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TRUCKEE RIVER RESTORATION AND CONSTRUCTION SITE PERMITTING HANDBOOK

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Prepared For:

NORTHERN NEVADA WATER PLANNING COMMISSION

K/J Project No. 0895005

Acknowledgements

The 2009 Update Truckee River Restoration and Construction Site Permitting Handbook was prepared under a contract with Washoe County on behalf of the Northern Nevada Water Planning Commission. The 2008-2009 committee members were:

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This handbook was developed to assist the Cities and County and members of public involved in the planning, design and construction of private and public new development and redevelopment projects on and near the Truckee River.

Special Thanks to Terri Svetich - City of Reno, Mickey Hazelwood – The Nature Conservancy, and Janelle Thomas – City of Sparks for their contributions to the review of this handbook.

The following staff members at Kennedy/Jenks Consultants were responsible for the development of this handbook: Tom Swan, Ph.D, Karin Staggs, and Candice Siwarga.

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Section 1: Preface

1.1 List of Acronyms

BMP	Best Management Practice
Caltrans	California Department of Transportation
CTWCD	Carson-Truckee Water Conservancy District
NDEP	Nevada Division of Environmental Protection
NDOW	Nevada Department of Wildlife
NDOT	Nevada Department of Transportation
NDWR	Nevada Department of Water Resources
NPDES	National Pollutant Discharge Elimination System
NSHPO	Nevada State Historic Preservation Office
NDSL	Nevada Division of State Lands
PLPT	Pyramid Lake Paiute Tribe
SWPPP	Stormwater Pollution Prevention Plan
USACE	U.S. Army Corps of Engineers
USFW	U.S. Fish and Wildlife

1.2 Disclaimer

The “Truckee River Restoration Permitting and Construction Site BMP Handbook” is to be used as a guidance document for the permitting process for restoration and construction projects within the Truckee River, and as a reference for procedures to minimize runoff from erosion during construction projects. The example permits compiled are current at the completion of the Handbook. As such, anyone using this Handbook as a guide to permitting should access the appropriate websites to ensure the permit applications are up to date. The controls and performance standards described herein are intended to serve as minimum control standards or Best Management Practices (BMPs). BMPs are used to assist with consistent regulation of restoration/construction activities by applying a uniform standard. Not all of the control practices noted in this handbook are necessary or even appropriate for all restoration/construction sites. Proper training is recommended prior to installing, inspecting and maintaining the BMPs described herein. This Handbook is not intended to guide the user on the State of Nevada’s “General Permit”, or to guide the user on how to create a Stormwater Pollution Prevention Plan. This is an informational guide that may facilitate the permitting of restoration/construction projects within the Truckee River as it flows through Nevada, and assist in finding acceptable BMPs for restoration/construction work in the River.

The River Restoration Permitting and Construction Site BMP Handbook is a dynamic document that will be reviewed and updated periodically. Updates may include new permit applications, permitting methods, practices and technologies, as well as new erosion and sediment control and general site and materials management at restoration/construction sites.

1.3 Contact Information

Comments and questions on the Truckee River Restoration Permitting and Construction Site Handbook may be directed to:

Mr. Jim Smitherman
Water Resources Program Manager (NNWPC)
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Distribution Copies of the River Restoration Permitting and Construction Site BMP Handbook can be obtained from Washoe County Department of Water Resources. A PDF version of the Handbook can also be downloaded at http://www.washoecounty.us/water/index.htm.

Section 2: Background

2.1 Introduction

Throughout the United States, restoration has been conducted to restore rivers and streams to more natural conditions - conditions that existed prior to significant human development. This work includes removing dams, concrete walls, straightened channels and other "improvements" that were made over the last century for navigation, hydropower, irrigation and flood control. There is a growing philosophy among community planners, conservationists, floodplain managers and engineers that healthy, beautiful streams and rivers are an important part of the civilized environment and are to be protected and incorporated into the functions of flood control, environmental protection, recreation and water supply for all users. Funding has become available from private, local, state and federal sources to conduct river restoration as stand-alone projects or to incorporate restoration into other river projects.

River restoration has become more popular in recent years, and includes the construction of riffles, meanders, wetlands, and river banks. However, work within or adjacent to nearly any water body within the United States is governed by state and federal standards and regulations. These regulations are intended to help minimize the disturbance to the water body and its ecosystem, by helping to maintain established water quality standards and continue to meet the river's beneficial uses during the construction process. In general, the governing regulations were written 25-30 years ago, and according to the U.S. Army Corps of Engineers (USACE), were adopted to protect waterways from the construction impacts of pipeline crossings, bridge piers, flood walls, channel widening or narrowing, gravel mining, dewatering and activity of heavy equipment. They were not written to encourage restoration or to guide the necessary natural features of flood control, recreation or other construction activities along streams and rivers.

This handbook is directed to anyone proposing to conduct work in the Truckee River as a means to provide guidelines on acquiring the necessary regulatory permits they will need to obtain in order to conduct such work. Types of work include restoration, construction, and flood control, while the associated regulatory permits are intended to regulate or minimize the effect that such work has on the in-stream environment, thereby maintaining the river's health and quality while conducting such work. Typical projects that need permits on the Truckee River include river restoration projects, any type of construction activities in or near the river, and any projects related to flood protection – levees, walls, etc. Those conducting the work include developers, contractors, or public agencies. Acquisition of a permit may be accompanied by a monitoring/sampling plan and recommended best management practices, requiring a project to be held accountable for any impact it may have on the river. This plan may require daily collection of water samples from the impacted water body, in an attempt to monitor the project's impact on the water body. