

**CEQA Initial Study
&
Mitigated Negative Declaration

for

University Wash Channel Stage 3
ZONE 1**

March 2014

Prepared For:
WARREN D. WILLIAMS
General Manager-Chief Engineer
Riverside County Flood Control and
Water Conservation District
1995 Market Street
Riverside, CA 92501

Prepared By:

123 Technology Dr.
Irvine, CA 92618

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INTRODUCTION

This Initial Study and Mitigated Negative Declaration have been prepared by the Riverside County Flood Control and Water Conservation District (District) as the Lead Agency in accordance with the California Environmental Quality Act (CEQA) and implementing regulations (Public Resources Code Section 21000-21177 and California Code of Regulations Title 14 Division 6 Chapter 3) for the proposed University Wash Channel Stage 3 Project in the City of Riverside, California, herein referred to as the Project. The Project consists of the construction and maintenance of approximately 2,500 linear feet (LF) of underground storm drain pipe and associated catch basins, access manholes, street repaving, and grading. Once constructed, the proposed Project would provide 10-year flood protection to the adjacent area and would substantially improve drainage along the Project reach during the majority of storm events. Additionally, when ultimately paired with future master planned improvements upstream, the proposed storm drain improvements would provide 100-year flood protection to adjacent properties and public rights-of-way.

The Initial Study is the District's initial evaluation of environmental impacts from the Project that could potentially be significant pursuant to CEQA and is prepared pursuant to California Code of Regulations Section 15063. In cases where potentially significant impacts have been identified by the Initial Study, mitigation measures are identified that the District has determined would reduce such impacts to a level that is less than significant. The Initial Study and Mitigated Negative Declaration are being circulated for public review and input. Pending input from public review, the Initial Study and Mitigated Negative Declaration may be adopted by the District Board of Supervisors for use by the District and other affected agencies to consider environmental impacts of the Project in conjunction with their discretionary actions.

The following are included herein:

- **Mitigated Negative Declaration:** This document is being circulated for public review prior to being considered for adoption by the District Board of Supervisors.
- **Environmental Commitments and Mitigation Monitoring Program Table:** This table provides a summary of potential significant impacts identified in the Initial Study and Project commitments and proposed mitigation measures that would limit impacts to a level that is less than significant.
- **CEQA Initial Study:** This document provides a description of the proposed Project, affected agencies, the affected environment, the District's evaluation of environmental impacts from the Project that could potentially be significant pursuant to CEQA, and mitigation measures that the District has determined would limit impacts to a level that is less than significant.
- **Determination:** This document provides the District's determination regarding the significance of impacts that could occur from the proposed Project.
- **References:** This section includes a list of references used for the Initial Study.

The Mitigated Negative Declaration and Initial Study are being circulated for a 30-day public review and comment period. Comments to these documents should be submitted in writing by April 21, 2014 and addressed to:

Attn: Kris Flanigan
Riverside County Flood Control and Water Conservation District
1995 Market Street
Riverside, CA 92501
(951) 955-8581
kflaniga@rcflood.org

Comments that are received during the review period will be included and addressed as appropriate in the Project's CEQA administrative record for consideration by the Board of Supervisors of the District. If the Project's environmental impact evaluation is challenged in court, the challenge may be limited to only those issues raised during the public review period.

MITIGATED NEGATIVE DECLARATION

State Clearinghouse Number:
Not Yet Assigned

Contact Person:
Kris Flanigan

Telephone Number:
951.955.8581
Email: kflaniga@rcflood.org

Lead Agency and Project Sponsor:
Riverside County Flood Control and Water Conservation District

Address:
1995 Market Street

City:
Riverside

Zip:
92501

Project Title and Description:

The proposed University Wash Channel Stage 3 Project (Project) consists of the construction and maintenance of approximately 2,500 linear feet (LF) of 90-inch reinforced concrete pipe underground storm drain and associated catch basins, access manholes, street repaving, and grading of approximately 2 acres. Once constructed, the proposed Project would provide 10-year flood protection to the adjacent area.

Project Location:

The Project would be located in the City of Riverside, California, in Section 24 of Township 2 South, Range 5 West, San Bernardino Base and Meridian. The Project Site is generally bound by Spruce Street to the north, Chicago Avenue to the east, Massachusetts Avenue and Durahart Street to the south, and Kansas Avenue to the west.

The General Manager-Chief Engineer of the Riverside County Flood Control and Water Conservation District has made a finding that the proposed University Wash Channel Stage 3 Project will not have a significant adverse effect on the environment. An Initial Study supporting this finding is attached. This finding will become final upon adoption of this Mitigated Negative Declaration by the Board of Supervisors of the Riverside County Flood Control and Water Conservation District. Mitigation measures are as follows:

Refer to attached Project Features & Environmental Commitments Monitoring Program Table.

Signature: _____
WARREN D. WILLIAMS
General Manager-Chief Engineer

Dated: _____

The Board of Supervisors of the Riverside County Flood Control and Water Conservation District, assembled in regular session on _____ has determined that the proposed University Wash Channel Stage 3 Project will not have a significant adverse effect on the environment and has adopted this Mitigated Negative Declaration.

Signature: _____
KECIA HARPER-IHEM
Clerk of the Board

Dated: _____

Attachment

Copies to: 1) County Clerk
 2) Flood Control

P8__

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

University Wash Channel Stage 3 Project

ENVIRONMENTAL COMMITMENTS & MITIGATION MONITORING PROGRAM TABLE

Issue	Potential Impact	Environmental Commitment, Avoidance, Minimization, and/or Mitigation Measures	Action	Implementation Responsibility	Governing Agency	Implementation Timing
Project Environmental Commitments						
Damage to underground utilities must be avoided	Excavation equipment could damage underground utilities	EC-1: Prior to construction work, Underground Service Alert will be notified to locate buried utilities, and potholing will be conducted to confirm their location and depth at selected locations and to test subsurface conditions. All underground utilities would be marked and flagged prior to construction.	Notify Underground Service Alert and conduct potholing to locate utilities.	District's Contractor	District	Prior to construction work
Noise	Construction work will generate noise	EC-2: Construction hours will be limited to the time between 7 am to 7 pm on weekdays. Saturday work is not anticipated but would be limited to the hours between 8 am and 5 pm if Saturday work occurs. Internal combustion engines used during construction will be equipped with functional mufflers to limit noise emissions.	Limit construction to specified hours and ensure all internal combustion equipment is equipped with a functional muffler.	District's Contractor	District	Duration of construction
Potential for unknown cultural resources	If unknown cultural resources are encountered and not managed appropriately they could be adversely impacted	EC-3: The District has no objection to Native American Monitors from the Soboba Band of Luiseño Indians and the Gabilino Tongva Nation being present at no cost to the District when in situ soils are excavated for Project construction. The District will also implement its ordinary construction restrictions for unanticipated discoveries that would stop excavation in the event of a cultural resource discovery.	Make no objections to Native American monitoring and implement the District's ordinary construction restrictions for unanticipated discovery,	District and District's Contractor	District	Duration of excavation work
Potential to affect emergency access on roadways	Short term lane closures could affect emergency response time to some locations	EC-4: Emergency response agencies will be notified of construction in roadways prior to work in public streets.	Provide e-mail or other written notification of planned lane closure locations, dates and times to City of Riverside Police and Fire Departments	District's Contractor	District	At least 72-hours prior to any lane closure

ENVIRONMENTAL COMMITMENTS & MITIGATION MONITORING PROGRAM TABLE (Continued)

Issue	Potential Impact	Environmental Commitment, Avoidance, Minimization, and/or Mitigation Measures	Action	Implementation Responsibility	Governing Agency	Implementation Timing
Potential to affect public transit access on roadways	Short term lane closures could affect bus route on Massachusetts Avenue	EC-5: The Riverside Transit Authority will be notified prior to any lane closures on Massachusetts Avenue.	Provide e-mail or other written notification of planned lane closure locations, dates and times to RTA	District's Contractor	District	At least 72-hours prior to any lane closure on Massachusetts Avenue
Water quality could be effected by construction discharges	Sediment and materials used during construction could be transported offsite by storm water runoff	EC-6: The District will obtain coverage under the State storm water discharge General Permit for construction,	Obtain coverage under and comply with the State General Permit	District's Contractor	RWQCB	Coverage under the General Permit shall be obtained prior to groundbreaking and compliance shall occur throughout construction until a Notice of Termination is accepted by the RWQCB.
Water quality downstream could be effected by discharges to the constructed storm drain system	If pollutants are introduced to the constructed storm drain system water quality downstream could be degraded	EC-7: Following construction, the storm water inlets would be stenciled with "Only Rain in the Storm Drain" as a BMP for water quality protection.	Stencil catch basins with required language	City of Riverside	RWQCB	Before completion of construction
Mitigation Measures						
Burrowing owl is a protected species and could be affected if present	Construction ground disturbances could impact burrowing owl, if present	MM BIO 1: A burrowing owl survey shall be conducted no more than 30 days prior to the onset of Project-related disturbance activities. The pre-construction survey and any relocation of burrowing owls, if present, shall be conducted in accordance with current MSHCP survey guidelines and protocols.	Conduct burrowing owl survey and relocate owls if present.	District's Contractor	CDFG/USFWS	Survey shall be conducted no more than 30 days prior to ground disturbance. Relocation of owls, if needed shall occur before construction occurs in the vicinity.
Potential for loss of raptor nesting habitat	Construction will remove some large eucalyptus trees that could provide raptor nesting habitat	MM BIO 2: If construction is expected to occur during the typical raptor nesting season (February 1- August 31), a pre-disturbance raptor survey shall be conducted to determine if active raptor nests are present on the site. The survey shall be conducted by a qualified biologist no more than 30 days prior to the onset of construction activities. If active nests are found on or within 250 feet of the site, the Project shall coordinate with the wildlife agencies regarding appropriate construction buffers. All construction activities shall remain outside the buffer until the young have fledged or until the Project biologist has determined that the nest is no longer	If disturbance will occur during the typical raptor nesting season (February 1- August 31), a pre-disturbance raptor survey shall be conducted and work shall be avoided in the vicinity of active nests, if found.	District's Contractor	CDFG/USFWS	If needed, the survey shall be conducted no more than 30 days prior to the onset of construction activities. If active nests are identified, all construction activities shall remain outside the buffer until the young have fledged or until the Project biologist has determined that the nest is no longer active.

ENVIRONMENTAL COMMITMENTS & MITIGATION MONITORING PROGRAM TABLE (Continued)

Issue	Potential Impact	Environmental Commitment, Avoidance, Minimization, and/or Mitigation Measures	Action	Implementation Responsibility	Governing Agency	Implementation Timing
		active. In the event initial disturbance activities occur during the non-breeding season (September 1-January 31), a survey is not required and no further studies are necessary.				
Nesting birds are protected and could be affected if present	Vegetation removal could impact nesting birds, if present	MM BIO 3: If any vegetation removal occurs during the typical avian nesting season (March 1-June 30), a pre-disturbance survey shall be conducted to determine if active nests are present on the site. The survey shall be conducted by a qualified biologist no more than two weeks prior to the onset of vegetation removal. If active nests are found on the site, disturbance or removal of the nest shall be avoided until the young have fledged and the nest is no longer active. Depending on the species, site conditions, and the proposed construction activities near the active nest, a buffer distance may be prescribed, as determined through coordination with the wildlife agencies. Vegetation removal between July 1-February 28, outside the nesting season, would not require a pre-disturbance nesting bird survey.	If disturbance will occur during the typical nesting season March 1-June 30) a pre-disturbance nest survey shall be conducted and work shall be avoided except beyond a prescribed buffer distance of active nests, if found.	District's Contractor	USFWS	Survey shall be conducted no more than two weeks prior to vegetation removal. If active nests are found, disturbance or removal of the nest shall be avoided until the young have fledged and the nest is no longer active.
Potential for habitat loss	Filling of University Wash Channel would impact 0.72 acre of riparian/riverine habitat	MM BIO 4: To mitigate for permanent impacts to the 0.72-acre University Wash Channel, the District shall pay into the Riverside Corona Resource Conservation District in-lieu fee program at a ratio of 1 to 1.	Pay into the Riverside Corona Resource Conservation District in-lieu fee program at a ratio of 1 to 1	District	USACE/DFG	Prior to project construction
Potential for unknown cultural resources	If unknown cultural resources are encountered and not managed appropriately they could be adversely impacted	MM CUL 1: Construction shift foremen, excavation equipment operators and other construction workers with responsibility for observing construction excavations shall be instructed by a representative of the District or its contractor to be observant for the potential occurrence of archaeological resources in the geologic materials encountered, and shall be instructed and authorized to halt excavation in the area immediately and notify the District's Project Engineer if such resources are discovered. In the event of a	Instruct construction workers to be observant for the potential occurrence of archaeological resources, and instruct and authorize them to halt excavation in the area immediately and notify the District's Project Engineer if such resources are discovered.	District's Contractor	District	Instruct workers prior to their first shift involving excavation of native soils. Stop work and notify the District Engineer immediately if unknown cultural resources are discovered.

**ENVIRONMENTAL COMMITMENTS & MITIGATION
MONITORING PROGRAM TABLE (Continued)**

Issue	Potential Impact	Environmental Commitment, Avoidance, Minimization, and/or Mitigation Measures	Action	Implementation Responsibility	Governing Agency	Implementation Timing
		discovery, work in the area shall cease until the discovery is evaluated by a qualified cultural resource specialist. If evaluation by a qualified cultural resource specialist indicates that the discovery may be significant, then excavation in the area shall be continued only as directed by a qualified cultural resource specialist and in a manner allowing for collection of significant resources and information that may otherwise be affected by the Project. For significant cultural resources, a Research Design and Data Recovery Program may be necessary and would be prepared and carried out to mitigate impacts if needed. Collected cultural artifacts would be cataloged, and permanently curated with an appropriate institution. Artifacts would be analyzed to identify function and chronology as they relate to the history of the area. Faunal material would be identified as to species. A final monitoring report shall be prepared if unanticipated cultural resources are discovered.				
Potential for unknown paleontological resources	If unknown paleontological resources are encountered and not managed appropriately they could be adversely impacted	MM CUL 2: Construction shift foremen, excavation equipment operators and other construction workers with responsibility for observing construction excavations shall be instructed by a representative of the District or its contractor to be observant for the potential occurrence of fossils in the geologic materials encountered, and shall be instructed and authorized to halt excavation in the area if vertebrate fossils are discovered. In the event of a discovery, work in the area shall cease until the discovery is evaluated by a qualified paleontologist. If evaluation by a qualified paleontologist indicates that the discovery may yield significant scientific information, then excavation in the area shall be continued only as directed by a qualified paleontologist and in a manner allowing for collection of significant fossil	Instruct construction workers to be observant for the potential occurrence of paleontological resources, and instruct and authorize them to halt excavation in the area immediately and notify the District's Project Engineer if such resources are discovered.	District's Contractor	District	Instruct workers prior to their first shift involving excavation of native soils. Stop work and notify the District Engineer immediately if paleontological resources are discovered.

**ENVIRONMENTAL COMMITMENTS & MITIGATION
MONITORING PROGRAM TABLE (Continued)**

Issue	Potential Impact	Environmental Commitment, Avoidance, Minimization, and/or Mitigation Measures	Action	Implementation Responsibility	Governing Agency	Implementation Timing
		material and stratigraphic information. Significant fossil remains collected shall be cleaned, sorted, cataloged, and offered for collection in a scientific institution with a permanent paleontological collection. A paleontological monitoring report shall be prepared if a significant paleontological discovery occurs.				
Unknown hazardous materials could be present in soils to be excavated	Workers or the public could be exposed to hazardous materials if unknown hazardous materials are encountered	MM HAZ-1: Construction shift foremen, excavation equipment operators and other construction workers with responsibility for observing construction excavations shall be instructed by a representative of the District or its environmental contractor to be observant for the potential occurrence of soils impacted by unknown hazardous materials releases, and shall be instructed and authorized to halt excavation in the area immediately and notify the District's Project Engineer if such soils are discovered. In the event that unknown hazardous material impacted soils are discovered in the subsurface during construction, ground disturbing activities in the vicinity of the discovery shall cease until a California Professional Engineer or California Professional Geologist with experience in hazardous materials management can assess the impacted soils and, if necessary, develop appropriate management measures in coordination with jurisdictional agencies.	Instruct construction workers to be observant for the potential occurrence of soils impacted by hazardous materials releases, and instruct and authorize them to halt excavation in the area immediately and notify the District's Project Engineer if such soils are discovered.	District's Environmental Contractor	District	Instruct workers prior to their first shift involving excavation work. Stop work and notify the District Engineer immediately if impacted soils are discovered.

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

California Environmental Quality Act (CEQA) Initial Study

- 1. Project title:** University Wash Channel Stage 3 Project
- 2. Lead agency name and address:** Riverside County Flood Control and Water Conservation District, 1995 Market Street, Riverside, CA 92501
- 3. Contact person email address and phone number:**

Project Applicant

Attn: Kris Flanigan
Riverside County Flood Control
and Water Conservation District
1995 Market Street
Riverside, CA 92501
(951) 955-8581

Consultant

Attn: Joseph Stenger
TRC Solutions, Inc.
2666 Rodman Drive
Los Osos, CA 93402
(805) 528-6868

4. Project location:

The Project would be located in the City of Riverside, California, south of the intersection of State Highway 91 and State Highway 60 (see Figure 1). Project construction work would occur within an approximately 8.1 acre area referred to herein as the Site, which is generally bound by Spruce Street to the north, Chicago Avenue to the east, Massachusetts Avenue and Durahart Street to the south, and Kansas Avenue to the west (see Figure 2). The Site occurs in Section 24 of Township 2 South, Range 5 West, San Bernardino Base and Meridian. It is within the U.S. Geological Survey (USGS) 7.5-minute *Riverside East, California* quadrangle.

The Project would begin at the existing box to the Spruce Street Storm Drain on the south side of Spruce Street, then southeast along the alignment of the existing earthen channel approximately 800 LF. . The Project alignment would extend southerly and easterly for approximately 1,700 LF through several private parcels on which a storm drain easement would be acquired generally parallel to property lines. The alignment would then extend easterly in Massachusetts Avenue, terminating on the east side of Durahart Street adjacent to its intersection with Massachusetts Avenue. Preliminary design drawings are provided in Appendix A.

The Project would be located on the following parcels:

- 210-120-005
- 210-120-006
- 210-120-007
- 210-120-008
- 210-120-009
- 210-120-010
- 210-120-011
- 210-130-029
- 210-150-001
- 210-150-016

- 210-150-004
 - 210-172-020
5. **Project sponsor's name and address:** Riverside County Flood Control and Water Conservation District, 1995 Market Street, Riverside, CA 92501
6. **General plan designation:**
- I (General Industrial) and B/OP (Business/Office Park)
7. **Description of Project:** *(Describe the whole action involved, including but not limited to later phases of the Project, and any secondary, support, or offsite features necessary for its implementation. Attach additional sheets if necessary.)*

Overview

The proposed University Wash Channel Stage 3 Project (Project) consists of the construction and maintenance of approximately 2,500 linear feet (LF) of 90-inch reinforced concrete pipe underground storm drain and associated catch basins, access manholes, street repaving, and grading of approximately 2 acres. The Riverside County Flood Control and Water Conservation District (District) would manage Project construction and would own, operate and maintain the storm drain mainline. The City of Riverside would maintain the catch basins (i.e., drain inlets) and connector pipes. Once constructed, the proposed Project would provide 10-year flood protection to the adjacent area and would substantially improve drainage along the Project reach during the majority of storm events. Additionally, when ultimately paired with future master planned improvements upstream, the proposed storm drain improvements would provide 100-year flood protection to adjacent properties and public rights-of-way.

The Project is located within the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) and will comply with relevant aspects of the MSHCP as described in responses in Section IV of the CEQA Initial Study.

Construction

A preliminary construction equipment list is provided in Appendix B. Prior to construction work, Underground Service Alert would be notified to locate buried utilities, and potholing would be conducted to confirm their location and depth at selected locations and to test subsurface conditions. All underground utilities would be marked and flagged prior to construction. Following mobilization, construction is expected to take approximately six months. Removal of existing debris and ruderal and ornamental vegetation would occur as needed in areas where it occurs, and then a trench would be excavated and storm drain piping installed. The trench excavation depth would range from less than a few feet to as much as approximately 25 feet. Shoring would be used to temporarily stabilize the trench walls during construction work where needed in accordance with OSHA regulations. Following pipe installation, the trench would be backfilled and compacted. Connector pipes and catch basins would then be installed and paved areas would be repaved and restriped. The area to be repaved would be approximately 0.25 acre. No areas would be paved that are not paved currently. Construction hours would be limited to the time between 7 am to 7 pm on weekdays. Saturday work is not anticipated but would be limited to the hours between 8 am and 5 pm if Saturday work occurs. Internal combustion engines used during construction would be equipped with functional mufflers to limit noise emissions.

Most phases of construction ongoing at a given time would have a maximum of four or five pieces of equipment in operation. The typical onsite construction crew during periods of maximum activity is expected to be about 15 persons. Equipment and materials staging would occur within the 8.1 acre Site.

A records search and pedestrian cultural resource survey of the Site have been completed and no resources were identified or expected to occur. Native American entities have expressed interest in the Project as described in detail in the Cultural Resources Section of the Initial Study. In response to requests from Native American entities, the District has no objection to Native American Monitors from the Soboba Band of Luiseño Indians and the Gabelino Tongva Nation being present at no cost to the District when in situ soils are excavated for Project construction. The District has ordinary construction restrictions in place for unanticipated discoveries that would stop excavation in the event of a cultural resource discovery.

Portions of the construction work would be within City street rights-of-way and would require permits from the City. Work in street rights-of-way would need to occur under City traffic management plan requirements. Emergency response agencies would be notified of construction in roadways prior to work in public streets. The Riverside Transit Authority would be notified by the District prior to any lane closures on Massachusetts Avenue where a bus route could be interrupted during construction. Project construction in Massachusetts Avenue would be accomplished with lane closures and a traffic management plan accounting for bus service on this route.

Construction would involve approximately 14,200 cubic yards of soil excavation and approximately 12,500 cubic yards of backfill. Most areas would be returned to grade. University Wash channel would be filled to achieve final design grades. Approximately 1,700 cubic yards of soil would be exported. Additionally, a total of approximately 200 tons of construction/demolition debris (e.g., asphalt, concrete, road base gravel, etc.) is expected to be generated (Webb, 2013). Soil and waste generated would be managed in accordance with applicable regulations. Sanitary facilities for construction would be portable and self-contained, and waste would be removed from the site by a licensed contractor.

Construction would disturb more than one acre and, therefore, the Project would be required to obtain coverage under an NPDES permit for storm water discharges. The District would obtain coverage under the State storm water discharge General Permit for construction through filing of a Notice of Intent (NOI) and Storm Water Pollution Prevention Plan (SWPPP) with the Regional Water Quality Control Board (RWQCB), and would comply with the General Permit and implement the SWPPP during construction and until construction disturbances are stabilized and a Notice of Termination for coverage under the permit is filed and accepted by the RWQCB. The SWPPP would include Best Management Practices (BMPs) for water quality protection. Following construction, the storm water inlets would be stenciled with “Only Rain in the Storm Drain” as a BMP for water quality protection.

Project construction would fill an approximately 800 foot long segment of University Wash Channel. Filling of the channel would require a Clean Water Act Section 404 permit from the USACE and a Clean Water Act Section 401 Water Quality Certification from the RWQCB. In addition, it would require an application be submitted to the CDFW for a Streambed Alteration Agreement. To mitigate for permanent impacts to the 0.72-acre University Wash Channel, the District proposed to pay into the Riverside Corona Resource Conservation District in-lieu fee program.

Maintenance

Once construction is completed, routine maintenance would include removal of debris or sediment as needed from the storm drain and drain inlets. When needed, sediment or debris would typically be removed from drain inlets with a shovel or vacuum truck. Before removing debris from the storm drain main line, a video camera would be placed in the storm drain to locate the debris or sediment buildup. Manhole covers upstream and downstream of the location would be removed to allow for adequate ventilation of the storm drain prior to entry by the work crew. Air quality would be measured inside the storm drain prior to entry. Following entry, sandbags would be stacked on top of each other up to the wide point of the pipe to form a barrier to contain debris and sediment and then water would be put in the storm drain upstream of the area to push debris and sediment toward the sand bag barrier. After the water drains from behind the barrier, debris and sediment build up would be removed with a shovel and hand bucket or vacuum truck and then sandbags

would be removed. Debris and sediment removed would be disposed of in accordance with applicable regulations. The routine maintenance would typically be performed by work crews using only light vehicles for transportation and support. An exception would be vacuum trucks, if used.

Earlier Analyses Used: None.

Impacts Adequately Addressed in Earlier Analyses: None.

Mitigation Measures from Earlier Analysis: None.

8. Surrounding land uses and setting: *(Briefly describe the Project's surroundings)*

The Site is in an urban area and is surrounded by industrial and commercial land uses and other disturbed land. Elevations on the Site range from approximately 880 feet to 920 feet (265 to 280 meters) above mean sea level (msl). The Site is irregularly shaped and encompasses a variety of land uses and vegetation communities such as paved roads, disturbed/developed land, ruderal (weedy) and ornamental vegetation, and the existing University Wash Channel, which supports its own assortment of upland and wetland vegetation. Figure 2 provides an aerial photograph of the Project area depicting the surrounding land development. The storm drain would be installed in City street rights-of-way and previously developed lands including a brownfields site and existing commercial and industrial developed parcels. The closest potential sensitive receptors are the Riverside Community Shelter located approximately 100 feet west of the Project's footprint on Massachusetts Avenue, and a residence on Massachusetts Avenue adjacent to the east end of the Project's footprint.

9. Other public agencies whose approval is required: *(e.g., permits, financing approval, or participation agreement.)*

Federal Agencies *(not "public agencies" as defined by CEQA or required to take a CEQA action)*

U.S. Army Corps of Engineers (USACE): It is anticipated that the USACE would consider the University Wash Channel below the Ordinary High Water Mark (OHWM) to be Waters of the United States, requiring a Clean Water Act Section 404 Permit for the portion of the construction below the OHWM. An application for coverage under Nationwide Permit No. 43 will be submitted to the USACE.

The Project would not require approval by any other federal agency.

State Agencies

RWQCB: The Clean Water Act Section 404 Permit identified above would require a Clean Water Act Section 401 Water Quality Certification to be issued by the RWQCB. An application for Certification will be submitted to the RWQCB.

RWQCB: Construction of the proposed Project would disturb more than one acre and, therefore, would require an NPDES permit for any storm water discharge or permitted non-storm water discharge from the construction site. The State of California through the State Water Resources Control Board has developed an NPDES General Permit that can be used for authorization of such discharges upon submittal of a complete Permit Registration Document (PRD) package to the State's Storm Water Multiple Application and Report Tracking System (SMARTS), documented by the issuance of a Waste Discharge Identification (WDID) Number. This permit is available for use by qualifying Projects with no discretionary approval, but once covered under the General Permit, the Applicant is responsible for compliance with the General Permit until a Notice of Termination is issued and approved by the jurisdictional RWQCB.

California Department of Fish and Wildlife (CDFW): It is anticipated that CDFW would require that the District enter into a Streambed Alteration Agreement under fish and wildlife protection measures of California Fish and Game Code Sections 1600 to 1616. A Notification of Streambed Alteration will be submitted to CDFW to initiate the process.

The Project would not require approval by any other State agency.

City/County Agencies

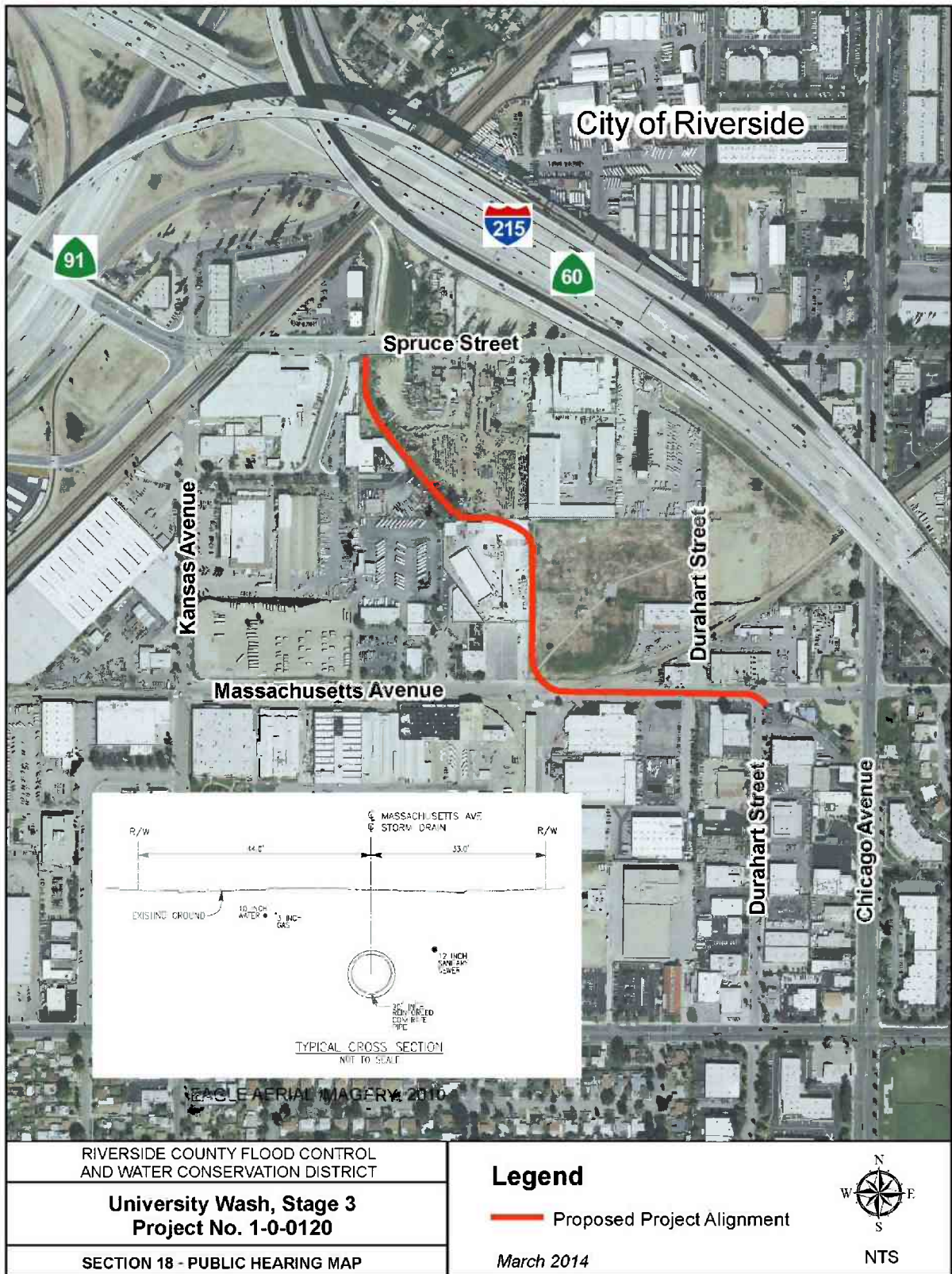
No County approvals are required for the Project.

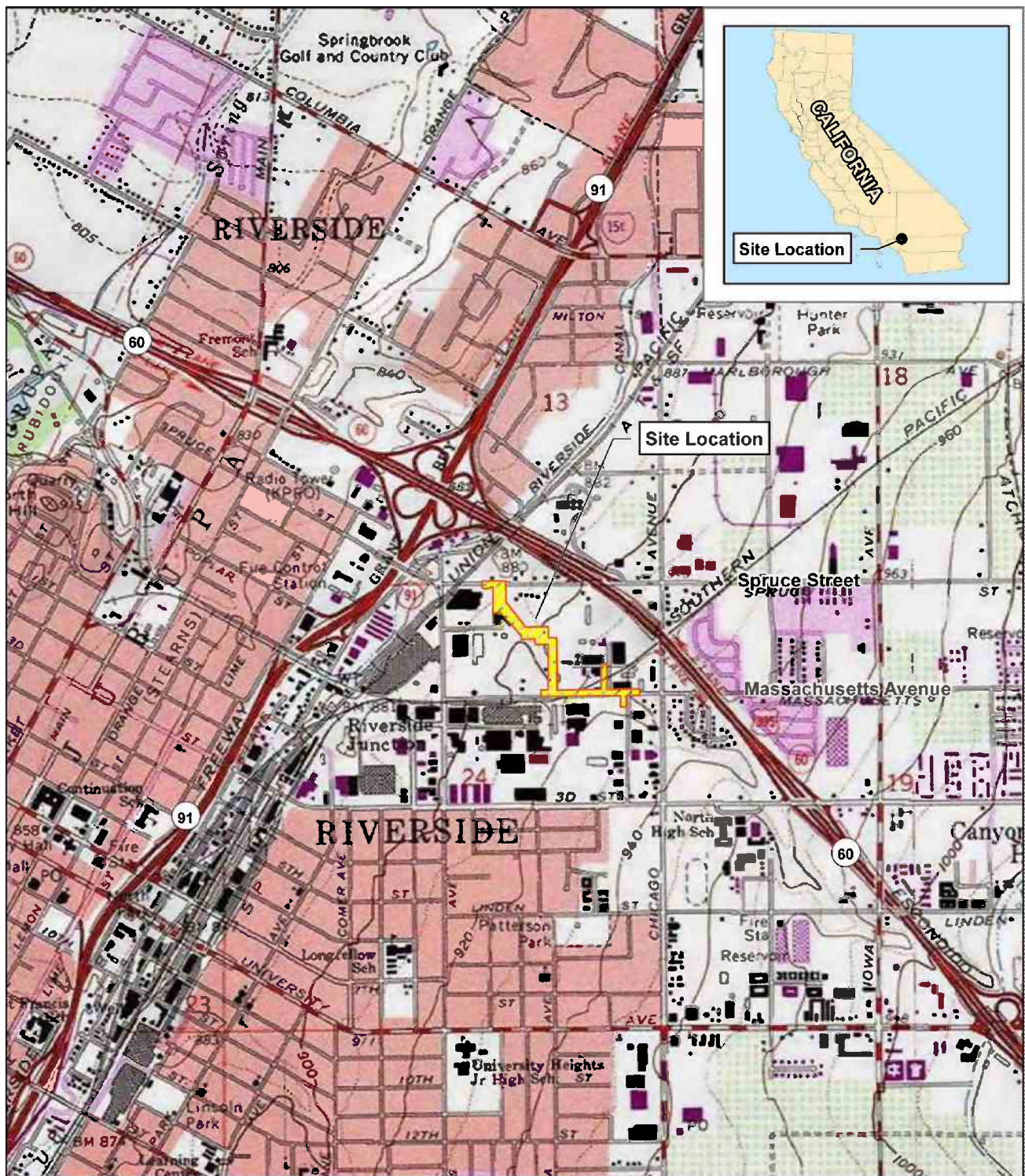
Financing Approval or Participation Agreements

The Project would require an agreement or agreements with the City of Riverside to define responsibilities of the City and the District related to construction and maintenance of facilities.

The Project may require an easement or other agreement with Union Pacific Railroad to cross an existing railroad right-of-way in or adjacent to Massachusetts Avenue.

In addition, the Project would require easements or other entitlements from private landowners whose property is crossed.





University Wash Channel Project

Vicinity and Site Location

Figure 1

Datum: WGS84
Latitude: 33.988°
Longitude: -117.353°

Riverside East Quadrangle
T02S R05W Sec 24

 Project Boundary

Copyright: © 2013 National Geographic Society, i-cubed; TRC, 2013

0 1,000 2,000 3,000 Feet

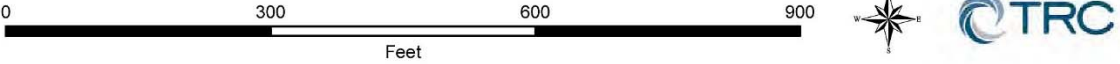




G:\UniversityWash 189699\MXD\Figure2.SiteBoundary.mxd

- Site Boundary
- Devoe Site (2625 Durahart Street)
- Catch Basin
- Closest Sensitive Receptor (1732 Massachusetts Avenue)

University Wash Channel Stage 3 Project
Site Boundary
Figure 2



Source: Esri, DigitalGlobe, GeoEye, i-cubed, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors, as checked below, would potentially be affected by this Project.

<input type="checkbox"/> Aesthetics	<input type="checkbox"/> Mineral Resources
<input type="checkbox"/> Agriculture Resources	<input checked="" type="checkbox"/> Noise
<input checked="" type="checkbox"/> Air Quality and Greenhouse Gas Emissions	<input type="checkbox"/> Population/Housing
<input checked="" type="checkbox"/> Biological Resources	<input checked="" type="checkbox"/> Public Services
<input checked="" type="checkbox"/> Cultural Resources	<input type="checkbox"/> Recreation
<input checked="" type="checkbox"/> Geology/Soils	<input checked="" type="checkbox"/> Transportation/Traffic
<input checked="" type="checkbox"/> Hazards & Hazardous Materials	<input checked="" type="checkbox"/> Utilities/Service Systems
<input checked="" type="checkbox"/> Hydrology/Water Quality	<input type="checkbox"/> Mandatory Findings of Significance
<input type="checkbox"/> Land Use/Planning	

Evaluation of Environmental Impacts:

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to Projects like the one involved (*e.g., the Project falls outside a fault rupture zone*). A "No Impact" answer should be explained where it is based on Project-specific factors as well as general standards (*e.g., the Project will not expose sensitive receptors to pollutants, based on a Project-specific screening analysis*).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as Project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: No Impact or Less Than Significant" applies when the proposed Project will not have a significant effect on the environment, does not require the incorporation of mitigation measures, and does not require the preparation of an Environmental Impact Report. The lead agency must briefly describe the reasons that a proposed Project will not have significant effect on the environment and does not require the preparation of an environmental impact report.
5. "Mitigated Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced any effect from "Potentially Significant Impact" to a "Less Than Significant Impact". The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses", as described in (5) below, may be cross-referenced).

6. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. (CEQA Guidelines Section 15063(c)(3)(D)). The use of an earlier analysis as a reference should include a brief discussion that identifies the following:
 - a. Earlier Analysis Used. Identify and state where they are available for review.
 - b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c. Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated", describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the Project.
7. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (*e.g., general plans, zoning ordinances*). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
8. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
9. The explanation of each issue should identify:
 - a. The significance criteria or threshold, if any, used to evaluate each question; and
 - b. The mitigation measure identified, if any, to reduce the impact to less than significance.

I. AESTHETICS. Would the Project:		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant	No Impact
a)	Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project consists of construction and maintenance of an underground storm drain in an urban area comprised of industrial and commercial developments and City streets. Following construction, visible components would be limited to manhole covers and catch basins at or close to existing grade on developed properties and in City Streets and an undeveloped former industrial site with a ground surface currently dominated by ruderal vegetation. For most of the Project alignment, surface grades would be restored to existing conditions. The exception would be at the existing University Wash, comprised of an open channel which would be filled. The existing open channel is a small channel highly modified by human activity lined with concrete demolition debris and located adjacent to an auto salvage yard and industrial development. In this setting, there would be no adverse visual impact once construction is completed. Construction work would be short-term and the scale of equipment used and activities conducted would be subordinate to surrounding development such that it would not be readily noticeable from any scenic vista.</p> <p>Sources: Project Description, Project location maps, and Project area photographs.</p>					
b)	Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. There are no State Scenic Highways in the Project vicinity.</p> <p>Source: Caltrans, 2013.</p>					
c)	Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
No Impact. See Item 1a, above.					
d)	Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
No Impact. See Item 1a, above.					
II. AGRICULTURAL & FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the Project:		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant	No Impact
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project occurs in an urban area. There are no farmlands on or adjacent to the Project footprint.</p> <p>Source: See Land Use Planning Section IX, below.</p>					

b)	Conflict with existing agricultural zoning, agricultural use or land subject to a Williamson Act contract or land within a Riverside County Agricultural Preserve?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. There is no agricultural zoning or agricultural use on or adjacent to the Project footprint.</p> <p>Source: See Land Use Planning Section IX, below.</p>					
c)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. No aspect of the Project would result in the conversion of farmland.</p> <p>Source: Project Description. Also see Items 2a and 2b, above.</p>					
d)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project occurs in an urban area. There are no forest lands or timber lands on or adjacent to the Project footprint.</p> <p>Source: See Land Use Planning Section IX, below.</p>					
e)	Result in the loss of forest land or conversion of forest land to non-forest use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project occurs in an urban area. There are no forest lands on or adjacent to the Project footprint.</p> <p>Source: See Land Use Planning Section IX, below.</p>					
III. AIR QUALITY AND GREENHOUSE GAS EMISSIONS. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the Project:		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant	No Impact
a)	Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Less than Significant Impact. The proposed Project is located within the South Coast Air Basin (SCAB), a region that currently exceeds and is in violation of state and national ambient air quality standards for ozone (O₃) and particulate matter (PM) less than 10 and 2.5 microns in diameter (PM₁₀ and PM_{2.5}). The South Coast Air Quality Management District (SCAQMD) regulates air quality emissions within the SCAB and has prepared a series of Air Quality Management Plans (AQMP), the most recent of which was adopted by the Governing Board of the SCAQMD on June 1, 2007 (2007 AQMP). The 2007 AQMP is designed to meet applicable Federal and State requirements, including attainment of ambient air quality standards. To assess the impacts of Project-related construction and operational emissions, the SCAQMD has established regional significance thresholds.</p>					

As described below in III.b), construction and subsequent maintenance emissions from the proposed Project would only result in temporary, less than significant impacts to air quality. The proposed Project must also comply with applicable provisions of Rule 403 for the control of fugitive dust. As such, the proposed Project would not conflict with or obstruct implementation of the 2007 AQMP.

Sources: AQMP; SCAQMD

b)	Violate any air quality standard or contribute substantially to an existing or Projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Less than Significant Impact. The SCAB currently exceeds and is in violation of state and national ambient air quality standards for O₃, PM₁₀ and PM_{2.5}. The SCAQMD has established regional significance thresholds to help assess the impacts of Project-related construction and operational emissions. Construction and operational emissions from the proposed Project that are below these thresholds are considered less than significant. Subsequent maintenance of the proposed flood control facility is expected to release infrequent and minor air emissions associated with trucks used on an as-needed basis for inspection or maintenance purposes. Temporary construction emissions would come from heavy equipment exhaust, equipment and material deliveries, construction related trips by workers, and fugitive dust generation from excavation and grading activities. SCAQMD regional construction emission significance thresholds and estimated construction emissions for the proposed Project are provided in the Table below.

The Project construction emissions are calculated using the latest version of the California Emissions Estimator Model (CalEEMod version 2013.2.2). The construction emissions are conservatively estimated assuming every piece of equipment would operate a full eight (8) hours per day. A more complete description of Project emissions modeling input parameters are provided in Appendix C.

Estimated Maximum Daily Construction Emissions and Regional Significance Criteria

Criteria Pollutant	SCAQMD Regional Significance Threshold for Construction (lbs/day)	Estimated Maximum Daily Project Construction Emissions (lbs/day)
Nitrogen Oxides	100	61.9
Reactive Organic Gases	75	7.35
Sulfur Dioxide	150	0.07
Carbon Monoxide	550	42.2
PM ₁₀ (exhaust only)	150	3.55
PM _{2.5} (exhaust only)	55	3.43
*Lead	3	< 3

*CalEEMod does not calculate lead emissions. Using the SCAQMD lead emission factor for diesel of 0.0083 lb/gal it was calculated that 361 gal/day of fuel would need to be combusted to exceed this threshold. This Project would not consume diesel fuel in excess of the 361 gal/day and would therefore not exceed the significance threshold.

As shown the table above, the temporary construction emissions from the proposed Project would be less than the regional significance thresholds for construction. In addition, compliance with Rule 403 for the control of fugitive dust would ensure that the proposed Project would not violate any air quality standard or contribute substantially to an existing or Projected air quality violation.

Sources: Project Design; CARB; SCAQMD; CalEEMod

c)	Result in cumulatively considerable net increase of any criteria pollutant for which the Project region is non-attainment under an applicable federal or state ambient air quality standard (<i>including releasing emissions which exceed quantitative thresholds for ozone precursors</i>)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Less than Significant Impact. The SCAB is designated as a non-attainment area for O₃, PM₁₀ and PM_{2.5}. Since the Project's short-term emissions are below the significance threshold; the Project's net increase in criteria pollutant emissions for which the Project region is non-attainment is not cumulatively considerable and impacts are considered less than significant.

Source: SCAQMD

d)	Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Less Than Significant Impact. Temporary construction emissions would result from heavy equipment exhaust, construction-related trips, and fugitive dust generation. The Project would traverse an auto salvage yard, a mineral processing plant, a currently undeveloped brownfields site, and City streets with adjacent industrial and commercial development. For air quality impact analysis, a sensitive receptor is a receptor such as a residence, hospital, or convalescent facility where it is possible that an individual could remain on a 24-hour a day basis.

The SCAQMD has developed suggested Localized Significance Thresholds (LSTs) to assist lead agencies in assessing potential air quality impacts to sensitive receptors near emission sources. LSTs are applicable to oxides of nitrogen (NO_x), carbon monoxide (CO), particulate matter less than 10 microns in aerodynamic diameter (PM₁₀), and particulates less than 2.5 microns in aerodynamic diameter (PM_{2.5}). According to the SCAQMD, the LSTs represent the maximum emissions from a Project that are not expected to cause or contribute to an exceedance of the most stringent applicable Federal or State ambient air quality standard. LSTs are also based on the ambient concentrations of the specific pollutants within each source receptor area (SRA) and the distance to the nearest sensitive receptor.

The recommended LSTs applicable to the Project were determined using the *SCAQMD LST Methodology Guidance Document, Appendix C – Mass Rate LST Look-up Tables C-1 through C-6* and their derivation from the lookup tables is described in Appendix C. Because LST's are dependent on distance between the emission source and receptor, the emissions modeling in Appendix C includes a two-step analysis to ensure that all sensitive receptors are appropriately considered. First, the overall project construction emissions are compared to the LSTs for a 50 meter separation distance. As shown in the table below, overall project emissions would be less than the LSTs for any sensitive receptor located 50 meters or more from the Project.

**Estimated Maximum Daily Construction Emissions and
Localized Significance Criteria for 50 Meter Setback**

Criteria Pollutant	SCAQMD Localized Significance Threshold for 50 Meter Setback (lbs/day)	Estimated Maximum Daily Project Construction Emissions (lbs/day)
Nitrogen Oxides	148	61.9
Carbon Monoxide	887	42.2
PM ₁₀ (Total)	12	4.17
PM _{2.5} (Total)	4	3.60

Second, to compare the applicable LSTs for receptors closer than 50 meters, a separate CalEEMod modeling run is included in Appendix C that estimates emissions from the entire Project for durations when work would be occurring less than 50 meters from any sensitive receptor, and the results are

compared to the LSTs for the closest sensitive receptor. The closest sensitive receptor is a residence located on Massachusetts Avenue adjacent to the southeastern most end of the Project (Figure 2). As shown in the table below, project emissions when work is occurring within 50 meters of sensitive receptors would be less than SCAQMD's minimum LSTs.

**Estimated Maximum Daily Construction Emissions for Durations With Work
Within 50 Meters of a Sensitive Receptor and Minimum Localized Significance Criteria**

Criteria Pollutant	SCAQMD Minimum Localized Significance Threshold (lbs/day)	Estimated Maximum Daily Project Construction Emissions (lbs/day)
Nitrogen Oxides	118	52.6
Carbon Monoxide	602	*42.7
PM ₁₀ (Total)	4	3.38
PM _{2.5} (Total)	3	2.84

*The negligible increase in carbon monoxide shown in this table compared to that modeled for the worst day of the overall Project in previous tables appears to be an artifact of the CalEEMod program and is inconsequential since carbon monoxide emissions are far below significance thresholds.

Based on the modeling results summarized in the above tables and included in Appendix C, Project construction emissions would not exceed any SCAQMD localized or regional significance threshold. Therefore, the impact to sensitive receptors would be less than significant.

Massachusetts Avenue

Source: LST Guidance

e) Create objectionable odors affecting a substantial number of people?

☐
☐
☒
☐

Less than Significant Impact. The Project would traverse an auto salvage yard, a mineral processing plant, a currently undeveloped brownfields site, and City streets with adjacent industrial and commercial development. The Project would not produce odors except for the potential for localized odors from internal combustion engine exhaust during construction. The generation of any odors would be localized and short duration and, therefore, not considered a significant impact.

Source: Project Design

f) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

☐
☐
☒
☐

Less than Significant Impact. On June 1, 2005, the Governor signed Executive Order S-3-05 which sets forth a series of target dates by which statewide greenhouse gas (GHG) emissions would be reduced to, as follows: 1) 2000 levels by the year 2010; 2) 1990 levels by the year 2020; and 3) eighty percent (80%) below the 1990 levels by the year 2050. In 2006, the California State Legislature adopted AB 32 (Global Warming Solutions Act of 2006) and the Governor signed it into law. AB 32 requires the California Air Resources Board (CARB), the State agency charged with regulating statewide air quality, to adopt rules and regulations that would achieve GHG emissions equivalent to statewide levels in 1990 by the year 2020. GHG as defined under AB 32 includes carbon dioxide (CO₂), methane, nitrous oxide, sulfur hexafluoride, hydrofluorocarbons, and perfluorocarbons. CO₂ has been identified as the most important anthropogenic GHG because it comprises the majority of total GHG emissions emitted per year and it has a long atmospheric lifetime.

The primary Project-related GHG emissions are short-term fuel burning emissions associated with construction. CalEEMod was used to estimate the Project construction emissions. CalEEMod has the option to output annualized emissions in addition to maximum daily emissions. The annualized CalEEMod results are provided in Appendix C and estimate the Project's construction GHG impact to

be 110.73 metric tons of CO₂ equivalents. Subsequent operation and maintenance of the proposed Project is expected to emit De Minimis GHG emissions in comparison to construction emissions.

Currently, there are no established GHG significance thresholds from Federal or State agencies. However, in October 2008, the CARB and SCAQMD issued the draft "Recommended Approaches for Setting Interim Significance Thresholds for Greenhouse Gases under the California Environmental Quality Act" and the "Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold", respectively. Each agency's draft guidance material represents a potential analytical framework for addressing CEQA significance thresholds for GHG. In general, interim GHG thresholds of 7,000 and 10,000 CO₂ equivalents per year (MTCO_{2eq/yr}) are recommended by CARB and

SCAQMD, respectively. The estimated Project construction GHG emissions of 110.73 MTCO_{2eq/yr} is well below the interim GHG thresholds recommended by the CARB and SCAQMD. Therefore, the proposed Project would not generate GHG emissions that would cause significant direct or indirect impacts on the environment.

Sources: CalEEMod; CARB; SCAQMD

g) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Less than Significant Impact. As discussed in Item III.f, the GHG emissions generated by the proposed Project are temporary and less than the recommended significance thresholds. Therefore, the proposed Project would not conflict with any plan, policy or regulation adopted for the purpose of reducing emissions of GHG.

Sources: CalEEMod; CARB; SCAQMD

IV. BIOLOGICAL RESOURCES. Would the Project:

	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Less Than Significant with Mitigation. A Biological Resources Assessment of the Project area was conducted and a detailed report is provided in Appendix D. The proposed Project is located within the Western Riverside County MSHCP area and subject only to the Riparian/Riverine Areas and Vernal Pools assessment. The proposed Project area is not within any Criteria Cells, Narrow Endemic Plant Species Survey Areas, or proposed Conservation Areas; therefore, it is not subject to the focused species surveys associated with those areas.

The University Wash Channel meets the MSHCP definition of a riparian/riverine feature only because it receives fresh water flow during all or a portion of the year. The channel lacks any semblance of riparian vegetation structure typically provided by riparian tree species such as cottonwoods (*Populus* sp.), valley oak (*Quercus lobata*), sycamore (*Platanus racemosa*), and willows (*Salix* spp.). No additional riparian/riverine areas or vernal pools were identified on the site during the field surveys. Due to the lack of a riparian vegetation component, the channel does not provide suitable habitat for least Bell's vireo, southwestern willow flycatcher, or western yellow-billed cuckoo. Therefore, no focused surveys or conservation measures are required for these avian species.

Due to the lack of suitable habitat and the highly disturbed nature of the Project area, including periodic vegetation disturbance activities within the University Wash Channel, the site does not support suitable habitat for special-status plant species.

The field assessments conducted for the Project identified limited nesting and foraging habitat for burrowing owl, along with additional nesting and foraging opportunities for a variety of raptors and other birds protected under the Migratory Bird Treaty Act (MBTA). Implementation of the following mitigation measures would ensure that potential impacts to nesting birds are reduced to less than significant levels:

MM BIO 1: *A burrowing owl survey shall be conducted no more than 30 days prior to the onset of Project-related disturbance activities. The pre-construction survey and any relocation of burrowing owls, if present, shall be conducted in accordance with current MSHCP survey guidelines and protocols.*

MM BIO 2: *Although no active raptor nests were observed on the site during the surveys, the mature trees provide suitable nesting habitat and the ruderal field provides potential foraging habitat for a variety of raptor species. If construction is expected to occur during the typical raptor nesting season (February 1- August 31), a pre-disturbance raptor survey shall be conducted to determine if active raptor nests are present on the site. The survey shall be conducted by a qualified biologist no more than 30 days prior to the onset of construction activities. If active nests are found on or within 250 feet of the site, the Project shall coordinate with the wildlife agencies regarding appropriate construction buffers. All construction activities shall remain outside the buffer until the young have fledged or until the Project biologist has determined that the nest is no longer active. In the event initial disturbance activities occur during the non-breeding season (September 1-January 31), a survey is not required and no further studies are necessary.*

MM BIO 3: *The trees, shrubs, ruderal vegetation, dismantled automobiles and other structures on the site provide suitable nesting habitat for a number of common and special-status birds protected solely by the MBTA. If any vegetation removal occurs during the typical avian nesting season (March 1-June 30) a pre-disturbance survey shall be conducted to determine if active nests are present on the site. The March 1-June 30 timeframe is consistent with the MSCHP section 7.5.3. The survey shall be conducted by a qualified biologist no more than two weeks prior to the onset of vegetation removal. If active nests are found on the site, disturbance or removal of the nest shall be avoided until the young have fledged and the nest is no longer active. Alternatively, depending on the species, site conditions, and the proposed construction activities near the active nest, a small buffer may be prescribed, as determined through coordination with the wildlife agencies. Vegetation removal scheduled to occur between July 1 and February 28, outside the nesting season, would not require a pre-disturbance nesting bird survey and would not impact nesting birds or unfledged young.*

Implementation of these mitigation measures would ensure that the proposed Project would have a less than significant impact (either directly or through habitat modifications) on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service(USFWS).

Source: Biological Resources Assessment (Appendix D)

b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Less Than Significant with Mitigation. In order to meet the goal and purpose of the proposed Project, the riparian/riverine area known as the University Wash Channel would be permanently removed and replaced with underground 90-inch-diameter concrete storm drain pipe. A delineation of jurisdictional waters was completed for the Project area and a report is provided in Appendix E. The 0.72-acre channel represents the extent of riparian/riverine habitat or other sensitive natural communities on the site. No additional riparian/riverine areas or vernal pools were identified on the site during the field surveys. Implementation of the following mitigation measure would ensure that impacts to the riparian/riverine area are reduced to a less than significant level:</p>					
<p>MM BIO 4: <i>To mitigate for permanent impacts to the 0.72-acre University Wash Channel, the District shall pay into the Riverside Corona Resource Conservation District in-lieu fee program at a ratio of 1 to 1.</i></p> <p>Implementation of this mitigation would assure that the Project would have a less than significant impact on riparian habitats or other sensitive natural communities identified in local or regional plans, policies, and regulations, or by the CDFW and USFWS. A Determination of Biologically Equivalent or Superior Preservation (DBESP) prepared pursuant to requirements of the MSHCP is provided in Appendix F. Sources: Biological Resources Assessment (Appendix D); Waters Delineation and Jurisdictional Analysis (Appendix E); DBESP (Appendix F).</p>					
c)	Have a substantial adverse effect on biological resources involved within a jurisdictional water feature as defined by federal, state or local regulations (e.g., Section 404 of the Clean Water Act, Section 401 of the Clean Water Act, Section 1602 of California Fish and Game Code, Porter-Cologne Water Quality Control Act, etc.) through direct removal, filing, hydrological interruption, or other means?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Less Than Significant with Mitigation. The proposed Project would permanently impact 0.25 acre of waters of the U.S./waters of the state, as determined by using the ordinary high water mark, subject to the jurisdiction of the Army Corps of Engineers (ACOE) and Regional Water Quality Control Board (RWQCB) under Sections 404 and 401 of the Clean Water Act, respectively. The proposed Project would also permanently impact 0.72 acre of streambed, as determined by the distance between the top of each bank, subject to CDFW jurisdiction under Section 1602 of the California Fish and Game Code. Due to the lack of riparian or wetland habitat beyond the banks, CDFW jurisdiction terminates at the top of each bank. In compliance with Section 404/401 of the Clean Water Act and Section 1602 of the California Fish and Game Code, necessary authorizations from the ACOE, RWQCB and CDFW would need to be obtained prior to construction.</p> <p>By obtaining the necessary authorizations along with the implementation of MM BIO 4, the proposed Project would have a less than significant impact on biological resources involved within a jurisdictional water feature as defined by federal, state or local regulations through direct removal, filing, hydrological interruption, or other means.</p> <p>Sources: Biological Resources Assessment (Appendix D); Waters Delineation and Jurisdictional Analysis (Appendix E).</p>					

d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact: The proposed Project is surrounded by existing developments and roads that prevent the movement of wildlife through the site. Although portions of the University Wash Channel on the site are vegetated, the upstream portion is underground and the downstream portion is concrete-lined. Therefore, no wildlife corridors occur on the site.</p> <p>Source: Biological Resources Assessment (Appendix D).</p>					
e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The proposed Project is not subject to local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. The Project is subject to the MSHCP and would participate in the MSHCP to mitigate all impacts to biological resources.</p> <p>Sources: Biological Resources Assessment (Appendix D); MSHCP</p>					
f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact: The County of Riverside Board of Supervisors adopted the MSHCP on June 23, 2003. The USFWS and CDFW issued "take" permits in June 2004 for the implementation of the MSHCP. The MSHCP is a comprehensive, multi-jurisdictional habitat conservation plan focusing on the conservation of species and their associated habitats in Western Riverside County. The District is a MSHCP permittee, and the proposed Project must be consistent with the applicable provisions of the MSHCP. A summary of the obligations specific to implementation by the District is described in Section 13.4 of the Implementing Agreement (IA) and includes:</p> <p>A. Adopt and maintain resolutions as necessary to implement the requirements and to fulfill the purposes of the Permits, the MSHCP, and the IA for covered activities. Such requirements include compliance with: 1) the policies for the protection of species associated with riparian/riverine areas and vernal pools as set forth in Section 6.1.2 of the MSHCP; 2) the policies for the protection of narrow endemic plant species as set forth in Section 6.1.3 of the MSHCP; 3) the requirements of Section 7.3.7 of the MSHCP; 4) the urban/wildlands interface guidelines as set forth in Section 6.1.4 of the MSHCP; and 5) the BMPs and the siting and design criteria as set forth in Section 7.0 and Appendix C of the MSHCP. The requirements also include conducting surveys as set forth in Section 6.3.2 of the MSHCP.</p> <p>B. Contribute mitigation through payment of 3% of total capital costs for a Covered Activity. Such payment may be offset through acquisition of replacement habitat or creation of new habitat for the benefit of covered species, as appropriate. Such mitigation shall be implemented prior to impacts to covered species and their habitats.</p> <p>C. Manage land owned or leased within the MSHCP Conservation Area that has been set aside for conservation purposes pursuant to a management agreement to be executed between Riverside County Flood Control and Water Conservation District and the CDFW.</p> <p>D. Carry out all other requirements of the MSHCP, the MSHCP permits, and the IA.</p> <p>E. Participate as a member of the Reserve Management Oversight Committee (RMOC).</p>					

Section 6.1.2. In accordance with MSHCP Section 6.1.2, field assessments of the Project site were performed for riparian/riverine areas and vernal pool habitats. The University Wash Channel meets the MSHCP definition of a riparian/riverine feature only because it receives fresh water flow during all or a portion of the year. The channel lacks a true riparian vegetation component typically provided by riparian tree species such as cottonwoods, valley oak, sycamore, and willows. Due to the lack of a riparian vegetation component, the channel does not provide suitable habitat for least Bell's vireo, southwestern willow flycatcher, or western yellow-billed cuckoo. Therefore, no focused surveys or conservation measures are required for these avian species. No additional riparian/riverine areas or vernal pools were identified on the site during the field surveys. Given the lack of vernal pools on the site, focused surveys for Riverside fairy shrimp, Santa Rosa Plateau fairy shrimp, and vernal pool fairy shrimp are not required.

The University Wash Channel would be permanently impacted with the implementation of the proposed Project. Implementation of MM BIO 4 would mitigate impacts to the University Wash Channel to a level that is less than significant. In compliance with the MSHCP, a Determination of Biologically Equivalent or Superior Preservation (DBESP) report has been prepared (see Appendix F) and evaluates the proposed measures to ensure replacement of lost functions and values of habitat as it relates to Covered Species. The Project is consistent with Section 6.1.2 of the MSHCP.

Section 6.1.3. The proposed Project is not within any Criteria Cells, Narrow Endemic Plant Species Survey Areas, or proposed Conservation Areas; therefore, it is not subject to the focused species surveys associated with those areas. Consequently, no further assessments and/or surveys or conservation measures are required. The Project is consistent with Section 6.1.3 of the MSHCP.

Section 6.1.4. Section 6.1.4 of the MSHCP addresses indirect impacts from developments in proximity to MSHCP Conservation Areas. The Project is surrounded by developed and disturbed land and not located near the MSHCP Conservation Area. Therefore, the Project would not result in edge effects that would adversely affect biological resources within the area proposed for the MSHCP conservation area. The Project is consistent with Section 6.1.4 of the MSHCP.

Section 6.3.2. Pursuant to Section 6.3.2 of the MSHCP, habitat assessments and/or focused surveys for certain additional plant and animal species are required for properties located within mapped survey areas within Criteria Cells. Since the proposed Project is not within any Criteria Cells, it is not subject to the focused species surveys associated with those areas. The Project is consistent with Section 6.3.2 of the MSHCP.

Section 7.3.7. This section lists the flood control facilities that have been identified as Covered Activities within a Criteria Area. Since the Project is not located within a Criteria Area, this section is not applicable to the Project.

Section 7.5.3. This section of the MSHCP outlines construction guidelines when constructing facilities within the Criteria Area or within Public /Quasi-Public lands. Since the Project is not located within a Criteria Area or on Public /Quasi-Public lands, this section is not applicable to the Project.

Mitigation Fee. The Riverside County Flood Control and Water Conservation District is obligated to contribute mitigation through payment of a minimum of 3% of total capital costs for a Covered Activity.

Additionally, the project will be designed and implemented to comply with the Standard Best Management Practices outlined in Appendix C of the MSHCP.

Based on the above analysis, the proposed Project would be consistent with the MSHCP.

Sources: Biological Resources Assessment (Appendix D); DBESP (Appendix F); MSHCP

V. CULTURAL RESOURCES. Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact: The Project site was assessed for the presence or absence of cultural resources and no resources were identified. A report on this evaluation is provided in Appendix G. A record search was conducted by the Eastern Information Center housed at University of California, Riverside. The record search results were received on January 6, 2012. The record search indicated that there are no known (previously recorded) historic resources within the Project area. Based on the records search and site survey results, no significant historical resources occur on the site or adjacent lands. Therefore, the Project would have no impact on historical resources.</p> <p>Source: Cultural Resource Survey Report (Appendix G).</p>				
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>No Impact: A record search was conducted by the Eastern Information Center housed at University of California, Riverside. The record search results were received on January 6, 2012. The record search indicated that there are no known (previously recorded) archaeological sites within the Project area. The Native American Heritage Commission was contacted to conduct a sacred lands search. The search was conducted on November 6, 2013, and did not indicate the presence of cultural resources in the immediate vicinity. Letters were sent to additional parties that may have information about archaeological sites/sacred sites in the vicinity. On November 26, 2013, the Soboba Band of Luiseño Indians responded requesting consultation and that although this area is outside of the reservation it is still considered a traditional use area. Thus the Soboba have requested that a Native American Monitor from the Soboba Band be present during any ground disturbing proceedings. The Gabelino Tongva Nation responded on December 11, 2013 requesting that a Native American Monitor from the Gabelino Tongva Nation be present during any ground disturbing activities. The District has no objection to representatives of the Soboba Band and the Gabelino Tongva Nation monitoring Project excavations at no cost to the District. An archaeological pedestrian survey occurred on November 4, 2013, and no archaeological sites were identified. The site is highly disturbed and the intensive pedestrian survey yielded no evidence of any cultural resource. Considering that no resources have been identified in the area, that the area is intensively disturbed and developed, and that Project trenching would encompass less than one acre of total area, the Project is not expected to impact archaeological resource. The District has ordinary construction restrictions in place for unanticipated discoveries that would stop excavation if a cultural resource discovery occurs. In addition, as previously described, for the District has no objection to excavation work being monitoring by Native American representatives. Implementation of the following mitigation measure would further reduce the potential for adverse impacts to archaeological resources to a level that is less than significant in the event of an unanticipated discovery:</p> <p>MM CUL 1: <i>Construction shift foremen, excavation equipment operators and other construction workers with responsibility for observing construction excavations shall be instructed by a representative of the District or its contractor to be observant for the potential occurrence of archaeological resources in the geologic materials encountered, and shall be instructed and authorized to halt excavation in the area immediately and notify the District's Project Engineer if such resources are discovered. In the event of a discovery, work in the area shall cease until the discovery is evaluated by a qualified cultural resource specialist. If evaluation by a qualified cultural resource specialist indicates that the discovery may be significant, then excavation in the area shall be continued only as directed by a qualified cultural resource specialist and in a manner allowing for collection of significant</i></p>				

resources and information that may otherwise be affected by the Project. For significant cultural resources, a Research Design and Data Recovery Program may be necessary and would be prepared and carried out to mitigate impacts if needed. Collected cultural artifacts would be cataloged, and permanently curated with an appropriate institution. Artifacts would be analyzed to identify function and chronology as they relate to the history of the area. Faunal material would be identified as to species. A final monitoring report shall be prepared if unanticipated cultural resources are discovered.

Source: Cultural Resource Survey Report (Appendix G).

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| c) | Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|----|--|--------------------------|-------------------------------------|--------------------------|--------------------------|

A paleontological record search was conducted by the Los Angeles Natural History Museum on December 29, 2011 (see Appendix H). The records search indicated that there are no known paleontological resources on the Project site or in the immediate area. The search indicated that the closest recorded vertebrate fossil local is in the northern portion of the City of Corona where a deer fossil was found (McLeod, 2011). Corona is located approximately 10 miles to the southwest of the Project site. The deer fossil was found in different geologic deposits than those mapped to occur at the Project site, but geologic deposits similar in character to those where the deer was found might occur beneath the surface in the Project area. Although unlikely, there is the potential for impacts to paleontological resources to occur when grading operations cut into the geological deposits that are buried beneath the surface, especially when the excavations go below five feet in depth. The District has ordinary construction restrictions in place for unanticipated discoveries that would stop excavation in the area if a vertebrate fossil discovery were to occur. Implementation of the following additional mitigation measure would further reduce the potential for adverse impacts to paleontological resources in the event of an unanticipated discovery:

MM CUL 2: *Construction shift foremen, excavation equipment operators and other construction workers with responsibility for observing construction excavations shall be instructed by a representative of the District or its contractor to be observant for the potential occurrence of fossils in the geologic materials encountered, and shall be instructed and authorized to halt excavation in the area if vertebrate fossils are discovered. In the event of a discovery, work in the area shall cease until the discovery is evaluated by a qualified paleontologist. If evaluation by a qualified paleontologist indicates that the discovery may yield significant scientific information, then excavation in the area shall be continued only as directed by a qualified paleontologist and in a manner allowing for collection of significant fossil material and stratigraphic information. Significant fossil remains collected shall be cleaned, sorted, cataloged, and offered for collection in a scientific institution with a permanent paleontological collection. A paleontological monitoring report shall be prepared if a significant paleontological discovery occurs.*

Source: McLeod, 2011 (Appendix H).

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| d) | Disturb any human remains, including those interred outside of formal cemeteries? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
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No Impact: A cultural resource records search was conducted through the Eastern Information Center and did not indicate any burials within the Project area, or within one mile of the Project area. Given that there is no evidence of human remains at the site, no impact to human remains is anticipated. In the event that human remains are encountered unexpectedly during Project construction, District has ordinary construction restrictions in place for unanticipated discoveries that would stop excavation in the area. In this case all work in the vicinity of the discovery would cease and the county coroner would be contacted per the California Public Resources Code and *CEQA Guidelines* Section 15064.5(e) (1).

Source: Cultural Resource Survey Report (Appendix G).

VI. GEOLOGY AND SOILS. Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a Known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. There are no known earthquake fault surface traces in the U.S. Geological Survey (USGS) 7.5-minute <i>Riverside East, California</i> quadrangle, where the Project would be located. The closest surface traces of faults mapped as active by the State are those associated with the San Jacinto Fault Zone located approximately six to the northeast and the Elsinore Fault Zone located approximately 15 miles to the southwest.</p> <p>Sources: California Department of Conservation, 2013a; Jennings and Bryant. 2010; City of Riverside, 2013.</p>				
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Less than Significant Impact. All of southern California is considered to be a seismically active region where strong seismic ground shaking is possible from regional fault systems. Three major fault systems pass within 20 miles of the City of Riverside where the Project is located: the San Andreas Fault; the San Jacinto Fault Zone and the Elsinore Fault Zone. These and other regional fault systems are capable of generating strong seismic ground shaking in the Project area.</p> <p>Because of the low likelihood of a moderate to large earthquake occurring during the short (i.e., approximately six month) construction period, the potential for construction personnel to experience strong seismic ground shaking is low. Due to the short construction period, the risk of exposure of people or structures to strong seismic ground shaking during construction is less than significant.</p> <p>Underground facilities can sustain damage from seismic shaking but they are less vulnerable than aboveground facilities because movements are confined by surrounding soil. The City of Riverside Municipal Code would require a site specific geotechnical investigation and incorporation of all recommendations of the geotechnical report into the final design. With the application of the geotechnical report engineering recommendations, the risk of damage to Project facilities due to strong seismic shaking is less than significant. Furthermore, the facilities would be underground and, therefore, would not pose a significant risk to persons or property.</p> <p>Source: Riverside Municipal Code 17.16.010.B; Project Description.</p>				

iii)	Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Less than Significant Impact. Shaking from a moderate to large earthquake can potentially result in liquefaction in areas where groundwater is shallow and soils consist of uncompacted, granular materials. Depth to ground water beneath the Project area is more than 100 feet, making the risk of liquefaction very low. The City of Riverside General Plan supports this conclusion, identifying the Project area to have a low risk of liquefaction. Therefore, the risk of liquefaction at the Project site is less than significant.</p> <p>Source: City of Riverside, 2013; TRC, 2013b.</p>					
iv)	Landslides or mudflows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project occurs in gently sloping terrain in an urbanized area. There are no substantial slopes that could be susceptible to landslides or mudflows in the Project area.</p> <p>Sources: Project Description; USGS 7.5 minute Topographic Map, Riverside East Quadrangle.</p>					
b)	Result in substantial changes in topography, unstable soil conditions from excavation, grading or fill, or soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Less than Significant Impact. The Project occurs in gently sloping terrain in an urbanized area. The preliminary design drawings in Appendix A show changes to topography would be minor. Most of the storm drain alignment would be returned to existing grade. The filling of the existing University Wash would require a Clean Water Act Section 404 Permit from the USACE, Clean Water Act 401 Water Quality Certification from the RWQCB, and an application for a Streambed Alteration Agreement with CDFW. Mitigation for filling of the wash would occur as described in Part IV, Biological Resources. As described in the Project Description, construction would occur under the State General Permit for storm water discharges from construction sites (SWRCB Order 2009-0009-DWQ). The State General Permit provides for water quality protection during construction through a comprehensive program of permit registration, discharge prohibitions, BMPs for water quality protection, monitoring, reporting and enforcement. The General Permit is hereby incorporated by reference and available for review at www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml. The General Permit would require the implementation of a SWPPP including Best Management Practices for controlling soil erosion. The District would be responsible for controlling erosion until construction is completed, surfaces are stabilized, and a Notice of Termination is filed with the RWQCB and accepted by RWQCB. Compliance with the SWPPP required by the General Permit would ensure that soil erosion is less than significant.</p> <p>Sources: Project Description; USGS 7.5 minute Topographic Map, Riverside East Quadrangle; SWRCB, 2009.</p>					
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the Project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project occurs in gently sloping terrain in an urbanized area with no identified geologic stability issues. The near-surface geology consists of alluvial sediments. Liquefaction is addressed in Item VI.a.iii above and determined to be a less than significant risk. Furthermore, there is no existing terrain that could be susceptible to landslides, collapse or lateral spreading. The preliminary design drawings in Appendix A show changes to topography would be minor. Most of the storm drain alignment would be returned to existing grade. Construction areas that are not repaved would be stabilized. The Project does not involve the withdrawal of fluid from a geologic reservoir and, therefore, would not have the potential to cause subsidence. Considering these factors, the Project would not affect or be affected by any unstable geologic unit or unstable soil.</p> <p>Sources: Project Description; USGS 7.5 minute Geologic Map, Riverside East Quadrangle.</p>					

d)	Be located on expansive soil, as defined by Article 1803.5 of the California Building Code, creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. Because the Project is an underground installation, it is not susceptible to adverse effects by expansive soil. The Figure PS-3 in City of Riverside General Plan Public Safety Element maps the locations in the City where expansive soils are present. Expansive soils have not been identified in the Project area and are not expected to occur.</p> <p>Sources: Preliminary Design Drawings (Appendix A); City of Riverside, 2007.</p>					
e)	Have soils incapable of adequately supporting any structures, fill or other improvements associated with the Project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Less than Significant Impact. The Project occurs in gently sloping terrain in an urbanized area with no identified geotechnical stability issues. Near-surface geology consists of alluvial sediments. A geotechnical study would be completed and all recommendations of the geotechnical study would be incorporated into the final Project design. With the application of the geotechnical report engineering recommendations, soils would support all improvements associated with the Project.</p> <p>Sources: Project Description; USGS 7.5 minute Geologic Map, Riverside East Quadrangle.</p>					
VII. HAZARDS AND HAZARDOUS MATERIALS. Would the Project:		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant	No Impact
a)	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Less than Significant Impact. Vehicles and equipment necessary for construction and maintenance could contain or require the temporary, short-term use of potentially hazardous substances, such as fuels, lubricating oils, and hydraulic fluids. Hazardous materials accident and impact prevention would occur through adherence to relevant state and federal hazardous materials laws and regulations and Best Management Practices. Key regulatory requirements that the Project would follow to protect the public and the environment during routine transport, use or disposal of hazardous materials include:</p> <ul style="list-style-type: none"> • 29 CFR 1910 Subpart H OSHA regulations for hazardous materials safety in the workplace; • 49 CFR Subtitle B regulations for hazardous material transportation safety; • California Water Code Division 7 regulations for water quality protection; • 22 CCR Division 4.5 regulations for hazardous waste management, transport and disposal; and • 8 CCR 5194 regulations for safe exposure to hazardous materials in remediation and hazardous waste operations. <p>BMPs required by the NPDES General Permit for stormwater discharges from construction sites would also be implemented include, but not limited to, the use of a specified locations for construction vehicle refueling and a frequent vehicle inspection schedule designed to identify potential leaks from equipment as early as practical. The construction contractor would also implement (in addition to regulatory and District requirements) their own compliance management programs to ensure that regulatory requirements are adhered to and that worker and public safety are secured. Considering key relevant laws and regulations in place, with implementation of BMPs the hazard to the public or the environment from the routine use of hazardous materials by the Project would be less than significant.</p> <p>Sources: Project Description; cited regulations.</p>					

b)	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Less than Significant Impact. Because vehicles and equipment necessary for construction and maintenance could require short-term use of hazardous materials such as fuels, lubricating oils, and hydraulic fluids, the potential exists for an accidental release of hazardous materials. If a release of these materials were to occur it could have the potential to impact workers, the public and the environment if not properly contained and removed. Hazardous materials accident and impact prevention would be through adherence to relevant state and federal hazardous materials laws and regulations and Best Management Practices described in Item VII.a, above. Considering key relevant laws and regulations in place, with implementation of District BMPs the hazard to the public or the environment from routine use of hazardous materials by the Project would be less than significant.</p> <p>Sources: Project Description; cited regulations.</p>					
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. There are no schools within one-quarter mile of the Project. Therefore, there would be no impact. The closest school is the John W. North High School separated from the Project footprint by more than 0.25 mile.</p> <p>Source: Project Description; City of Riverside, 2007; Google Earth 1994 Aerial Image.</p>					
d)	Be located on a site, which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Less Than Significant With Mitigation. Approximately 900 feet of the Project storm drain installation would occur on the former Devoe site (2625 Durahart Street), which is on agency hazardous materials release lists maintained pursuant to Government Code Section 65962.5 due to past or open regulatory oversight files with agencies having jurisdiction over hazardous materials releases. The Devoe site was identified to have past or open files with California Department of Toxic Substances Control (DTSC), the Santa Ana RWQCB, the County of Riverside Department of Environmental Health, the City of Riverside Fire Department the DTSC, and the U.S. Environmental Protection Agency (USEPA).</p> <p>Project design planning included a hazardous materials investigation completed, in part, to determine if the portion of the Devoe site where Project construction will occur has been effected by past hazardous material releases. The investigation included completion of five soil borings along the proposed storm drain main line where it traverses the Devoe property. Soil samples were obtained from each boring and 15 samples from depths ranging to 15 feet below the ground surface were analyzed for volatile organic compounds (EPA Method 8260B), total petroleum hydrocarbons (EPA Method 8015), and metals (EPA Methods 6010B/7471). Results showed concentrations of hazardous constituents were low (TRC 2013b). No areas were identified to have constituents of concern at concentrations high enough to require remediation or special handling during construction. In addition to the sampling on the Devoe site, the hazardous materials investigation included collection and laboratory analysis of eight soil samples from depths ranging to five feet from the University Wash channel bottom and banks. The samples from the channel area were analyzed for the same parameters, as well as herbicides (EPA Method 8150) and semi-volatile organic compounds (EPA Method 8270C). As for the samples from the Devoe site, no areas were identified to have constituents of concern at concentrations high enough to require remediation or special handling during construction.</p>					

In addition to soil sampling and analysis, the hazardous materials investigation included consultation with the DTSC, RWQCB, USEPA and County of Riverside Department of Environmental Health (TRC 2013b). DTSC was contacted on July 16, 2013, their last involvement with the Devoe property was a Site Assessment performed for USEPA in 2006 and DTSC referred the case back to the RWQCB. The RWQCB was contacted on July 17, 2013 and indicated their last involvement with the Devoe property was issuance of a June 17, 1997 No Further Action letter. While the RWQCB issued a No Further Action letter in 1997, their case closure summary indicated that corrective action should be reviewed if the land use at the site should change. The Project would not result in any change in land use for the Devoe property. The USEPA was contacted on July 15, 2013. They indicated the Devoe site was listed as a low priority in their database and that they would have no involvement if intrusive work was conducted. The County of Riverside Department of Environmental Health was contacted on July 17, 2013. They requested additional information that has been provided, but have not yet indicated whether they have any interest in the Project. Based on results of sampling previously described, no requirements are anticipated that could affect environmental impacts of the Project.

The hazardous materials investigation conducted for Project design planning did not identify any soils with constituents of concern at concentrations high enough to require remediation or special handling during construction. Nevertheless, there is potential for unknown impacted soils to be encountered during Project construction. In the event that unknown hazardous materials impacted soils are discovered in the subsurface during construction, key relevant regulatory requirements that would protect the public and the environment from unsafe levels of exposure during construction include:

- 29 CFR 1910.120 OSHA regulations for safety at hazardous materials release remediation sites;
- 49 CFR Subtitle B regulations for hazardous material transportation safety would apply to offsite transport of any soil classified as hazardous waste;
- 22 CCR Division 4.5 regulations for hazardous waste management, transport and disposal would apply to any soil classified as hazardous waste; and
- 8 CCR 5192 regulations for safety in hazardous materials release remediation operations.

These regulations require hazardous material control and safety measures to minimize the potential for unhealthful exposure to workers, the public or the environment. The following mitigation measure would further ensure that the hazard to the public and the environment is mitigated so that the impact would be less than significant:

MM HAZ 1: *Construction shift foremen, excavation equipment operators and other construction workers with responsibility for observing construction excavations shall be instructed by a representative of the District or its environmental contractor to be observant for the potential occurrence of soils impacted by unknown hazardous materials releases, and shall be instructed and authorized to halt excavation in the area immediately and notify the District's Project Engineer if such soils are discovered. In the event that unknown hazardous material impacted soils are discovered in the subsurface during construction, ground disturbing activities in the vicinity of the discovery shall cease until a California Professional Engineer or California Professional Geologist with experience in hazardous materials management can assess the impacted soils and, if necessary, develop appropriate management measures in coordination with jurisdictional agencies.*

With this mitigation measure and compliance with existing regulations to protect the public and the environment, the hazard to the public or the environment from construction of the Project would be less than significant.

Maintenance would not typically include ground disturbing activities. Therefore, the hazard to the public or the environment from exposure to unknown impacted soils would be less than significant for Project maintenance activities.

Sources: Project Description; TRC, 2012; TRC 2013a; TRC 2103b, City of Riverside, 2007.

e)	For a Project located within an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project result in a safety hazard for people residing or working in the Project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project area is not within any airport land use plan and the closest airport is the Flobob airport located more than two miles west of the Project. Therefore, there would be no impact.</p> <p>Source: City of Riverside, 2007.</p>					
f)	For a Project within the vicinity of a private airstrip, would the Project result in a safety hazard for people residing or working in the Project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project area is not proximal to any private airstrip. The closest airport is the Flobob airport located more than two miles west of the Project. Therefore, there would be no impact.</p> <p>Source: City of Riverside, 2007.</p>					
g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Less than Significant Impact. The City of Riverside General Plan Public Safety Element Figure PS 8.1 identifies freeways, arterials, and streets that may be used in an emergency, including evacuation, and that can influence response time, including Massachusetts Avenue and other streets in the Project area. Project construction work that would occur within City street rights-of-way could affect emergency response times or evacuation in the event of an emergency during construction. The Project would require lane closures during the construction period and short term traffic control may also be required for Project facility maintenance. The District's standard practices include notification to public safety agencies of construction in roadways prior to initiating work. Most of the construction work would occur off of the street and would not affect public access routes. With the District's standard practice of notifying public safety agencies prior to construction, and considering that no arterial roadways would be affected, interference with emergency response plans and emergency evacuation plans would be less than significant.</p>					
h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where Wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project is in an urbanized area. The Project area is not designated as a fire hazard area in the City of Riverside General Plan Public Safety Element. No impacts on wildlands or wildland fires would be expected.</p> <p>Source: Project Description; City of Riverside, 2007.</p>					
VIII. HYDROLOGY AND WATER QUALITY. Would the Project:		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant	No Impact
a)	Violate or conflict with any adopted water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Less Than Significant Impact. As described in the Project Description, construction would occur under the State General Permit for storm water discharges from construction sites. The General Permit would</p>					

require the implementation of a SWPPP including Best Management Practices for water quality protection during construction. The District would be responsible for complying with the General Permit until construction is completed, surfaces are stabilized, and a Notice of Termination is filed and accepted by the RWQCB. Compliance with the SWPPP required by the General Permit would ensure that water quality standards are not violated by the Project. Therefore, affects to storm water quality during construction would be less than significant.

For maintenance of facilities, the District would be required to comply with the NPDES Municipal Separate Storm Sewer System (MS4) permit issued by the RWQCB (Order No. R8-2010-0033). The MS4 Permit provides a comprehensive program for storm water management, monitoring and reporting for protection of water quality. The MS4 Permit is hereby incorporated by reference and available for review at www.waterboards.ca.gov/santaana/board_decisions/adopted_orders/ord. The Project would implement BMPs to prevent new sources of storm water pollutants and, therefore, would be in compliance with the MS4 permit.

Completion of the Project is expected to reduce erosion and sediment and debris transport through the existing University Wash channel, and would eliminate direct urban runoff to the channel flow as well as stagnant conditions that occur during low flow. With the implementation of BMPs, the Project would be a net benefit to water quality and would not be expected to violate or conflict with any adopted water quality standard. Furthermore, the Project would comply with the General Permit for construction and the MS4 permit for maintenance. Therefore, there would be no conflict with waste discharge requirements.

Sources: Project Description; SWRCB, 2009 (Construction General Permit); RWQCB, 2010 (MS4 Permit).

b)	Result in substantial discharges of typical stormwater pollutants (<i>e.g. sediment from construction activities, hydrocarbons, and metals from motor vehicles, nutrients and pesticides from landscape maintenance activities, metals of other pollutants from industrial operation,</i>) or substantial changes to surface water quality including, but not limited to, temperature, dissolved oxygen, pH, or turbidity?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Less than Significant Impact. See response to Item VIII.a, above.

c)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (<i>e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted</i>)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Less than Significant Impact. The Project does not involve pumping of groundwater or propose any increase in impermeable surfaces. Most of the Project alignment would be returned to existing grade as part of construction. The segment of University Wash channel that would be filled is short, narrow, and intermittent and, therefore, a negligible source of ground water recharge.

Source: Project Description.

d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of a watercourse or wetland, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Less than Significant Impact. The Project would not increase the area of impermeable surfaces or surface runoff. Most of the Project alignment would be returned to existing grade as part of construction.

<p>The segment of University Wash channel that would be filled includes area that may be classified as jurisdictional waters by the USACE. Mitigation would occur for impacts as previously described in Section IV, Biological Resources. While mitigation would occur for impacts, there would not be substantial erosion or siltation on or off site because the Project would comply with the State General Permit for storm water discharges from construction sites, including implementation of a SWPPP and BMPs for water quality protection. The District would be responsible for compliance with the General Permit until construction disturbances are stabilized and a Notice of Termination accepted by the RWQCB. Considering these factors, the proposed changes to drainage patterns would be less than significant.</p>				
e)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Less than Significant Impact. The Project is part of a Master Drainage Plan for the University Wash area and is expected to provide relief from existing frequent flooding conditions in the adjacent areas. The Master Drainage Plan is designed to address current and future needs and provide for orderly development of drainage infrastructure. The Stage 3 Project described in the Project Description is the only Stage of the Master Plan being considered for construction at this time. Once constructed, the proposed Project would provide 10-year flood protection to the adjacent area and would substantially improve drainage along the Project reach during the majority of storm events. Additionally, when ultimately paired with future master planned improvements upstream, the proposed storm drain improvements would provide 100-year flood protection to adjacent properties and public rights-of-way. Because the Project would be consistent with the Master Drainage Plan, impacts to existing drainage patterns, storm water runoff drainage capacity, and flooding would be beneficial.</p> <p>Sources: Project Description; Master Drainage Plan.</p>				
f)	Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Less than Significant Impact. See response to Item VIII.e, above.</p>				
g)	Place housing within a 100-year flood hazard area as mapped on Federal Flood Hazard boundary of Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project does not propose any housing.</p> <p>Source: Project Description.</p>				
h)	Place structures or fill within a 100-year flood hazard area, which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Less than Significant Impact. Most of the Project area is within the 100-year flood hazard area (Zone AE). See response to Item VIII.e, above.</p> <p>Sources: Project Description; Federal Emergency Management Agency, 2008.</p>				
i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

<p>Less than Significant Impact. There are no levies or dams at locations where failure could result in inundation of the Project area. The Project would have a beneficial effect on storm water management capacity consistent with the Master Drainage Plan as described in the response to Item VIII.e, above. Considering these factors, the risk of exposure to flooding is less than significant.</p> <p>Sources: Project Description; City of Riverside, 2007.</p>					
j)	Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project area is an inland area beyond the limits of a reasonably foreseeable tsunami run-up. There are no nearby large bodies of water that could pose a threat of seiche. The Project occurs in gently sloping terrain in an urbanized area. There are no substantial slopes that could be susceptible to mudflows. Therefore, no impacts are anticipated.</p> <p>Sources: Project Description; USGS 7.5 minute Topographic Map, Riverside East Quadrangle.</p>					
IX. LAND USE PLANNING. Would the Project:		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant	No Impact
a)	Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The proposed Project consists of the construction and maintenance of an underground storm drain segment that is part of the area Master Drainage Plan. It would not physically divide any community because it would be underground.</p> <p>Sources: Project Description.</p>					
b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the Project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Less Than Significant Impact. The General Plan use designation for the Site is General Industrial (I) except at the eastern termination of the Project the designation is Industrial Business/Office Park (B/OP) on Durahart street south of Massachusetts Avenue. The entire Project Study Area is also zoned as General Industrial (I) except at the eastern termination of the Project the zoning is Industrial Business/Manufacturing Park (B/OP) on Durahart street south of Massachusetts Avenue. The northern approximately 800 feet of the Project alignment would occur along the University Wash Channel that is zoned with a water-course (WC) overlay, signifying the wash as a flood control facility area (City of Riverside, 2013a and 2013b). Continued utilization and expansion of the University Wash channel is expressly permitted pursuant to the WC zoning overlay. The proposed Project would not conflict with any goals, objectives, or policies that are detailed in the City of Riverside General Plan (City of Riverside, 2007). The Project would comply with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) (refer to Biological Resources section) and therefore would not conflict with that planning document. Because the proposed Project would not conflict with any applicable land use plan, policy or regulation of an agency with jurisdiction over the Project, there would be no impact.</p> <p>Sources: Project Description; City of Riverside, 2007; City of Riverside, 2013a and 2013b).</p>					

X. MINERAL RESOURCES. Would the Project:		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant	No Impact
a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project area is urbanized and no known mineral resources would be affected. The Project area is designated as an MRZ-3 mineral resource zone by the State.</p> <p>Source: City of Riverside, 2007.</p>					
b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project area is urbanized and no known mineral resources would be affected.</p> <p>Source: City of Riverside, 2007.</p>					
XI. NOISE. Would the Project result in:		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant	No Impact
a)	Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Less than Significant Impact. As described in the Project Description, Project construction hours would be limited to the time between 7 am and 7 pm on weekdays, and 8 am to 5 pm on Saturdays if any Saturday work occurs. Noise levels that could be expected from construction equipment were modeled and a technical summary is provided in Appendix I. Results of noise modeling indicates that the only noise-sensitive receptor location where construction noise levels would be higher than typical for the urban setting is one residence located adjacent to the east end of the Project on the south side of Massachusetts Avenue. Heavy equipment operation in proximity to the closest residence would be intermittent and short term due to this receptor's location adjacent to the southeastern most end of the Project. Construction activities within 100 feet of the closest residence would take place on several occasions during the approximate 6-month construction period, with work lasting from a few hours each occasion to a day or two each occasion. Considering the short term and limited construction hours, and considering that the Project would not exceed any established standard, the expected levels of construction noise would be less than significant. Maintenance work would typically generate little noise that would be short term and temporary at any given location. Therefore, maintenance noise would be less than significant.</p> <p>Source: Appendix I.</p>					
b)	Exposure of persons to or generation of excessive ground-borne vibration or ground-borne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Less than Significant Impact. Ground born vibrations that could be expected from construction equipment were modeled and a technical summary is provided in Appendix I. The modeling shows that ground vibrations 100 feet from the Project construction site would range up to 0.011 inch per second peak particle velocity, which is below the level perceptible to humans. Sensitive receptors are located</p>					

<p>100 feet or more from the Project with the exception of one residence located at the east end of the Project, approximately 25 feet outside the construction footprint. Modeling shows that ground borne vibration 25 feet outside the Project could range up to 0.076 inch per second peak particle velocity, which is above the barely perceptible threshold and below the distinctly perceptible threshold. Considering that vibrations would be short term, intermittent and below the distinctly perceptible threshold, the impact would be less than significant.</p> <p>Source: Appendix I.</p>				
c)	A substantial permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Less than Significant Impact. Most noise associated with the Project would be from constructing which would be short-term. Maintenance work would typically use minimal powered mobile equipment that would generate little noise that would be short term and temporary at any given location. Therefore, maintenance noise would be less than significant.</p> <p>Source: Project Description.</p>				
d)	A substantial temporary or periodic increase in ambient noise levels in the Project vicinity above levels existing without the Project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>Less than Significant Impact. Existing ambient noise levels in the Project area are relatively high, with contributing sources of noise that include streets and the major highways, a nearby railroad, and multiple industrial facilities, including a rock crushing and trucking facility, and an auto salvage facility. Most of the proposed Project would traverse non-noise sensitive industrial land uses. The closest noise sensitive land uses are the Riverside Community Center on Hulen Place, and residences on Massachusetts Avenue and Chicago Avenue. Noise impacts from construction were modeled to determine if they would pose a substantial increase in noise compared to existing levels. A technical summary of the modeling is provided in Appendix I. The modeling shows that the only noise-sensitive receptor location where construction noise levels would be higher than typical for the urban setting is one residence located adjacent to the east end of the Project on the south side of Massachusetts Avenue. Heavy equipment operation in proximity to the closest residence would be intermittent and short term due to this receptor's location adjacent to the southeastern most end of the Project. Construction activities within 100 feet of the closest residence would take place on several occasions during the approximate 6-month construction period, with work lasting from a few hours each occasion to a day or two each occasion. Considering the short term and limited construction hours, and considering that the Project would not exceed any applicable standard, the expected levels of construction noise would be less than significant.</p> <p>Source: Appendix I.</p>				
e)	For a Project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the Project expose people residing or working in the Project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project area is not within any airport land use plan. The closest airport is the Flobob airport located more than two miles west of the Project. Therefore, there would be no impact.</p> <p>Source: City of Riverside, 2007.</p>				

f)	For a Project within the vicinity of a private airstrip, would the Project expose people residing or working in the Project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project area is not proximal to any private airstrip. The closest airport is the Flobob airport located more than two miles west of the Project. Therefore, there would be no impact.</p> <p>Source: City of Riverside, 2007; Google Earth 1994 Aerial Image.</p>					
XII. POPULATION AND HOUSING. Would the Project:		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant	No Impact
a)	Induce substantial population growth in an area, either directly (<i>for example, by proposing new homes and businesses</i>) or indirectly (<i>for example, through extension of roads or other infrastructure</i>) resulting in substantial adverse physical impacts or conflicts with the adopted general plan, specific plan, or other applicable land use or regional plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact: The proposed Project would not add additional housing or create permanent jobs that would induce population growth either directly or indirectly. No impact would occur.</p> <p>Source: Project Description.</p>					
b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact: The Project Site is in an area surrounded by industrial and commercial uses. There is no housing on the Project Site. No impacts to housing would occur.</p> <p>Sources: Project Description.</p>					
c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact: The proposed Project would not displace people and, thus would not necessitate the construction of replacement housing elsewhere. No impact would occur.</p> <p>Sources: Project Description.</p>					
XIII. PUBLIC SERVICES		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant	No Impact
a)	Would the Project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the following public services:				
	Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Less Than Significant Impact: The Project is a storm drain infrastructure Project that would not result in the need for any other new public services or facilities. Therefore, there would be no need for new or physically altered governmental facilities for any reason. No fire station would be directly or indirectly affected by the Project. However, because the proposed Project would involve construction in City streets, (i.e., Spruce Street, Massachusetts Avenue, and Durahart Street) fire protection response time to the immediate vicinity of the Project could be temporarily affected during Project construction. Prior to any roadway lane closures, the District (or its contractor) would notify emergency response agencies so that alternate routes can be used if needed. Considering that construction would be short term and emergency response agencies would be notified prior to lane closures, the impact on fire protection response time would be less than significant.

Source: Project Description; City of Riverside, 2013.

Police protection?

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☐
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Less Than Significant Impact: The Project is a storm drain infrastructure Project that would not result in the need for any other new services or facilities. Therefore, there would be no need for new or physically altered governmental facilities for any reason. No police station would be directly or indirectly affected by the Project. However, because the proposed Project would involve construction in City streets, police protection response time to the immediate vicinity of the Project could be temporarily affected during Project construction. Prior to any roadway lane closures, the District (or its contractor) would notify emergency response agencies so that alternate routes can be used if needed. Considering that construction would be short term and emergency response agencies would be notified prior to lane closures, the impact on police protection response time would be less than significant.

Source: Project Description; City of Riverside, 2007.

Schools?

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No Impact: There are no schools within or adjacent to the Project Site or in the surrounding vicinity. No school facilities would need to be altered a result of the proposed Project. The proposed Project would not affect local school enrollment. No impacts would occur.

Source: Project Description; City of Riverside, 2007.

Parks?

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No Impact: There are no parks within or adjacent to the Project Site or in the surrounding vicinity. No park or other recreational facilities would need to be altered a result of the proposed Project. No impacts would occur.

Source: Project Description; City of Riverside, 2007.

Other public facilities?

☐
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No Impact: The Riverside Community Shelter located on Hulen Place (at the intersection of Hulen Place and Massachusetts Avenue) provides services to the local homeless population. However, this facility would not be disrupted, displaced, or altered in anyway by the proposed Project. There are no other public facilities within the vicinity of the Project that would be affected by the Project. No impact to public facilities would occur.

XIV. RECREATION		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant	No Impact
a)	Would the increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project would not result in population growth, housing or any other impact that could increase the use of existing neighborhood and regional parks and recreational facilities. No parks occur in the Project area that could be affected. Considering these factors, no impact is expected.</p> <p>Source: Project Description; City of Riverside, 2007.</p>					
b)	Does the Project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project would not result in population growth, housing or any other impact that could change the demand for recreational facilities, and recreational facilities are not included in the Project area. Considering these factors, no impact is expected.</p> <p>Source: Project Description; City of Riverside, 2007.</p>					
XV. TRANSPORTATION AND TRAFFIC. Would the Project:		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant	No Impact
a)	Conflict with an adopted plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Less Than Significant Impact: The City of Riverside General Plan - Circulation and Community Mobility Element provides goals, policies, programs, and standards that correlate the City's transportation system with types, intensities and locations of land uses within the City (City of Riverside, 2007). The Project would occur in an industrial-zoned area primarily off of streets and roadways. A portion of construction would occur on Massachusetts Avenue and Durahart Street, which are local streets. Short-term lane closure could also occur on Spruce Street, an Arterial street. Streets affected by Project construction would be returned to existing grade and resurfaced as part of Project construction. The Project would not affect any freeway or highway.</p> <p>There are no designated trails or bikeways on streets that would be affected by construction disturbances. Massachusetts Avenue in the blocks that would be affected by construction is a designated route for Bus 13 operated by the Riverside Transit Agency (RTA). There is a bus stop at Massachusetts and Hulen Place approximately 100 feet west of the Site. Project construction in Massachusetts Avenue would be accomplished with lane closures and a traffic management plan. RTA would be notified by the District prior to any lane closures on Massachusetts Avenue.</p>					

Construction workers and deliveries of equipment and materials to the site would generate vehicle trips for the period of construction work. These temporary localized increases in construction traffic would be too small to measurably affect circulation efficiency. Furthermore, it is expected that most construction trips would originate from within the region, thereby not adding to regional traffic.

Maintenance of the Project would occur primarily from vehicular trips that already exist for maintenance of other storm water control facilities in the area. Therefore, maintenance of the proposed Project would generate negligible new vehicle trips.

Considering the low levels of trips generated, the short term construction traffic and the negligible traffic related to maintenance would not have a measureable effect on circulation efficiency and would not conflict with the General Plan Circulation and Community Mobility Element or any other established plan or policy for circulation or transportation. Therefore, the impact would be less than significant.

Source: Project Description; City of Riverside, 2007; Riverside Transit Agency, 2013.

b)	Conflict with an adopted congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the appropriate congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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No Impact: The Project is within the area of the Riverside County Congestion Management Program (CMP). The CMP establishes a minimum level of service for Principal Arterials, Highways and Interstates in the Program area. The 91, 215 and 60 freeways are the only transportation routes proximal to the Project Site that are managed under the CMP. The Project would not directly affect any of these transportation routes.

Construction workers and delivery of equipment and materials to the site would generate vehicle trips for the period of construction work. These temporary localized increases in construction traffic would be too small to measurably affect level of service. Furthermore, it is expected that most construction trips would originate from within the region, thereby not adding to regional traffic.

Maintenance of the Project would occur primarily from vehicular trips that already exist for maintenance of other storm water control facilities in the area. Therefore, maintenance of the proposed Project would generate negligible new vehicle trips.

Considering the low levels of trips generated, the short term construction traffic and the negligible traffic related to maintenance would not have a measureable effect on circulation efficiency and would not conflict with the CMP. Therefore, the impact would be less than significant.

Source: Project Description; Riverside County Transportation Commission, 2011.

c)	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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No Impact: The Project consists of the construction and maintenance of an underground storm water drain. Where construction occurs in road rights-of-way, grades would be returned to existing condition as part of construction. Traffic would be controlled during construction with a traffic management plan. Considering these factors, the Project would not substantially increase any traffic hazards.

Source: Project Description.

d)	Would the Project result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Less Than Significant Impact: Project construction would require temporary lane closures on Spruce Street, Massachusetts Avenue and Durahart Street. Any work in the Spruce Street right-of-way would need to occur under City traffic management plan requirements for Arterial streets. A portion of the storm drain would be installed in Massachusetts Avenue and Durahart Street. Work in these street rights-of-way would need to occur under City traffic management plan requirements for Local streets. Following the completion of construction, the Project would not affect traffic flows with the exception of possible short-term lane closures under a traffic control plan to perform occasional maintenance. Emergency response agencies would be notified of prior to lane closures pursuant to District standard practice. With the implementation of the traffic control measures following City requirements and notification to emergency response agencies prior to lane closures, impacts on emergency access would be less than significant.</p> <p>Source: Project Description.</p>					
e)	Would the Project result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Less Than Significant Impact: The Project would not affect any parking lot or parking area with the potential exception of parking on City streets within the Project area. The streets where work would occur do not have high parking demand so the temporary impact on parking in the work area would be less than significant. Maintenance of the Project facilities following construction would generally not require more than a few vehicles at a time and would be short term at any given location so the effect on parking would be negligible.</p> <p>Source: Project Description.</p>					
f)	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, pedestrian facilities, or other alternate transportation or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Less Than Significant Impact: The City of Riverside General Plan - Circulation and Community Mobility Element provides goals, policies, programs, and standards that correlate the City's transportation systems including alternate transportation planning. The Project would occur in an industrial-zoned area primarily off of streets and roadways. A portion of construction would occur on Massachusetts Avenue and Durahart Street, which are local streets. Short-term lane closure could also occur on Spruce Street, an Arterial street. Streets affected by Project construction would be returned to existing grade and resurfaced as part of Project construction. Therefore, there would be no long-term effect on alternate transportation.</p> <p>There could be temporary sidewalk closures during construction but there are no designated pedestrian trails or bikeways on streets that would be affected. Massachusetts Avenue in the blocks that would be affected by construction is a designated route for Bus 13 operated by the Riverside Transit Agency (RTA). There is a bus stop at Massachusetts and Hulen Place approximately 100 feet west of the Project Site. Project construction in Massachusetts Avenue would be accomplished with lane closures and a traffic management plan accounting for bus service on this route.</p> <p>The Project would not conflict with any adopted policies, plans, or programs regarding public transit, bicycle, pedestrian facilities, or alternate transportation facilities. Therefore, the impact would be less than significant.</p> <p>Source: Project Description, City of Riverside, 2007</p>					

XVI. UTILITIES AND SERVICE SYSTEMS. Would the Project:	Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant	No Impact
a) Impact the following facilities requiring or resulting in the construction of new facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				
Electricity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>The Project is a storm drain infrastructure improvement that would not use electricity once constructed. Electricity demand during construction would be minor and short term and can be satisfied by existing infrastructure. There would be no need for new or expanded electricity infrastructure. Prior to construction work, Underground Service Alert would be notified to locate buried utilities, and potholing would be conducted to confirm their location and depth at selected locations. Underground utilities would be marked and flagged prior to construction to ensure that they are not adversely affected by Project construction.</p> <p>Source: Project Description.</p>				
Natural Gas	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>The Project is a storm drain infrastructure improvement that would not use natural gas. There would be no need for new or expanded natural gas infrastructure. Prior to construction work, Underground Service Alert would be notified to locate buried utilities, and potholing would be conducted to confirm their location and depth at selected locations. Underground utilities would be marked and flagged prior to construction to ensure that they are not adversely affected by Project construction.</p> <p>Source: Project Description.</p>				
Communication System	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>The Project is a storm drain infrastructure improvement that would not require or result in new communications systems infrastructure. Prior to construction work, Underground Service Alert would be notified to locate buried utilities, and potholing would be conducted to confirm their location and depth at selected locations. Underground utilities would be marked and flagged prior to construction to ensure that they are not adversely affected by Project construction.</p> <p>Source: Project Description.</p>				
Street lighting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>The Project is a storm drain infrastructure improvement that would not require or result in new street lighting infrastructure.</p> <p>Source: Project Description.</p>				
Public facilities, including roads and bridges	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project would not affect or be affected by any bridges. A portion of the Project would occur in City street rights-of-way and upon completion of construction surface grades, paving and curbs would be returned to existing conditions. No new road construction or paved areas would be needed. Because no expansion of existing roads or bridges would be needed, there would be no related impacts.</p> <p>Source: Project Description.</p>				

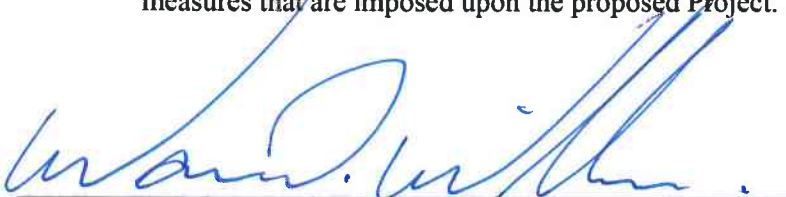
b)	Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Less Than Significant With Mitigation. The Project is part of a Master Drainage Plan for the University Wash area and is expected to provide relief from existing frequent flooding conditions in the adjacent areas. The Master Drainage Plan is designed to address current and future needs and provide for orderly development of drainage infrastructure. The Stage 3 Project described in the Project Description is the only Stage of the Master Plan being considered for construction at this time and the Project would not require construction of additional drainage facilities. Once constructed, the proposed Project would provide 10-year flood protection to the adjacent area and would substantially improve drainage along the Project reach during the majority of storm events. Additionally, when ultimately paired with future master planned improvements upstream, the proposed storm drain improvements would provide 100-year flood protection to adjacent properties and public rights-of-way. The environmental analyses in other sections of this Initial Study document indicate that the Project impacts would be less than significant with mitigation.</p> <p>Source: Project Description.</p>					
c)	Have sufficient water supplies available to serve the Project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Less than Significant Impact. The proposed Project is a storm drain improvement Project and would have negligible water demand. Therefore, no new or expanded entitlements would be needed and the effect on water supply would be less than significant.</p> <p>Source: Project Description.</p>					
d)	Result in a determination by the wastewater treatment provider which serves or may serve the Project that it has adequate capacity to serve the Project's Projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Less than Significant Impact. The proposed Project is a storm drain improvement Project that would not have a long-term wastewater generating stream. Sanitary waste during construction would be managed via self-contained portable sanitary facilities with wastes hauled from the site by a licensed contractor. The Project would not routinely generate wastewater following completion of construction. Considering these factors, the impact would be less than significant.</p> <p>Source: Project Description.</p>					
e)	Be served by a landfill with sufficient permitted capacity to accommodate the Project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>The proposed Project would generate construction and demolition waste on a one time basis during construction. During maintenance, minor amounts of waste such as trash and debris would be generated from cleaning of debris from catch basins and pipes. The limited amount of waste generated would not be substantial compared to the available waste management capacity in the region.</p> <p>Source: Project Description.</p>					

f)	Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<p>No Impact. The Project would comply with all relevant regulations related to solid waste. Therefore, there would be no conflict.</p>					
XVII. MANDATORY FINDINGS OF SIGNIFICANCE.		Potentially Significant Impact	Less Than Significant With Mitigation	Less Than Significant	No Impact
a)	Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Less Than Significant With Mitigation. As described in other sections of this Initial Study, the Project would have a less than significant effect on the environment with mitigation incorporated. With mitigation described in the response to Item IV.b, the Project would not substantially reduce the habitat of any fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community or reduce the number or restrict the range of rare or endangered species. Furthermore, as described in the responses to Items V.b and V.c, no known historic or prehistoric resources would be affected.</p>					
b)	Does the Project have impacts that are individually limited, but cumulatively considerable? (<i>"Cumulatively considerable" means that the incremental effects of a Project are considerable when viewed in connection with the effects of past Projects, the effects of other current Projects, and the effects of probable future Projects.</i>)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Less than Significant Impact. As described in other Sections of this Initial Study, most Project impacts would be limited to those related to construction, which would be short term. No other Projects have been identified nearby that would be expected to have the potential for significant cumulative impacts with Project construction.</p> <p>Project maintenance activities would be minimal, primarily related to periodically cleaning of debris from the Project storm water catch basins and conveyance facilities. Because of the minor, short term and temporary nature of maintenance activities at any given location, Project maintenance does not have the potential for significant cumulative impacts.</p>					
c)	Does the Project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<p>Less Than Significant With Mitigation. As previously described in other sections of this Initial Study, with mitigation measures, environmental effects of the Project would be less than significant. No other potentially significant environmental effects have been identified.</p>					

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- ☐ I find that the proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measures described on an attached sheet have been added to the Project. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed Project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed Project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed Project.



Signature



Date

WARREN D. WILLIAMS, General Manager-Chief Engineer
Printed Name and Title

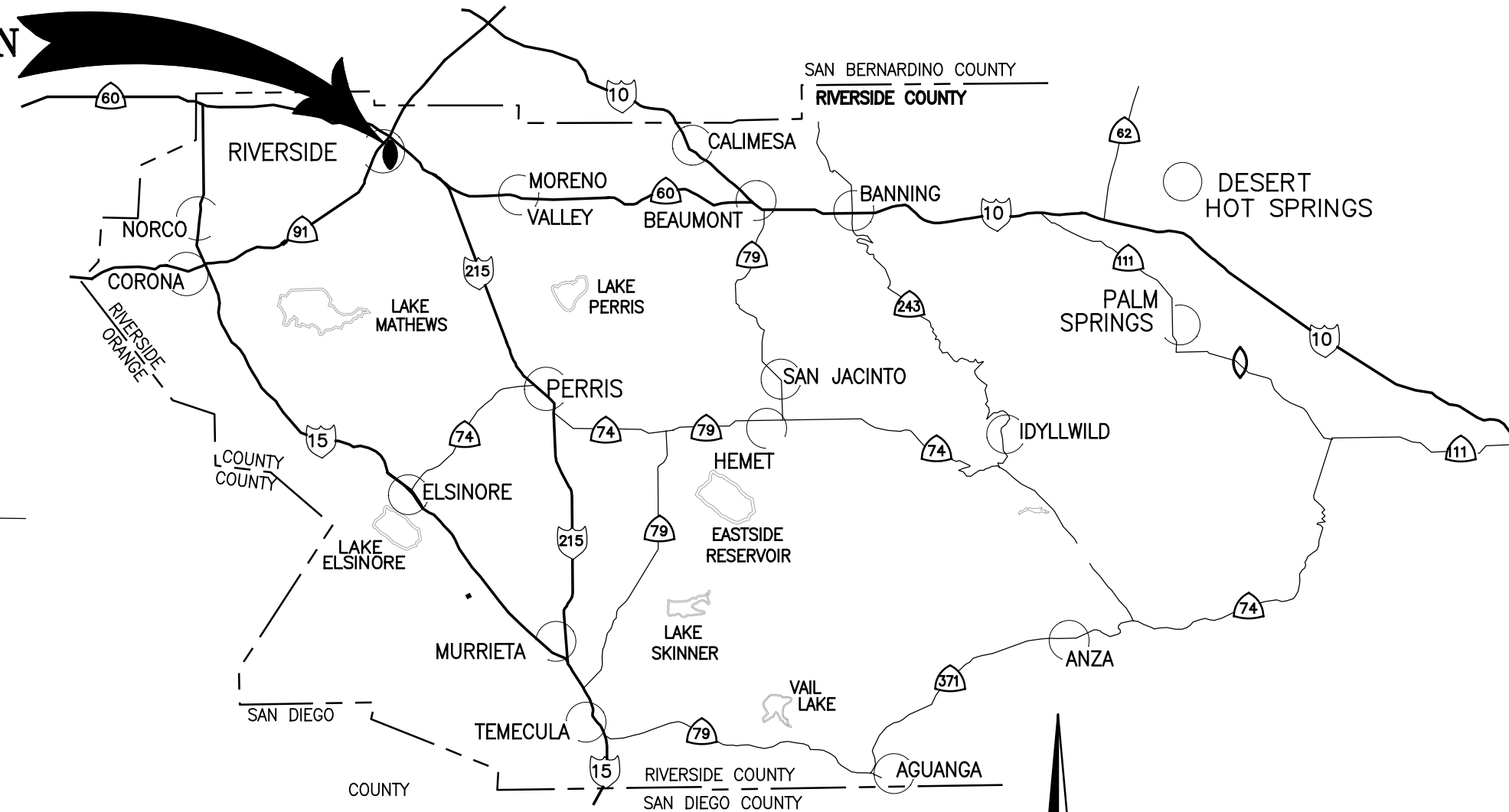
INITIAL STUDY CHECKLIST REFERENCE LIST

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2. California Department of Conservation, 2013a. *Alquist-Priolo Earthquake Fault Zones*. www.consrv.ca.gov/CGS/rghm/ap. Site visited December 9, 2013.
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5. Jennings, Charles W. and Bryant, William A., 2010. *Fault Activity Map of California*. California Department of Conservation California Geologic Data Map Series Map No. 6 – Fault Activity Map of California, 1:750,000 Scale. 2010.
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7. City of Riverside. 2013a. *City of Riverside Zoning Map*. Online at: <http://www.riversideca.gov/planning/zoning.asp>. Site accessed November 22, 2013.
8. City of Riverside. 2013b. *City of Riverside Zoning Code*. Online at: <http://www.riversideca.gov/municode/title19.asp>. Site accessed November 22, 2013.
9. TRC, 2013a. *Phase I Environmental Site Assessment for the Proposed University Wash Channel Improvement Project, Riverside, CA*. July 29, 2013.
10. TRC, 2013b. *Site Investigation Report, Proposed University Wash Channel Improvement, Riverside, CA*. July 29, 2013.
11. TRC, 2012. *Preliminary Environmental Assessment Report, University Wash Channel Project*. April 2012.
12. Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), June 17, 2003, Section 7.5.3 Construction Guidelines, page 7-87.
13. Riverside County Flood Control and Water Conservation District, 1983. *Master Drainage Plan, City of Riverside (University Area)*, Rev. 6. January 25, 1983.
14. RWQCB, 2010. *California Regional Water Quality Control Board, Santa Ana Region, Order No. R8-2010-0033, NPDES No. CAS 618033, National Pollutant Discharge Elimination System (NPDES) General Permit and Waste Discharge Requirements for the Riverside County Flood Control and Water Conservation District, the County of Riverside, and the Incorporated Cities of Riverside County Within the Santa Ana Region, Area-Wide Urban Runoff Management Program*. January 29, 2010. Incorporated by reference and available at www.waterboards.ca.gov/santaana/board_decisions/adopted_orders/ord.
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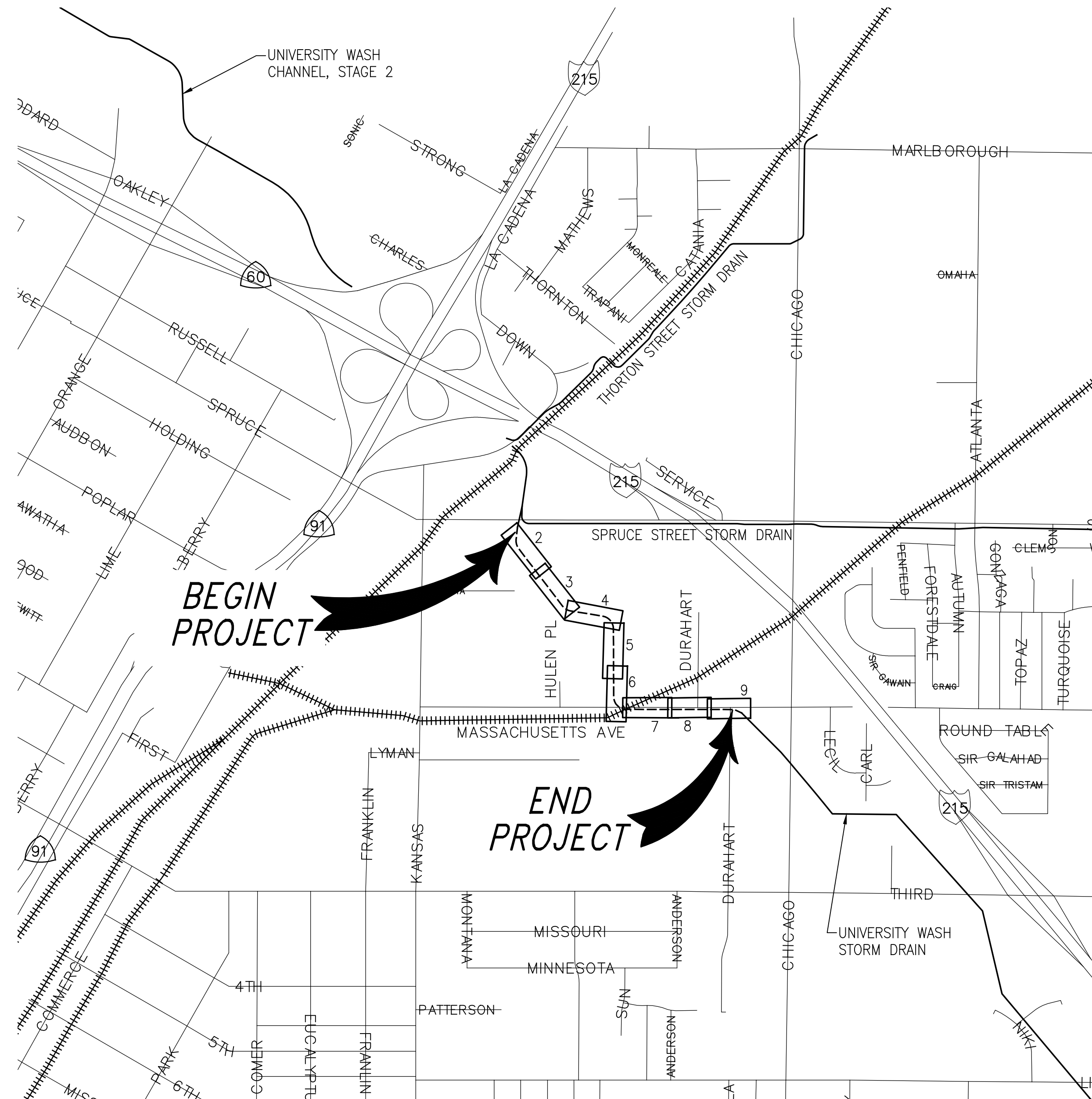
16. SCAQMD 2008. *Localized Significance Threshold Methodology*. July 2008
17. SCAQMD, 2014. *California Emissions Estimator Model (Version 2013.2.2)* [Computer software]. Available from <http://www.aqmd.gov/caleemod/download.htm>. Retrieved January 2, 2014.
18. SWRCB, 2009. *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities, Order No. 2009-0009-DWQ*. September 2, 2009 (amended November 16, 2010 and July 17, 2012). Incorporated by reference and available at www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

Appendix A
Preliminary Design Drawings

RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT



VICINITY MAP
N.T.S.



INDEX MAP
N.T.S.

SHEET INDEX

TITLE SHEET
PLAN & PROFILE
GRADING PLAN

SHEET NO.

1
2-9
10

- ## R.C.F.C. & W.C.D. STANDARD DRAWINGS

JS	229	JUNCTION STRUCTURE NO. 4
MH	252	MANHOLE NO. 2
MH	254	MANHOLE NO. 4
MH	257	MANHOLE SHAFT FOR CAST PIPE
MH	259	STANDARD DROP STEP
MH	260	24" MANHOLE FRAME AND COVER
M	814	ABBREVIATIONS AND SYMBOLS
M	816	CONCRETE BULKHEAD
TS	301	TRANSITION STRUCTURE NO. 1


CITY OF RIVERSIDE STANDARD DRAWINGS

STD 200	CURB AND GUTTER
STD 400	STORM WATER CATCH BASIN TYPE 2



SPPWC STANDARD DRAWINGS

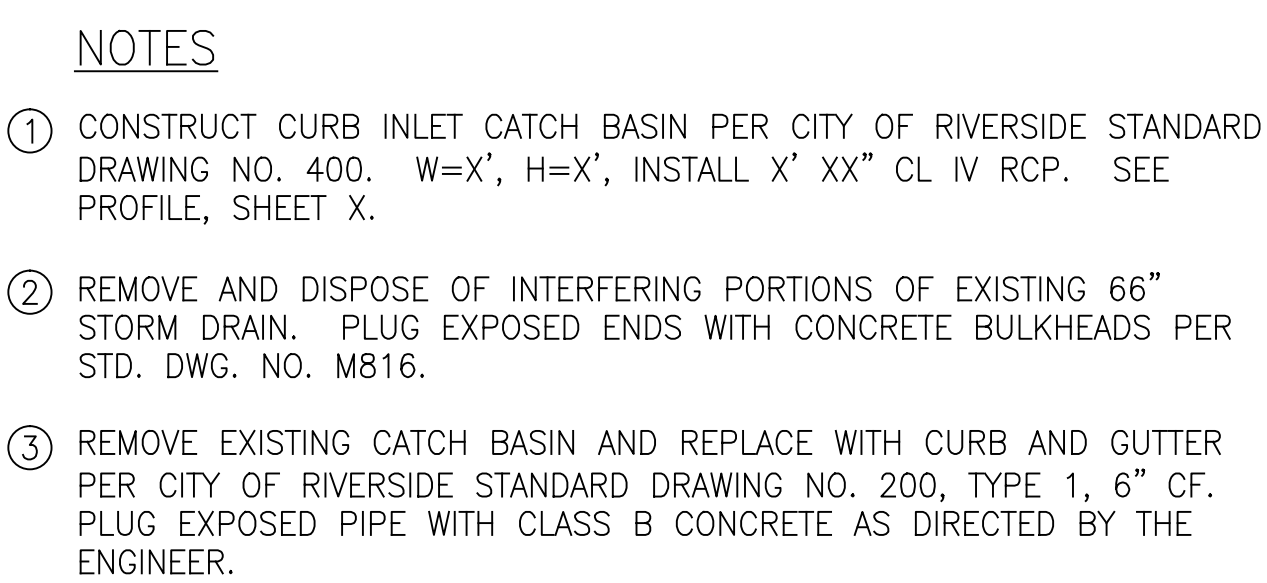
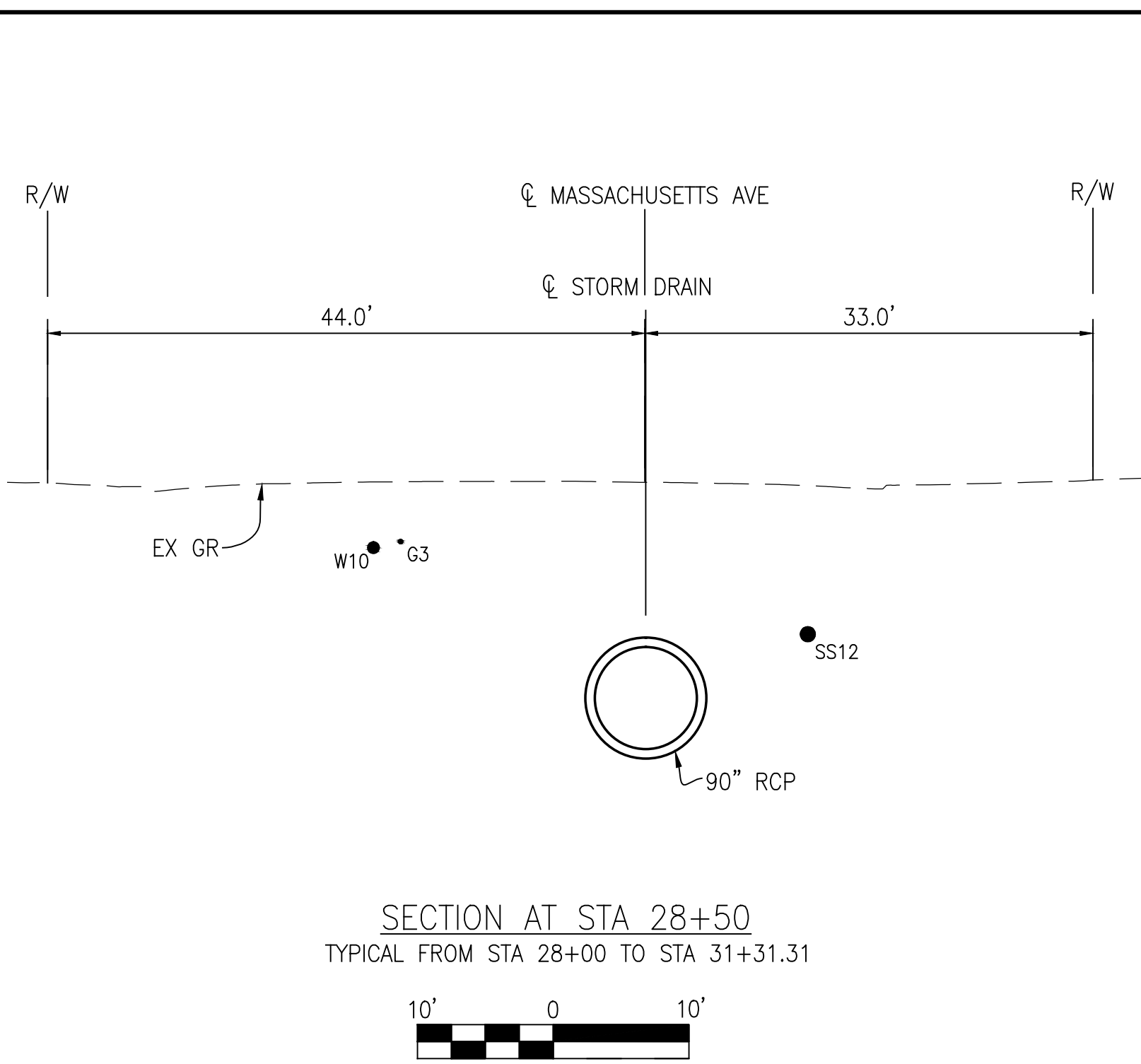
STD 225-2	BLANKET PROTECTION FOR PIPES
STD 300-3	CURB OPENING CATCH BASIN
STD 307-3	CURB OPENING CATCH BASIN WITH MANHOLE IN STREET
STD 314-3	MODIFICATIONS FOR SIDE OPENING CATCH-BASIN
STD 380-4	CONCRETE COLLAR FOR RCP


GENERAL NOTES

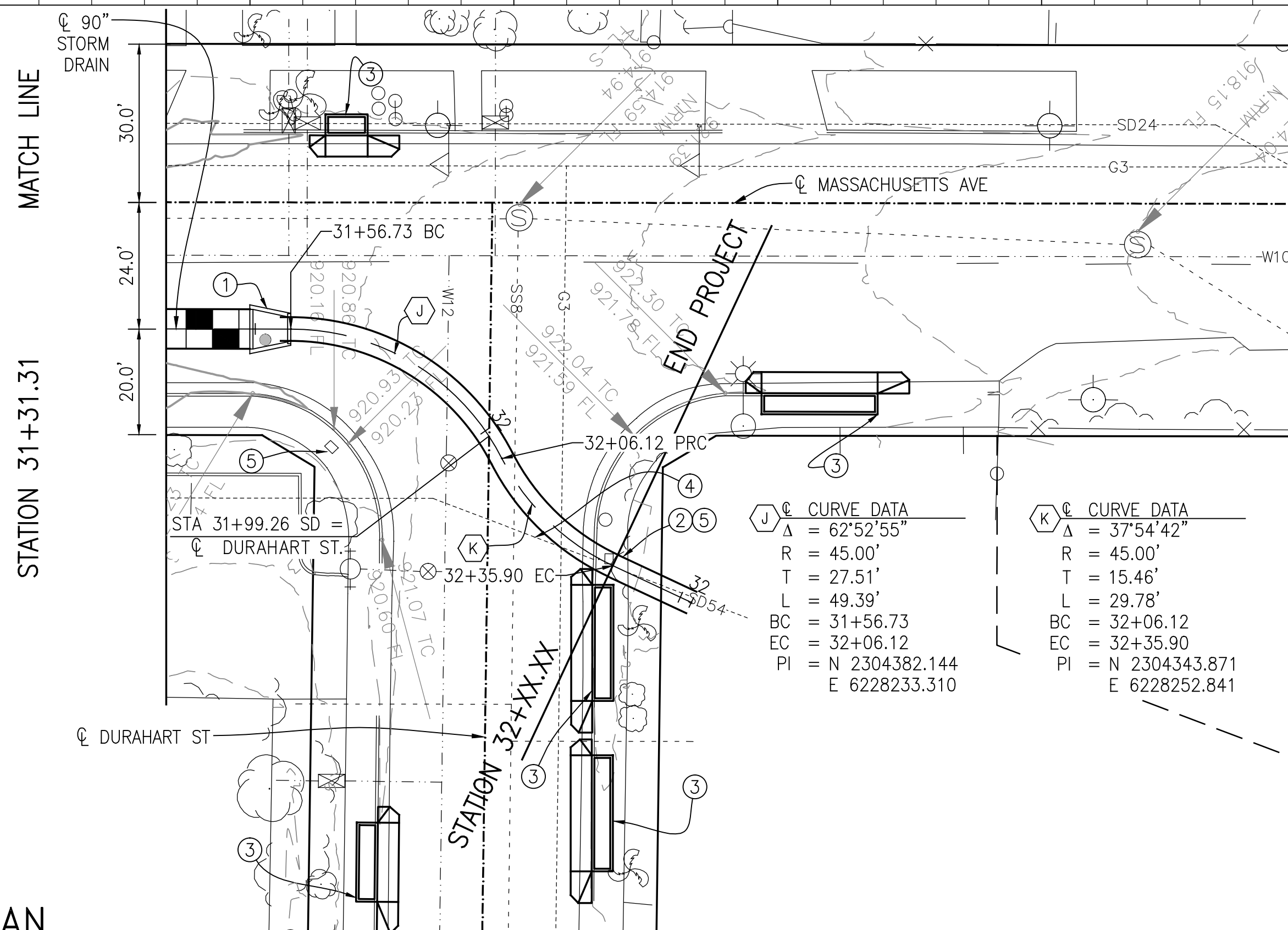
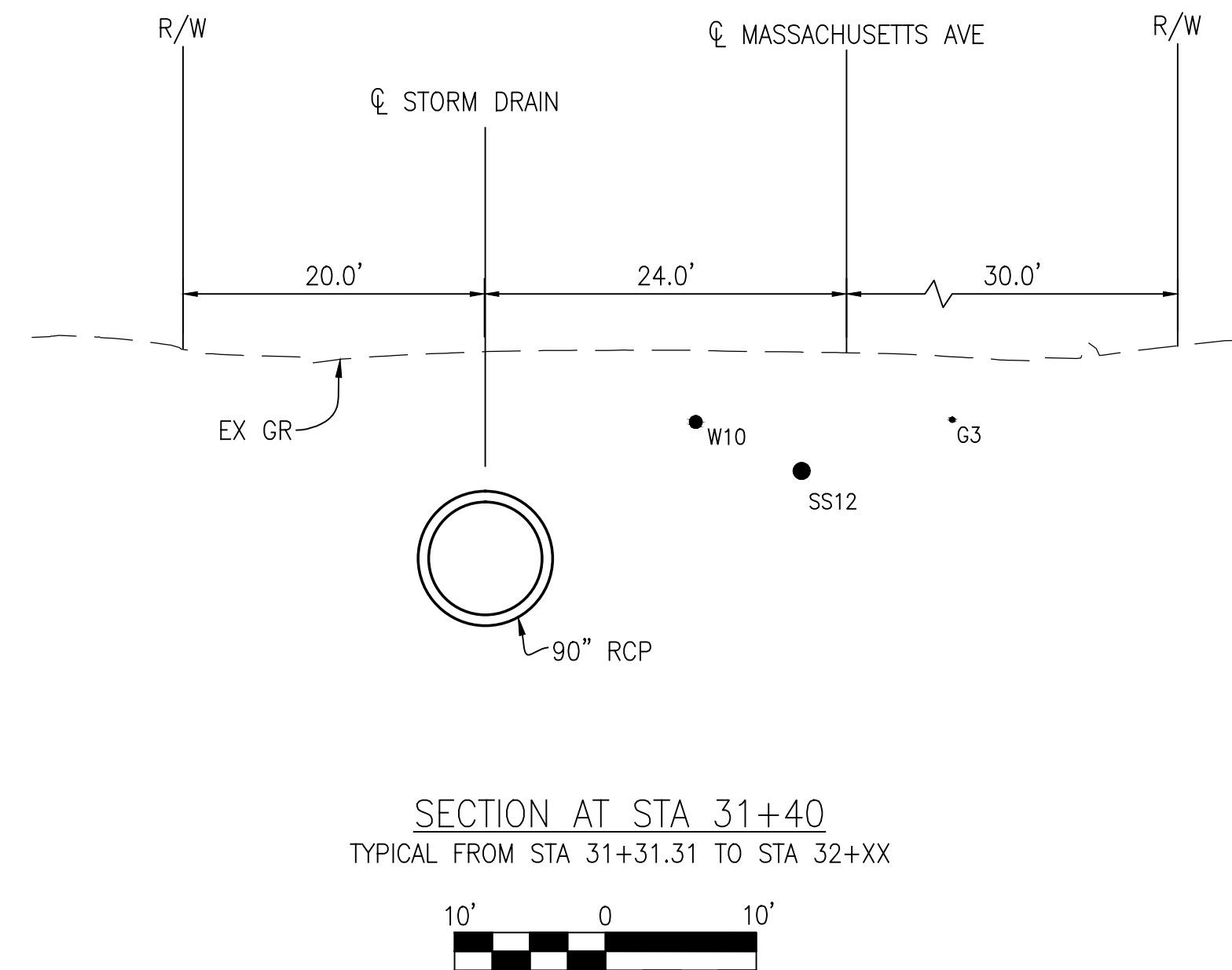
1. BEDDING AND STAYLINES ARE SHOWN ON RCFD STANDARD DRAWING M815 UNLESS SHOWN OTHERWISE ON THESE PLANS
2. ALL STATIONING REFERS TO CENTERLINE OF CONSTRUCTION.
3. ALL STORM DRAIN REFERENCES AND CROSS SECTIONS ARE TAKEN LOOKING DOWNSTREAM.
4. TOPOGRAPHY BY DIGITAL PHOTOGRAMMETRIC METHODS. AERIAL PHOTOGRAPHS TAKEN AT AN ALTITUDE NOT TO EXCEED A FLYING HEIGHT TO CONTOUR INTERVAL OF 1800. PHOTOGRAPHY DATED 06-06-2012.
5. ALL ELEVATIONS SHOWN ARE IN FEET AND DECIMALS THEREOF BASED ON THE NORTH AMERICAN VERTICAL DATUM (NAVD 88). ALL COORDINATES ARE SHOWN IN FEET AND DECIMALS THEREOF BASED ON THE NORTH AMERICAN DATUM (NAD 83), CALIFORNIA SYSTEM (CCS), ZONE 6 AND EPOCH 2007.00
6. STANDARD DRAWINGS CALLED FOR ON THE PLAN & PROFILE SHALL CONFORM TO THE LATEST EDITION OF R.C.F.C. & W.C.D. STD. DRAWINGS, UNLESS OTHERWISE NOTED.
7. ELEVATIONS AND LOCATIONS OF UTILITIES WERE OBTAINED FROM AVAILABLE INFORMATION AND ARE SHOWN APPROXIMATELY ON THESE PLANS. 48 HOURS BEFORE EXCAVATION CALL UNDERGROUND SERVICE ALERT AT 1-800-227-2600. ALL UTILITIES SHALL BE PROTECTED IN PLACE EXCEPT AS NOTED ON PLANS AND SPECIFICATIONS.
8. THE CONTRACTOR IS REQUIRED TO CONTACT ALL UTILITY AGENCIES REGARDING TEMPORARY SUPPORT AND SHORING REQUIREMENTS FOR THE VARIOUS UTILITY LINES SHOWN ON THESE PLANS.
9. ALL OPENINGS RESULTING FROM CUTTING OR PARTIAL REMOVAL OF EXIST. CULVERTS, PIPES, OR SIMILAR STRUCTURES TO BE ABANDONED SHALL BE SEALED AT BOTH ENDS WITH 6" MIN CLASS "B" CONCRETE.
10. UNLESS OTHERWISE SPECIFIED, MINIMUM STREET RECONSTRUCTION SHALL BE 3" TYPE "B" HOT MIX ASPHALT OVER 6" CLASS 2 AGGREGATE BASE OR AS SPECIFIED BY THE ENGINEER.
11. ALL RECONSTRUCTION, RESURFACING, AND PAVEMENT DELINEATION, CURBS, SIDEWALKS, AND OTHER IMPROVEMENT ARE TO BE RECONSTRUCTED IN KIND AT THE SAME LOCATIONS AND ELEVATIONS AS THE EXISTING IMPROVEMENTS, UNLESS OTHERWISE NOTED.
12.  INDICATES APPROXIMATE SOIL BORING LOCATION PER SOILS REPORT BY CHJ, INC. DATED 09/20/2013.
13. ALL PIPE LENGTHS ARE HORIZONTAL PROJECTIONS (NOT TRUE LENGTHS OF PIPE) AND ARE THE BASIS OF THE ESTIMATES OF QUANTITIES. THE CONTRACTOR SHALL DETERMINE THE TRUE QUANTITY OF PIPE REQUIRED FOR THIS PROJECT PRIOR TO PLACING THE ORDER.

30% 2ND SUBMITTAL

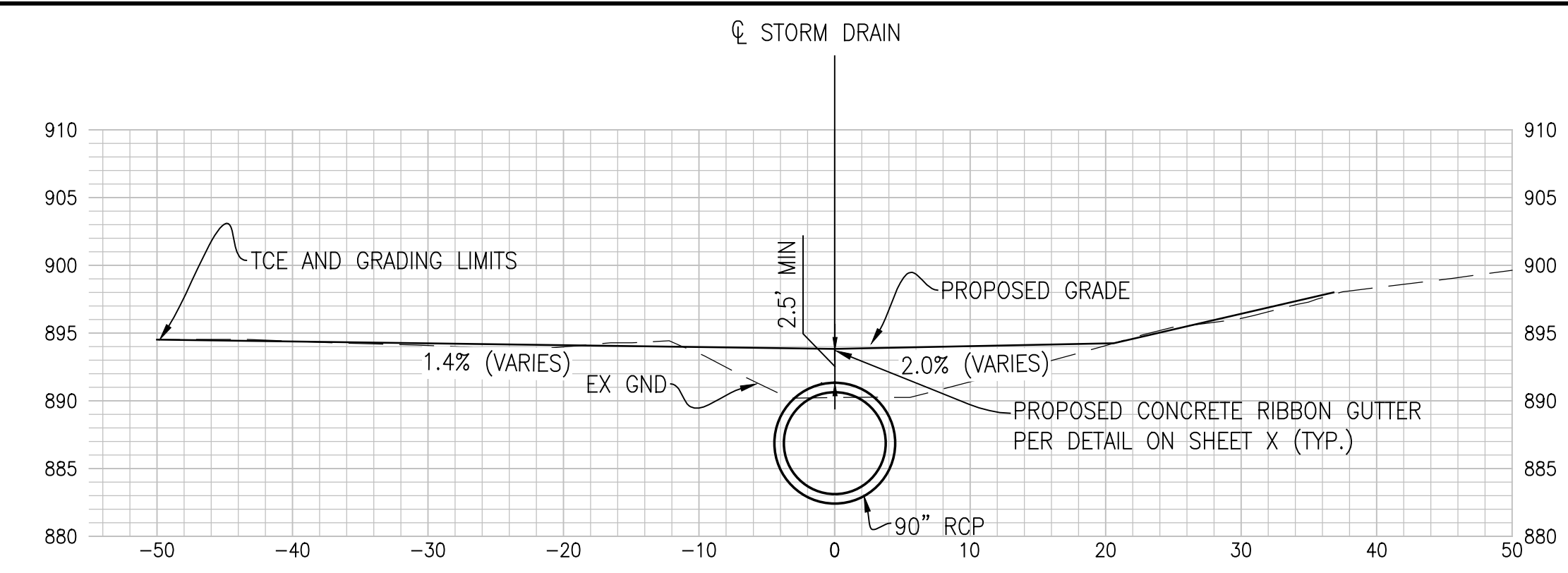
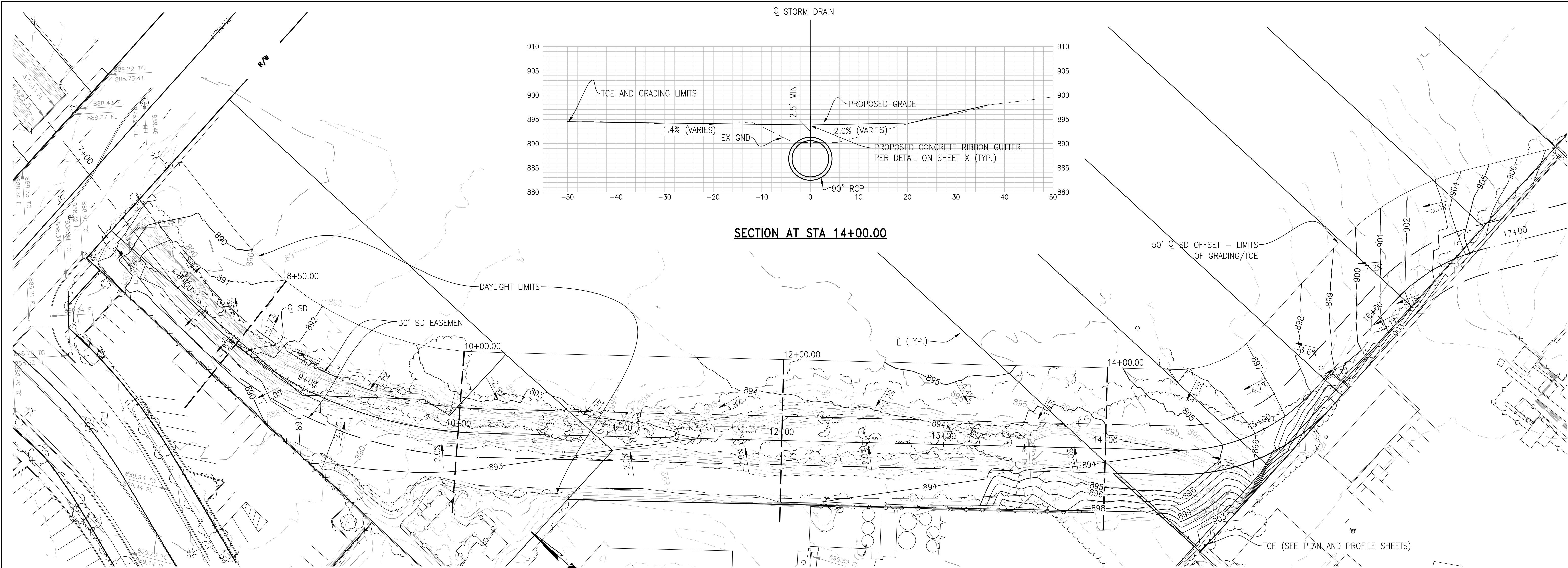
APPROVED BY: ALBERT A. WEBB ASSOCIATES ENGINEER, RCE C67239	ENGINEERING CONSULTANTS 3788 McCRAY STREET RIVERSIDE, CA. 92506 PH. (951) 686-1070 FAX (951) 788-1256		Don't Dig...Until You Call U.S.A. Toll Free 1-800-227-2600  for the location of buried utility lines. Don't disrupt vital services. TWO WORKING DAYS BEFORE YOU DIG	BENCHMARK Z14818 FD PK NAIL, NO TAG, FLUSH AT INTERSECTION OF KANSAS STREET AND SPRUCE STREET. ELEVATION 889.02 NAVD88/NAD83	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">REVISIONS</th> <th colspan="2">ENGINEER</th> <th colspan="2">RCFC&WCD</th> </tr> <tr> <td> </td><td> </td> <td> </td><td> </td> <td> </td><td> </td> </tr> <tr> <td> </td><td> </td> <td> </td><td> </td> <td> </td><td> </td> </tr> <tr> <td> </td><td> </td> <td> </td><td> </td> <td> </td><td> </td> </tr> <tr> <td> </td><td> </td> <td> </td><td> </td> <td> </td><td> </td> </tr> <tr> <td> </td><td> </td> <td> </td><td> </td> <td> </td><td> </td> </tr> <tr> <td> </td><td> </td> <td> </td><td> </td> <td> </td><td> </td> </tr> <tr> <td> </td><td> </td> <td> </td><td> </td> <td> </td><td> </td> </tr> <tr> <td> </td><td> </td> <td> </td><td> </td> <td> </td><td> </td> </tr> <tr> <td> </td><td> </td> <td> </td><td> </td> <td> </td><td> </td> </tr> <tr> <th>REF.</th> <th>DESCRIPTION</th> <th>APPR.</th> <th>DATE</th> <th>APPR.</th> <th>DATE</th> </tr> </table>	REVISIONS		ENGINEER		RCFC&WCD																																																								REF.	DESCRIPTION	APPR.	DATE	APPR.	DATE	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2">RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT</th> </tr> <tr> <td>RECOMMENDED FOR APPROVAL BY:</td> <td>APPROVED BY:</td> </tr> <tr> <td>CHIEF, DESIGN AND CONSTRUCTION</td> <td>GENERAL MANAGER - CHIEF ENGINEER</td> </tr> <tr> <td>DATE:</td> <td>DATE:</td> </tr> </table>	RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT		RECOMMENDED FOR APPROVAL BY:	APPROVED BY:	CHIEF, DESIGN AND CONSTRUCTION	GENERAL MANAGER - CHIEF ENGINEER	DATE:	DATE:	UNIVERSITY WASH STAGE 3 TITLE SHEET	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>PROJECT NO. 1-0-0120</td> </tr> <tr> <td>DRAWING NO. X-XXX</td> </tr> <tr> <td>SHEET NO. 1 OF X</td> </tr> </table>	PROJECT NO. 1-0-0120	DRAWING NO. X-XXX	SHEET NO. 1 OF X
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APPROVED BY: ALBERT A. WEBB ASSOCIATES ENGINEERING CONSULTANTS 3788 MCCRAY STREET RIVERSIDE CA 92506 PH. (951) 686-1070 FAX (951) 788-1256			Don't Dig...Until You Call U.S.A. Toll Free 1-800-227-2600 for the location of buried utility lines. Don't disrupt vital services.	BENCHMARK Z14818 FD PK NAIL, NO TAG, FLUSH AT INTERSECTION OF KAGAS STREET AND SPRUCE STREET. ELEVATION 889.02	REVISIONS ENGINEER RCFC&WCD				RIVERSIDE COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT		UNIVERSITY WASH STAGE 3		PROJECT NO. 1-0-0120
ENGINEER, RCE C67239		DATE:	TWO WORKING DAYS BEFORE YOU DIG		REF. DESCRIPTION APPR. DATE APPR. DATE				RECOMMENDED FOR APPROVAL BY: DATE:	APPROVED BY: DATE:	STA 28+00 TO 31+31.31		DRAWING NO. X-XXX
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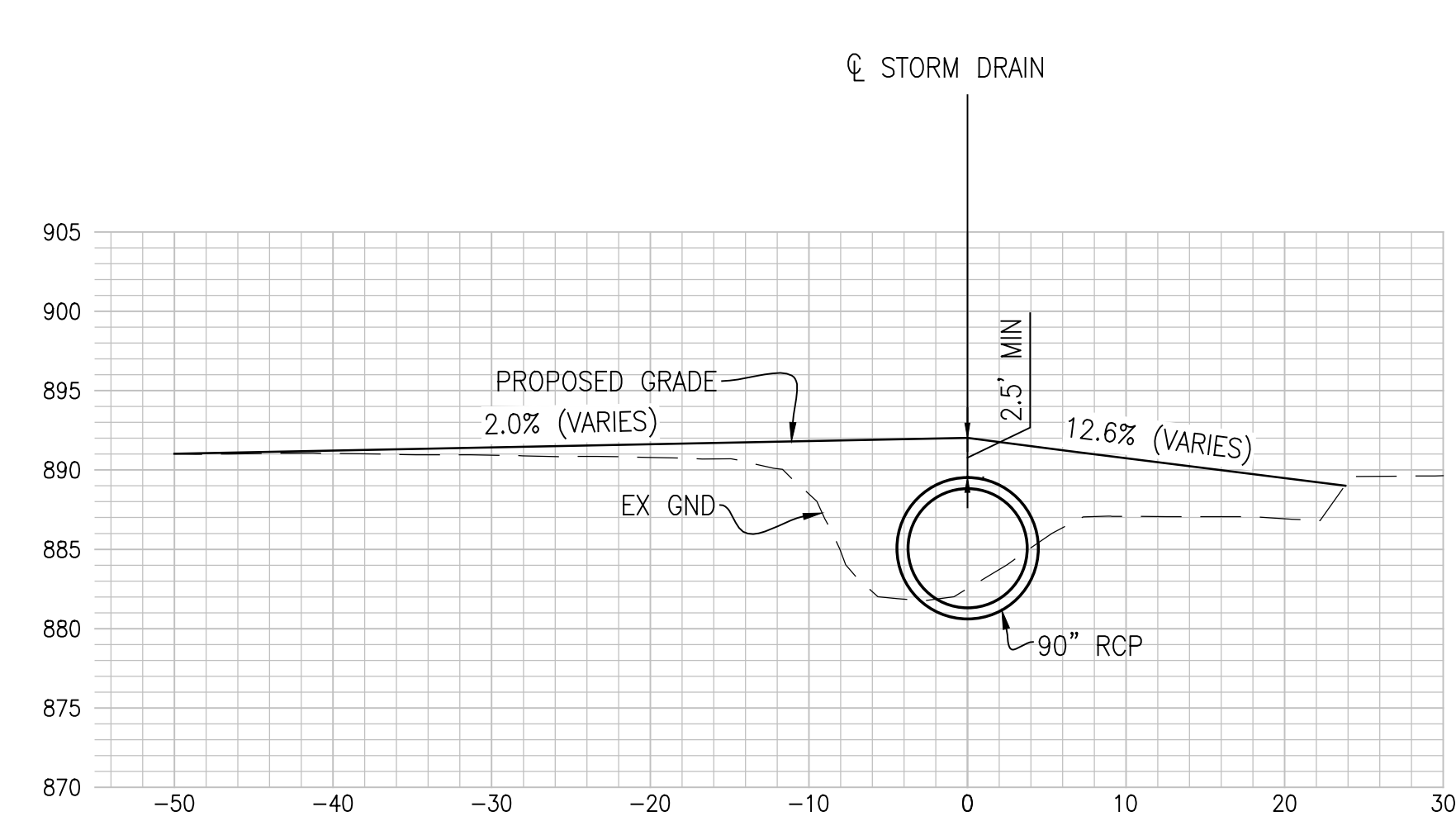


- ① CONSTRUCT MANHOLE NO. 2 PER STD. MH252: D1=90", D2=54".
- ② CONSTRUCT CONCRETE COLLAR PER STD. DWG. NO. M803. D1=54", D2=54".
- ③ CONSTRUCT CURB INLET CATCH BASIN PER CITY OF RIVERSIDE STANDARD DRAWING NO. 400. W=X', H=X', INSTALL X' XX" CL IV RCP. SEE PROFILE, SHEET X.
- ④ REMOVE AND DISPOSE OF INTERFERING PORTIONS OF EXISTING 54" STORM DRAIN. PLUG EXPOSED (DOWNSTREAM) END WITH CONCRETE BULKHEAD PER STD. DWG. NO. M816.
- ⑤ REMOVE EXISTING CATCH BASIN AND REPLACE WITH CURB AND GUTTER PER CITY OF RIVERSIDE STANDARD DRAWING NO. 200, TYPE 1, 6" CF. PLUG EXPOSED PIPE WITH CLASS B CONCRETE AS DIRECTED BY THE ENGINEER.

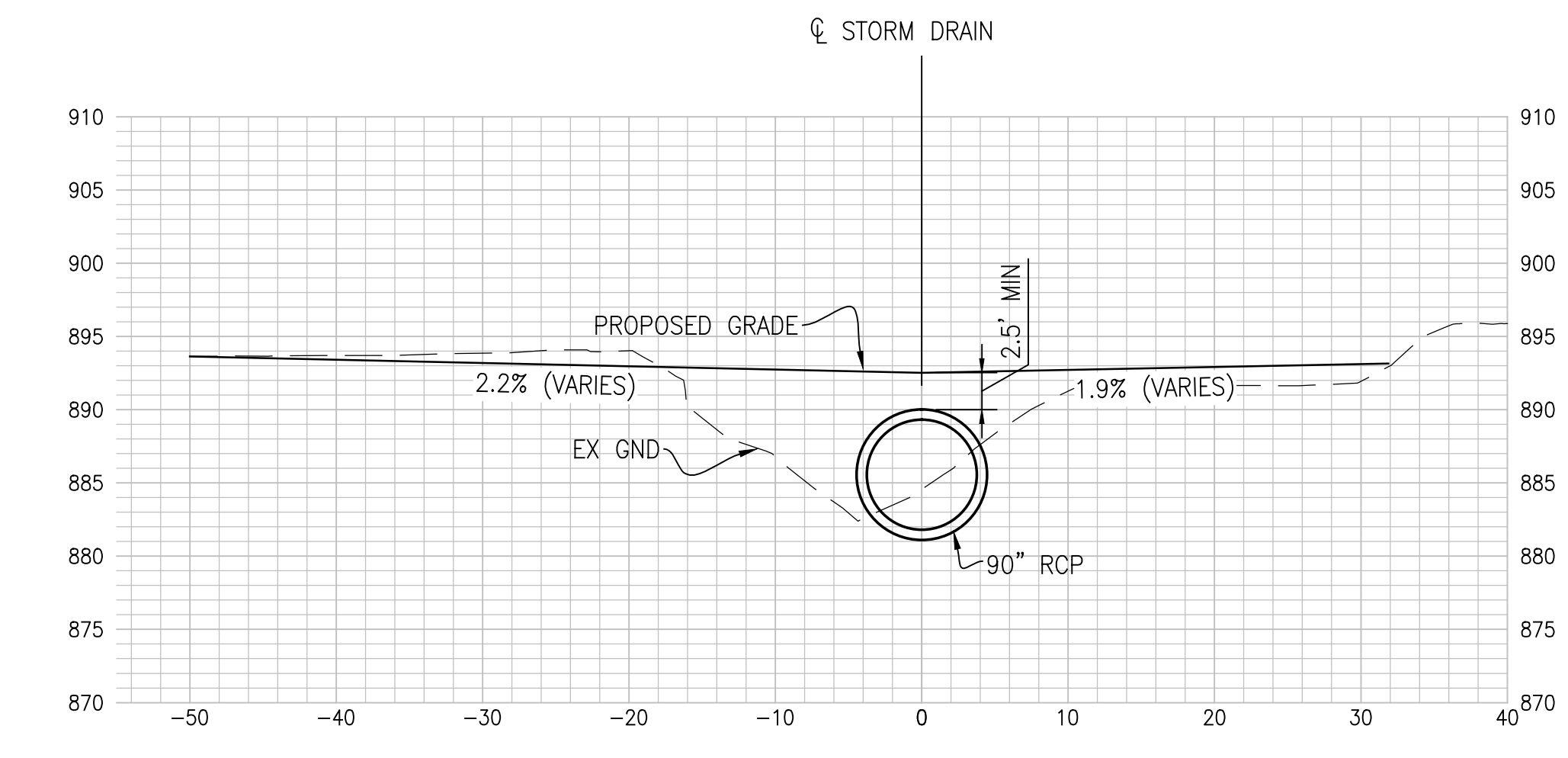


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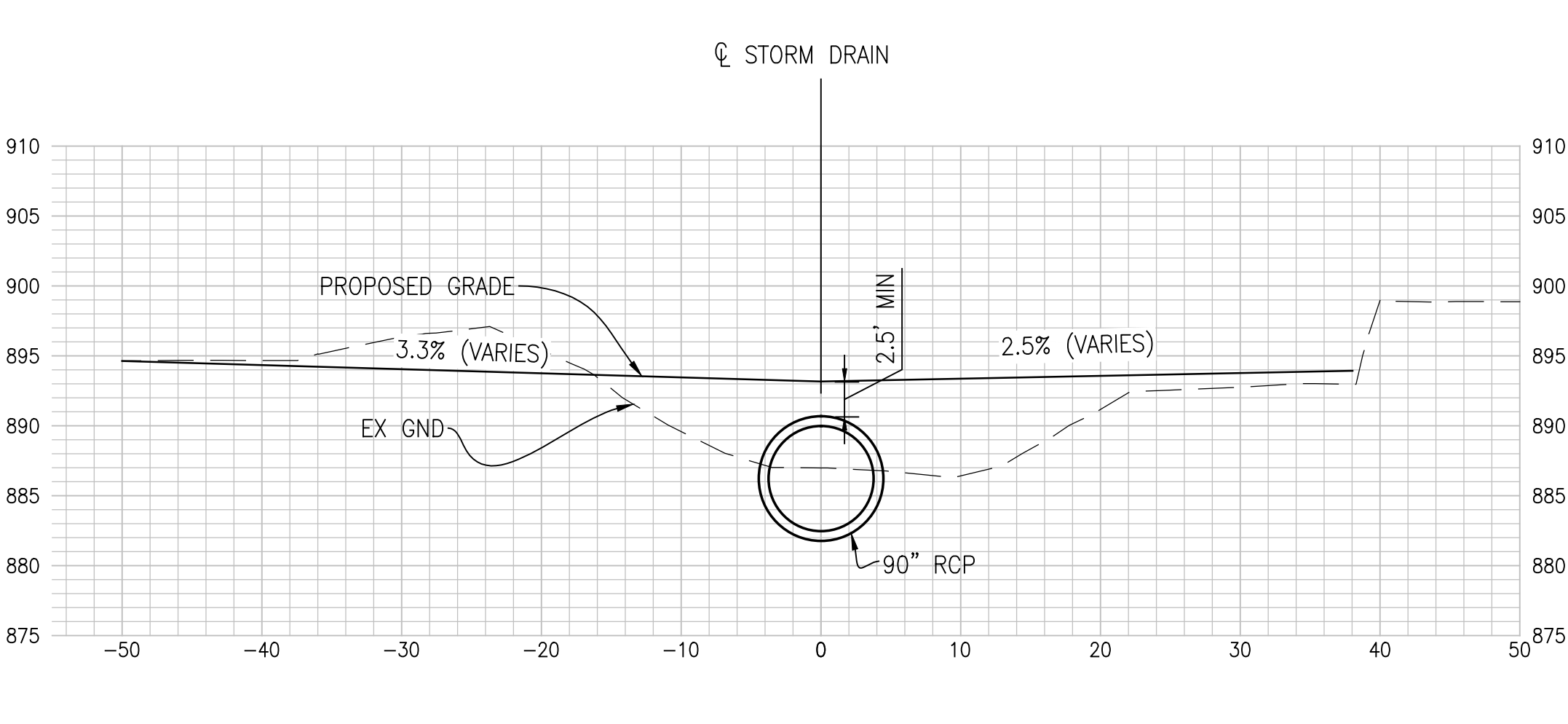
PLAN



SECTION AT STA 8+50.00



SECTION AT STA 10+00.00



SECTION AT STA 12+00.00

CROSS SECTIONS

APPROVED BY: **ALBERT A. WEBB ASSOCIATES**
ENGINEERING CONSULTANTS
3788 McCRAY STREET
RIVERSIDE CA. 92506
PH. (951) 686-1070
FAX (951) 788-1256

REGISTERED PROFESSIONAL ENGINEER
JOSEPH C. CALDWELL
NO. C67239
CIVIL
STATE OF CALIFORNIA

ENGINEER, RCE C67239 DATE:

Don't Dig...Until You Call U.S.A. Toll Free
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AND SPRUCE STREET.
ELEVATION 889.02

REVISIONS		ENGINEER		RCFC&WCD	
REF.	DESCRIPTION	APPR.	DATE	APPR.	DATE

RIVERSIDE COUNTY FLOOD CONTROL
AND
WATER CONSERVATION DISTRICT

RECOMMENDED FOR APPROVAL BY: _____
DATE: _____

APPROVED BY: _____
DATE: _____

UNIVERSITY WASH
STAGE 3

GRADING PLAN

PROJECT NO.
1-0-0120

DRAWING NO.
X-XXX

SHEET NO.
10 OF X

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Appendix B

Preliminary Construction Schedule and Equipment List

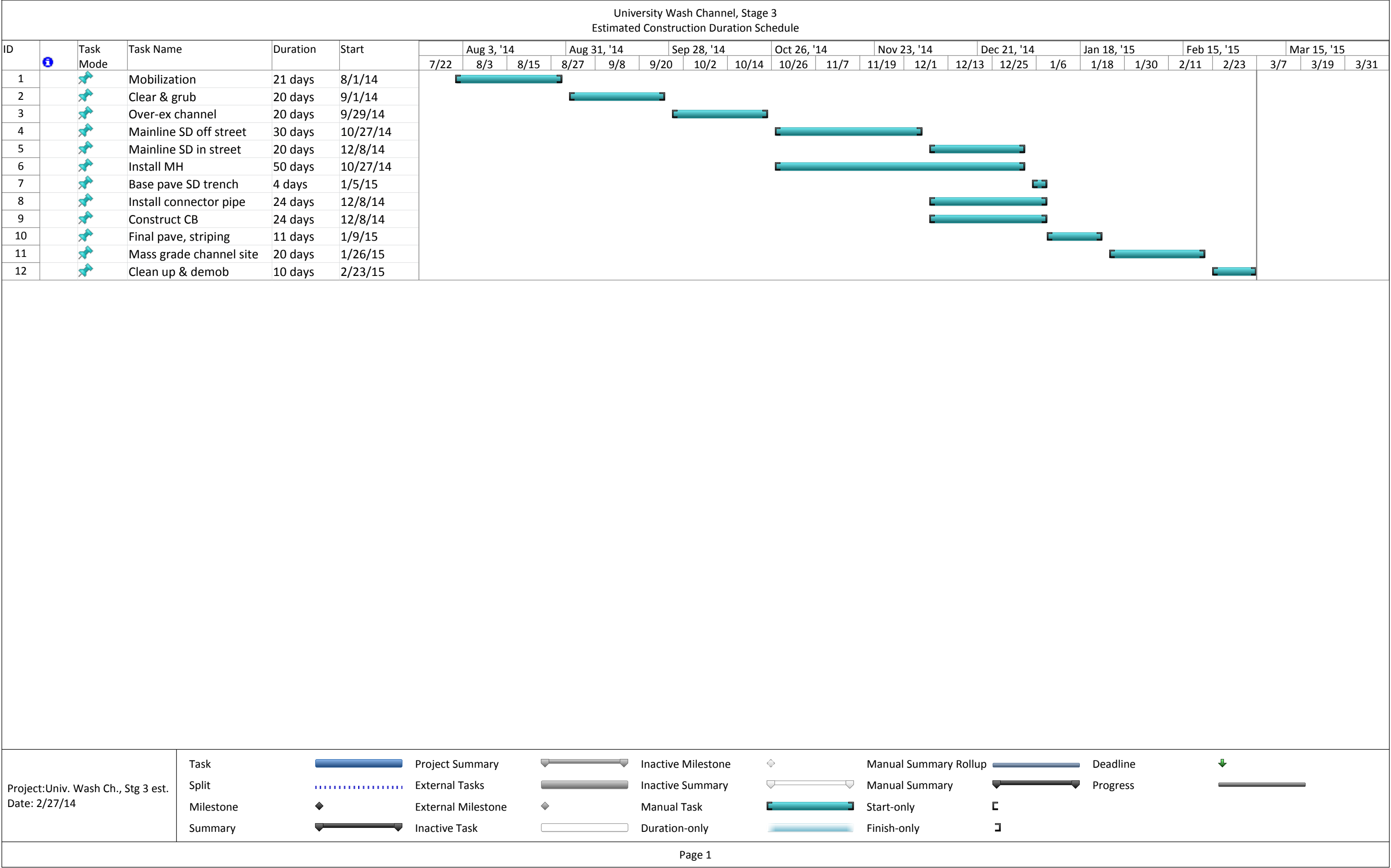
- **Appendix B.1 – Construction Equipment List**
- **Appendix B.2 – Construction Schedule**

Appendix B.1 – Construction Equipment List

CONSTRUCTION EQUIPMENT LIST

Equipment	WORK TASK											
	Mobilization	Clear and Grub Existing Channel	Over-Excavate Channel	Mainline Storm Drain (off Street)	Mainline Storm Drain (in Street)	Install Manholes	Base Pave Trench	Install Connector Pipe	Construct Catch Basins	Final Pave, Striping	Mass Grade Channel Site	Clean-up and Final Demobilization
Air Compressor	1					1		1	1			
Cement and Mortar Mixer						1		1	1			
Concrete/Industrial Saws						1		1				
Tractor/Loader/Backhoe		2	2									
Crushing/Processing Equipment											1	
Dumpers/Tenders		1		1								
Excavators		1	2	2	2			1	1		2	
Forklifts	1											
Generator Sets				1								
Graders											1	
Pavers							1			1		
Plate Compactors						1			1			
Pumps	1											
Rollers							1					
Rubber Tired Dozers							1					
Rubber Tired Loaders		1			2							
Signal Board	1											
Surfacing Equipment										1		
Sweepers/Scrubbers												1
Welders				1		1						

Appendix B.2 – Construction Schedule



**Appendix C through Appendix I
(Included on Attached CD)**

- **Appendix C: Construction Emissions Modeling Results**
- **Appendix D: Biological Resources Assessment**
- **Appendix E: Delineation of Waters of the United States And Jurisdictional Analysis**
- **Appendix F: Determination of Biologically Equivalent Or Superior Preservation**
- **Appendix G: Cultural Survey Report**
- **Appendix H: Paleontological Resources Record Search**
- **Appendix I: Noise Impact Evaluation Report**

Appendix C

Construction Emissions Modeling Results

University Wash Channel Stage 3 Construction Emissions Modeling

1.0 INTRODUCTION

Construction Emissions were modeled for the University Wash Channel Stage 3 project (the Project) in Riverside, CA located in the South Coast Air Quality Management District (SCAQMD) using the CalEEMod emissions modeling software as prescribed by SCAQMD. Results of modeling were compared to SCAQMD's recommended significance thresholds to determine if construction emissions impacts could have a significant impact on the environment. SCAQMD has recommended significance thresholds for impacts to both regional air quality and local air quality.

Attachment A provides the anticipated Project schedule. Attachment B provides the estimated quantities and types of equipment that would be used for each of the construction tasks. The CalEEMod emissions modeling input parameters incorporate the anticipated equipment use and schedule to estimate the worst-case daily emissions from construction.

The following assumptions regarding Project construction were made:

- The total disturbed acreage of the site is 8.1 acres.
- The daily disturbed acreage was assumed to be one acre per day for purposes of correlation with the *SCAQMD LST Methodology Guidance Document, Appendix C – Mass Rate LST Look-up Tables*. This assumption is conservative for purposes of air quality impact modeling since the actual daily disturbed acreage is expected to be substantially less than one acre.
- The source receptor area number is 23 – Metropolitan Riverside County.
- The total surface area of the site to receive new paving is 0.25 acres.
- Each piece of construction equipment in Attachment B was conservatively assumed to operate 8 hours/day.
- 1,700 cubic yards of earthen material will be exported from the site. The hauling distance for this material will be approximately 5 miles.

Results of modeling and comparison to SCAQMD significance thresholds are described in Section 2.0 of this appendix. Printouts of the CalEEMod emissions modeling are provided in Attachments C and D. There are a few things to note when reviewing the CalEEMod printouts in Attachments C and D.

- Operational emissions from the Project will be negligible and, therefore, were not part of this analysis. Therefore, disregard any values in the operational emissions sections of the



results, which are artifacts of the CalEEMod emissions model and unrelated to the Project.

- Some of the modeling report outputs only activate when the model default parameters are used and do not activate when site-specific parameters are used. For example, on page 8 of Attachment C, the acres of grading and paving are indicated as zero. This is because site specific acreages were input rather than the default data in the model tables. The appearance of discrepancies in the model printouts due to the use of site-specific data was confirmed through discussion with Mike Krause, Program Supervisor of the SCAQMD.

When reviewing the model printouts in Attachments C and D, the relevant information is the construction input parameters and the calculated emission results.

2.0 RESULTS

SCAQMD's Regional Significance Thresholds apply to the overall Project and Localized Significance Thresholds are a function of sensitive receptor distance. Table 1 provides the Project's maximum daily emissions estimated by the CalEEMod emissions modeling software compared to both the Regional Significance Thresholds and Localized Significance Thresholds for a 50 meter setback. As shown in Table 1, the Project emissions would not exceed any of these significance thresholds. The printout for this modeling is provided in Attachment C.

Table 1 - University Wash Channel Stage 3 Project Modeled Emissions, Regional Significance Thresholds, and Local Significance Thresholds for 50 Meter Setback

Pollutant	Maximum Daily Project Emissions (lbs/day)	SCAQMD Regional Significance Threshold (lbs/day)	SCAQMD Localized Significance Threshold - 50 Meter Setback (lb/day)	Exceedance?
ROG	7.35	75	None	No
NO _x	61.9	100	148	No
PM ₁₀ (exhaust)	3.55	150	None	No
Total PM ₁₀	4.17	None	12	No
PM _{2.5} (exhaust)	3.43	55	None	No
Total PM _{2.5}	3.60	None	4	No
SO ₂	0.07	150	None	No
CO	42.2	550	887	No
*Lead	< 3	3	None	No

*CalEEMod does not calculate lead emissions. Using the SCAQMD lead emission factor for diesel of 0.0083 lb/gal it was calculated that 361 gal/day of fuel would need to be combusted to exceed this threshold. This project will not consume diesel fuel in excess of the 361 gal/day and will therefore not exceed the significance threshold.

For air quality impact analysis, a sensitive receptor is a receptor such as residence, hospital, or convalescent facility where it is possible that an individual could remain on a 24-hour basis. Two residences are the only sensitive receptors located closer than 50 meters from the Project; the closest is a residence located adjacent to the Project at 1732 Massachusetts Avenue. The SCAQMD Localized Significance Thresholds for the closest sensitive receptor are the minimum values from the *SCAQMD LST Methodology Guidance Document, Appendix C – Mass Rate LST Look-up Tables C-1 through C-6* (Personal Communication with James Koisumi of South Coast Air Quality Management District, January 22, 2014).

Work tasks that would occur within 50 meters of this receptor and the schedule for the work within 50 meters of the receptor are as follows:

- Mainline Storm Drain In-Street – approximately one day (final day of this work task);
- Base Pave Trench – approximately one day (final day of this work task);
- Install Connector Pipe – approximately one day (final day of this work task);
- Construct Catch Basins – final approximately three days of this work task; and
- Final Paving, Striping – approximately one day (final day of this work task).

To compare Project emissions to the Localized Significance Threshold for this closest sensitive receptor, a second CalEEMod modeling run was completed that included all of the Project work tasks within the overall Project footprint that would be ongoing at the same time as any of the above tasks are occurring within 50 meters of the closest sensitive receptor. The CalEEMod printout for this second modeling run is provided in Attachment D. The maximum daily emissions for this modeling run are compared to the localized significance thresholds in Table 2.

Table 2 - University Wash Channel Stage 3 Project Modeled Emissions for Duration When Work is Occurring Within 50 Meters of the Closest Sensitive Receptor and Minimum Local Significance Thresholds

Pollutant	Maximum Daily Project Emissions (lbs/day)	*SCAQMD Minimum Localized Significance Threshold (lb/day)	Exceedance?
ROG	6.3	None	No
NO _x	52.6	118	No
PM ₁₀ (exhaust)	2.78	None	No
Total PM ₁₀	3.38	4	No
PM _{2.5} (exhaust)	2.68	None	No
Total PM _{2.5}	2.84	3	No
SO ₂	0.07	None	No



CO	42.7	602	No
Lead	< 3	None	No

*For sensitive receptors closer than 25 meters from a project, the minimum LST from the lookup tables should be applied (James Koizumi, SCAQMD).





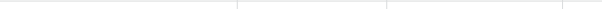




















Table 2 shows that the Local Significance Threshold would not be exceeded at the only sensitive receptor located within 50 meters of the Project.



















Based on the modeling results summarized in Tables 1 and 2 and included in Attachments C and D, construction emissions from the Project would not exceed any SCAQMD localized or regional significance threshold.

Attachment A

Project Construction Schedule

University Wash Channel, Stage 3 Estimated Construction Duration Schedule

ID		Task Mode	Task Name	Duration	Start	Finish	Aug 3, '14			Aug 24, '14			Sep 14, '14			Oct 5, '14			Oct 26, '14			Nov 16, '14			Dec 7, '14			Dec 28, '14			Jan 18, '15			Feb 8, '15			Mar 1, '15			Mar 22, '15		
							W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F					
1			Mobilization	21 days	8/1/14	8/29/14																																				
2			Clear & grub	20 days	9/1/14	9/26/14																																				
3			Over-ex channel	20 days	9/29/14	10/24/14																																				
4			Mainline SD off street	30 days	10/27/14	12/5/14																																				
5			Mainline SD in street	20 days	12/8/14	1/2/15																																				
6			Install MH	50 days	10/27/14	1/2/15																																				
7			Base pave SD trench	4 days	1/5/15	1/8/15																																				
8			Install connector pipe	24 days	12/8/14	1/8/15																																				
9			Construct CB	24 days	12/8/14	1/8/15																																				
10			Final pave, striping	11 days	1/9/15	1/23/15																																				
11			Mass grade channel site	20 days	1/26/15	2/20/15																																				
12			Clean up & demob	10 days	2/23/15	3/6/15																																				

Project: Univ. Wash Ch., Stg 3 est. Date: 2/5/14	Task		Project Summary		Inactive Milestone		Manual Summary Rollup		Deadline	
	Split		External Tasks		Inactive Summary		Manual Summary		Progress	
	Milestone		External Milestone		Manual Task		Start-only			
	Summary		Inactive Task		Duration-only		Finish-only			

Attachment B

Phase- Specific Construction Equipment Lists

ATTACHMENT B
CONSTRUCTION EQUIPMENT LIST

Equipment	WORK TASK											
	Mobilization	Clear and Grub Existing Channel	Over-Excavate Channel	Mainline Storm Drain (off Street)	Mainline Storm Drain (in Street)	Install Manholes	Base Pave Trench	Install Connector Pipe	Construct Catch Basins	Final Pave, Striping	Mass Grade Channel Site	Clean-up and Final Demobilization
Air Compressor	1					1		1	1			
Cement and Mortar Mixer						1		1	1			
Concrete/Industrial Saws						1		1				
Tractor/Loader/Backhoe		2	2									
Crushing/Processing Equipment											1	
Dumpers/Tenders		1		1								
Excavators		1	2	2	2			1	1		2	
Forklifts	1											
Generator Sets				1								
Graders											1	
Pavers							1			1		
Plate Compactors						1			1			
Pumps	1											
Rollers							1					
Rubber Tired Dozers							1					
Rubber Tired Loaders		1			2							
Signal Board	1											
Surfacing Equipment										1		
Sweepers/Scrubbers												1
Welders				1		1						

Attachment C

CalEEMod Modeling Results for Overall Project

University Wash Stage 3

South Coast AQMD Air District, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	8.10	User Defined Unit	7.69	0.00	0
Other Asphalt Surfaces	18.00	1000sqft	0.41	18,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	10			Operational Year	2014
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MW hr)	641.35	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Pipeline project will disturb approximately 8.1 acres.

Construction Phase - Default durations were not used, rather durations based upon the planned construction schedule were entered.

Off-road Equipment - Project specific equipment information entered.

Off-road Equipment - Project specific equipment information entered.

Off-road Equipment - Project specific equipment information entered.

Off-road Equipment - Project specific equipment information entered.

Off-road Equipment - Project specific equipment information entered.

Off-road Equipment - Project specific equipment information entered.

Off-road Equipment - Project specific equipment information entered.

Off-road Equipment - Project specific equipment information entered.

Off-road Equipment - Project specific equipment information entered.

Off-road Equipment - Project specific equipment information entered.

Off-road Equipment - Project specific equipment information entered.

Off-road Equipment - Project specific equipment information entered.

Trips and VMT - Project specific vendor distance entered.

All worker trips estimated using the default (1.25 * number of equipment * 2)

Grading - Project specific acreage information entered.

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Interior	27000	0
tblConstructionPhase	NumDays	230.00	50.00
tblConstructionPhase	NumDays	230.00	24.00
tblConstructionPhase	NumDays	230.00	24.00
tblConstructionPhase	NumDays	20.00	11.00
tblConstructionPhase	NumDays	20.00	4.00
tblConstructionPhase	NumDays	10.00	21.00
tblConstructionPhase	PhaseEndDate	2/13/2015	1/2/2015
tblConstructionPhase	PhaseEndDate	2/5/2015	1/8/2015

tblConstructionPhase	PhaseEndDate	2/11/2015	1/8/2015
tblConstructionPhase	PhaseEndDate	1/14/2015	1/8/2015
tblConstructionPhase	PhaseEndDate	1/30/2015	1/2/2015
tblConstructionPhase	PhaseStartDate	12/6/2014	10/27/2014
tblConstructionPhase	PhaseStartDate	1/3/2015	12/8/2014
tblConstructionPhase	PhaseStartDate	1/9/2015	12/8/2014
tblConstructionPhase	PhaseStartDate	1/24/2015	1/26/2015
tblConstructionPhase	PhaseStartDate	8/30/2014	9/1/2014
tblConstructionPhase	PhaseStartDate	1/9/2015	1/5/2015
tblConstructionPhase	PhaseStartDate	2/21/2015	2/23/2015
tblConstructionPhase	PhaseStartDate	9/27/2014	9/29/2014
tblConstructionPhase	PhaseStartDate	10/25/2014	10/27/2014
tblConstructionPhase	PhaseStartDate	1/3/2015	12/8/2014
tblGrading	AcresOfGrading	5.00	4.05
tblGrading	MaterialExported	0.00	1,700.00
tblLandUse	LotAcreage	0.00	7.69
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00

[illegible]

tblTripsAndVMT	HaulingTripLength	20.00	2.60
tblTripsAndVMT	HaulingTripLength	20.00	2.60
tblTripsAndVMT	HaulingTripNumber	168.00	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	58.00
tblTripsAndVMT	HaulingTripNumber	0.00	58.00
tblTripsAndVMT	HaulingTripNumber	0.00	58.00
tblTripsAndVMT	HaulingTripNumber	0.00	58.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	3.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	3.00	5.00
tblTripsAndVMT	VendorTripNumber	3.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	WorkerTripNumber	8.00	13.00
tblTripsAndVMT	WorkerTripNumber	8.00	10.00
tblTripsAndVMT	WorkerTripNumber	8.00	10.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2014	7.3479	61.8603	42.2126	0.0732	0.6128	3.5549	4.1676	0.1650	3.4333	3.5983	0.0000	7,220.0906	7,220.0906	1.4532	0.0000	7,250.6068
2015	6.9082	58.7671	41.4750	0.0732	0.6571	3.3072	3.9642	0.1759	3.1899	3.3658	0.0000	7,162.1213	7,162.1213	1.4187	0.0000	7,191.9137
Total	14.2561	120.6274	83.6876	0.1464	1.2698	6.8620	8.1319	0.3409	6.6233	6.9641	0.0000	14,382.2119	14,382.2119	2.8718	0.0000	14,442.5206

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2014	7.3479	61.8603	42.2126	0.0732	0.6128	3.5549	4.1676	0.1650	3.4333	3.5983	0.0000	7,220.0906	7,220.0906	1.4532	0.0000	7,250.6068
2015	6.9082	58.7671	41.4750	0.0732	0.6571	3.3072	3.9642	0.1759	3.1899	3.3658	0.0000	7,162.1213	7,162.1213	1.4187	0.0000	7,191.9137
Total	14.2561	120.6274	83.6876	0.1464	1.2698	6.8620	8.1319	0.3409	6.6233	6.9641	0.0000	14,382.2119	14,382.2119	2.8718	0.0000	14,442.5205

[illegible]

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3853	3.0000e-005	2.7900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7100e-003	5.7100e-003	2.0000e-005		6.0700e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.3853	3.0000e-005	2.7900e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005		5.7100e-003	5.7100e-003	2.0000e-005	0.0000	6.0700e-003

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3853	3.0000e-005	2.7900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		5.7100e-003	5.7100e-003	2.0000e-005		6.0700e-003
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	0.3853	3.0000e-005	2.7900e-003	0.0000	0.0000	1.0000e-005	1.0000e-005	0.0000	1.0000e-005	1.0000e-005		5.7100e-003	5.7100e-003	2.0000e-005	0.0000	6.0700e-003

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Mobilization	Site Preparation	8/1/2014	8/29/2014	5	21	
2	Clear and Grub Existing Channel	Grading	9/1/2014	9/26/2014	5	20	
3	Over Ex Channel	Trenching	9/29/2014	10/24/2014	5	20	
4	Mainline SD (90") - off street	Trenching	10/27/2014	12/5/2014	5	30	
5	Install MH	Building Construction	10/27/2014	1/2/2015	5	50	
6	Mainline SD (90") - in street R/W	Trenching	12/8/2014	1/2/2015	5	20	
7	Install Connector Pipe	Building Construction	12/8/2014	1/8/2015	5	24	
8	Construct CB	Building Construction	12/8/2014	1/8/2015	5	24	
9	Base Pave SD Trench	Paving	1/5/2015	1/8/2015	5	4	
10	Final Pave, Striping	Paving	1/9/2015	1/23/2015	5	11	
11	Mass Grade Channel Site	Grading	1/26/2015	2/20/2015	5	20	
12	Clean up and final demobilization	Site Preparation	2/23/2015	3/6/2015	5	10	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Mobilization	Air Compressors	1	8.00	78	0.48
Mobilization	Forklifts	1	8.00	89	0.20
Mobilization	Pumps	1	8.00	84	0.74
Mobilization	Signal Boards	1	8.00	6	0.82
Clear and Grub Existing Channel	Dumpers/Tenders	1	8.00	16	0.38
Clear and Grub Existing Channel	Excavators	1	8.00	162	0.38
Clear and Grub Existing Channel	Rubber Tired Loaders	1	8.00	199	0.36
Clear and Grub Existing Channel	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Over Ex Channel	Excavators	2	8.00	162	0.38
Over Ex Channel	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Mainline SD (90") - off street	Dumpers/Tenders	1	8.00	16	0.38
Mainline SD (90") - off street	Excavators	2	8.00	162	0.38
Mainline SD (90") - off street	Generator Sets	1	8.00	84	0.74
Mainline SD (90") - off street	Welders	1	8.00	46	0.45
Install MH	Air Compressors	1	8.00	78	0.48
Install MH	Cement and Mortar Mixers	1	8.00	9	0.56
Install MH	Concrete/Industrial Saws	1	8.00	81	0.73
Install MH	Plate Compactors	1	8.00	8	0.43
Install MH	Welders	1	6.00	46	0.45
Mainline SD (90") - in street R/W	Excavators	2	8.00	162	0.38
Mainline SD (90") - in street R/W	Rubber Tired Loaders	2	8.00	199	0.36
Install Connector Pipe	Air Compressors	1	8.00	78	0.48
Install Connector Pipe	Cement and Mortar Mixers	1	8.00	9	0.56
Install Connector Pipe	Concrete/Industrial Saws	1	8.00	81	0.73
Install Connector Pipe	Excavators	1	8.00	162	0.38
Construct CB	Air Compressors	1	8.00	78	0.48
Construct CB	Cement and Mortar Mixers	1	8.00	9	0.56

Construct CB	Excavators	1	8.00	162	0.38
Construct CB	Plate Compactors	1	8.00	8	0.43
Base Pave SD Trench	Pavers	1	8.00	125	0.42
Base Pave SD Trench	Rollers	1	8.00	80	0.38
Base Pave SD Trench	Rubber Tired Dozers	1	8.00	255	0.40
Final Pave, Striping	Pavers	1	8.00	125	0.42
Final Pave, Striping	Surfacing Equipment	1	8.00	253	0.30
Mass Grade Channel Site	Crushing/Proc. Equipment	1	8.00	85	0.78
Mass Grade Channel Site	Excavators	2	8.00	162	0.38
Mass Grade Channel Site	Graders	1	8.00	174	0.41
Clean up and final demobilization	Sweepers/Scrubbers	1	8.00	64	0.46

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Mobilization	4	10.00	5.00	0.00	14.70	6.90	2.60	LD_Mix	HDT_Mix	HHDT
Clear and Grub Existing Channel	5	13.00	5.00	58.00	14.70	6.90	2.60	LD_Mix	HDT_Mix	HHDT
Over Ex Channel	4	10.00	5.00	58.00	14.70	6.90	2.60	LD_Mix	HDT_Mix	HHDT
Mainline SD (90") - off street	5	13.00	5.00	58.00	14.70	6.90	2.60	LD_Mix	HDT_Mix	HHDT
Install MH	5	13.00	5.00	0.00	14.70	6.90	2.60	LD_Mix	HDT_Mix	HHDT
Mainline SD (90") - in street R/W	4	10.00	5.00	58.00	14.70	6.90	2.60	LD_Mix	HDT_Mix	HHDT
Install Connector Pipe	4	10.00	5.00	0.00	14.70	6.90	2.60	LD_Mix	HDT_Mix	HHDT
Construct CB	4	10.00	5.00	0.00	14.70	6.90	2.60	LD_Mix	HDT_Mix	HHDT
Base Pave SD Trench	3	8.00	5.00	0.00	14.70	6.90	2.60	LD_Mix	HDT_Mix	HHDT
Final Pave, Striping	2	5.00	5.00	0.00	14.70	6.90	2.60	LD_Mix	HDT_Mix	HHDT
Mass Grade Channel Site	4	10.00	5.00	0.00	14.70	6.90	2.60	LD_Mix	HDT_Mix	HHDT
Clean up and final demobilization	1	3.00	5.00	0.00	14.70	6.90	2.60	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Mobilization - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.7251	11.9418	8.0762	0.0128		0.9628	0.9628		0.9484	0.9484		1,209.6237	1,209.6237	0.1799		1,213.4024
Total	1.7251	11.9418	8.0762	0.0128	0.0000	0.9628	0.9628	0.0000	0.9484	0.9484		1,209.6237	1,209.6237	0.1799		1,213.4024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0601	0.5755	0.7004	1.0800e-003	0.0312	0.0113	0.0425	8.8900e-003	0.0104	0.0193		110.5402	110.5402	1.0100e-003		110.5613
Worker	0.0528	0.0708	0.7381	1.3300e-003	0.1118	1.0500e-003	0.1128	0.0296	9.6000e-004	0.0306		119.4197	119.4197	7.2400e-003		119.5719
Total	0.1129	0.6463	1.4386	2.4100e-003	0.1430	0.0123	0.1553	0.0385	0.0113	0.0499		229.9599	229.9599	8.2500e-003		230.1332

3.2 Mobilization - 2014**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.7251	11.9418	8.0762	0.0128		0.9628	0.9628		0.9484	0.9484	0.0000	1,209.6237	1,209.6237	0.1799		1,213.4024
Total	1.7251	11.9418	8.0762	0.0128	0.0000	0.9628	0.9628	0.0000	0.9484	0.9484	0.0000	1,209.6237	1,209.6237	0.1799		1,213.4024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0601	0.5755	0.7004	1.0800e-003	0.0312	0.0113	0.0425	8.8900e-003	0.0104	0.0193		110.5402	110.5402	1.0100e-003		110.5613
Worker	0.0528	0.0708	0.7381	1.3300e-003	0.1118	1.0500e-003	0.1128	0.0296	9.6000e-004	0.0306		119.4197	119.4197	7.2400e-003		119.5719
Total	0.1129	0.6463	1.4386	2.4100e-003	0.1430	0.0123	0.1553	0.0385	0.0113	0.0499		229.9599	229.9599	8.2500e-003		230.1332

3.3 Clear and Grub Existing Channel - 2014

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.7498	19.5404	10.4005	0.0184		1.0610	1.0610		0.9779	0.9779		1,934.0125	1,934.0125	0.5603		1,945.7782
Total	1.7498	19.5404	10.4005	0.0184	0.0000	1.0610	1.0610	0.0000	0.9779	0.9779		1,934.0125	1,934.0125	0.5603		1,945.7782

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0339	0.1962	0.5122	3.3000e-004	6.6200e-003	2.9300e-003	9.5500e-003	1.8200e-003	2.6900e-003	4.5100e-003		32.8585	32.8585	4.0000e-004		32.8669
Vendor	0.0601	0.5755	0.7004	1.0800e-003	0.0312	0.0113	0.0425	8.8900e-003	0.0104	0.0193		110.5402	110.5402	1.0100e-003		110.5613
Worker	0.0686	0.0921	0.9596	1.7300e-003	0.1453	1.3700e-003	0.1467	0.0385	1.2500e-003	0.0398		155.2457	155.2457	9.4200e-003		155.4435
Total	0.1627	0.8638	2.1722	3.1400e-003	0.1832	0.0156	0.1987	0.0493	0.0143	0.0636		298.6443	298.6443	0.0108		298.8717

3.3 Clear and Grub Existing Channel - 2014

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	1.7498	19.5404	10.4005	0.0184		1.0610	1.0610		0.9779	0.9779	0.0000	1,934.0125	1,934.0125	0.5603		1,945.7782
Total	1.7498	19.5404	10.4005	0.0184	0.0000	1.0610	1.0610	0.0000	0.9779	0.9779	0.0000	1,934.0125	1,934.0125	0.5603		1,945.7782

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0339	0.1962	0.5122	3.3000e-004	6.6200e-003	2.9300e-003	9.5500e-003	1.8200e-003	2.6900e-003	4.5100e-003		32.8585	32.8585	4.0000e-004		32.8669
Vendor	0.0601	0.5755	0.7004	1.0800e-003	0.0312	0.0113	0.0425	8.8900e-003	0.0104	0.0193		110.5402	110.5402	1.0100e-003		110.5613
Worker	0.0686	0.0921	0.9596	1.7300e-003	0.1453	1.3700e-003	0.1467	0.0385	1.2500e-003	0.0398		155.2457	155.2457	9.4200e-003		155.4435
Total	0.1627	0.8638	2.1722	3.1400e-003	0.1832	0.0156	0.1987	0.0493	0.0143	0.0636		298.6443	298.6443	0.0108		298.8717

3.4 Over Ex Channel - 2014**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5839	17.1778	11.6949	0.0168		1.0521	1.0521		0.9679	0.9679		1,784.5749	1,784.5749	0.5274		1,795,6495
Total	1.5839	17.1778	11.6949	0.0168		1.0521	1.0521		0.9679	0.9679		1,784.5749	1,784.5749	0.5274		1,795,6495

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0339	0.1962	0.5122	3.3000e-004	6.6200e-003	2.9300e-003	9.5500e-003	1.8200e-003	2.6900e-003	4.5100e-003		32.8585	32.8585	4.0000e-004		32.8669
Vendor	0.0601	0.5755	0.7004	1.0800e-003	0.0312	0.0113	0.0425	8.8900e-003	0.0104	0.0193		110.5402	110.5402	1.0100e-003		110.5613
Worker	0.0528	0.0708	0.7381	1.3300e-003	0.1118	1.0500e-003	0.1128	0.0296	9.6000e-004	0.0306		119.4197	119.4197	7.2400e-003		119.5719
Total	0.1469	0.8426	1.9508	2.7400e-003	0.1496	0.0153	0.1649	0.0404	0.0140	0.0544		262.8184	262.8184	8.6500e-003		263.0001

3.4 Over Ex Channel - 2014**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5839	17.1778	11.6949	0.0168		1.0521	1.0521		0.9679	0.9679	0.0000	1,784.5749	1,784.5749	0.5274		1,795,6494
Total	1.5839	17.1778	11.6949	0.0168		1.0521	1.0521		0.9679	0.9679	0.0000	1,784.5749	1,784.5749	0.5274		1,795,6494

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0339	0.1962	0.5122	3.3000e-004	6.6200e-003	2.9300e-003	9.5500e-003	1.8200e-003	2.6900e-003	4.5100e-003		32.8585	32.8585	4.0000e-004		32.8669
Vendor	0.0601	0.5755	0.7004	1.0800e-003	0.0312	0.0113	0.0425	8.8900e-003	0.0104	0.0193		110.5402	110.5402	1.0100e-003		110.5613
Worker	0.0528	0.0708	0.7381	1.3300e-003	0.1118	1.0500e-003	0.1128	0.0296	9.6000e-004	0.0306		119.4197	119.4197	7.2400e-003		119.5719
Total	0.1469	0.8426	1.9508	2.7400e-003	0.1496	0.0153	0.1649	0.0404	0.0140	0.0544		262.8184	262.8184	8.6500e-003		263.0001

3.5 Mainline SD (90") - off street - 2014**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4066	18.1685	13.0742	0.0205		1.1133	1.1133		1.0735	1.0735		2,013.8978	2,013.8978	0.4721		2,023.8128
Total	2.4066	18.1685	13.0742	0.0205		1.1133	1.1133		1.0735	1.0735		2,013.8978	2,013.8978	0.4721		2,023.8128

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0226	0.1308	0.3415	2.2000e-004	4.4100e-003	1.9600e-003	6.3700e-003	1.2100e-003	1.8000e-003	3.0100e-003		21.9057	21.9057	2.7000e-004		21.9113
Vendor	0.0601	0.5755	0.7004	1.0800e-003	0.0312	0.0113	0.0425	8.8900e-003	0.0104	0.0193		110.5402	110.5402	1.0100e-003		110.5613
Worker	0.0686	0.0921	0.9596	1.7300e-003	0.1453	1.3700e-003	0.1467	0.0385	1.2500e-003	0.0398		155.2457	155.2457	9.4200e-003		155.4435
Total	0.1514	0.7984	2.0015	3.0300e-003	0.1810	0.0146	0.1956	0.0486	0.0134	0.0621		287.6915	287.6915	0.0107		287.9160

3.5 Mainline SD (90") - off street - 2014**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.4066	18.1685	13.0742	0.0205		1.1133	1.1133		1.0735	1.0735	0.0000	2,013.8978	2,013.8978	0.4721		2,023.8128
Total	2.4066	18.1685	13.0742	0.0205		1.1133	1.1133		1.0735	1.0735	0.0000	2,013.8978	2,013.8978	0.4721		2,023.8128

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0226	0.1308	0.3415	2.2000e-004	4.4100e-003	1.9600e-003	6.3700e-003	1.2100e-003	1.8000e-003	3.0100e-003		21.9057	21.9057	2.7000e-004		21.9113
Vendor	0.0601	0.5755	0.7004	1.0800e-003	0.0312	0.0113	0.0425	8.8900e-003	0.0104	0.0193		110.5402	110.5402	1.0100e-003		110.5613
Worker	0.0686	0.0921	0.9596	1.7300e-003	0.1453	1.3700e-003	0.1467	0.0385	1.2500e-003	0.0398		155.2457	155.2457	9.4200e-003		155.4435
Total	0.1514	0.7984	2.0015	3.0300e-003	0.1810	0.0146	0.1956	0.0486	0.0134	0.0621		287.6915	287.6915	0.0107		287.9160

3.6 Install MH - 2014**Unmitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9956	11.1616	8.4876	0.0133		0.9115	0.9115		0.9115	0.9115		1,208.5330	1,208.5330	0.1791		1,212.2940
Total	1.9956	11.1616	8.4876	0.0133		0.9115	0.9115		0.9115	0.9115		1,208.5330	1,208.5330	0.1791		1,212.2940

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0601	0.5755	0.7004	1.0800e-003	0.0312	0.0113	0.0425	8.8900e-003	0.0104	0.0193		110.5402	110.5402	1.0100e-003		110.5613
Worker	0.0686	0.0921	0.9596	1.7300e-003	0.1453	1.3700e-003	0.1467	0.0385	1.2500e-003	0.0398		155.2457	155.2457	9.4200e-003		155.4435
Total	0.1288	0.6676	1.6600	2.8100e-003	0.1765	0.0126	0.1892	0.0474	0.0116	0.0590		265.7859	265.7859	0.0104		266.0048

3.6 Install MH - 2014**Mitigated Construction On-Site**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9956	11.1616	8.4876	0.0133		0.9115	0.9115		0.9115	0.9115	0.0000	1,208.5330	1,208.5330	0.1791		1,212.2940
Total	1.9956	11.1616	8.4876	0.0133		0.9115	0.9115		0.9115	0.9115	0.0000	1,208.5330	1,208.5330	0.1791		1,212.2940

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0601	0.5755	0.7004	1.0800e-003	0.0312	0.0113	0.0425	8.8900e-003	0.0104	0.0193		110.5402	110.5402	1.0100e-003		110.5613
Worker	0.0686	0.0921	0.9596	1.7300e-003	0.1453	1.3700e-003	0.1467	0.0385	1.2500e-003	0.0398		155.2457	155.2457	9.4200e-003		155.4435
Total	0.1288	0.6676	1.6600	2.8100e-003	0.1765	0.0126	0.1892	0.0474	0.0116	0.0590		265.7859	265.7859	0.0104		266.0048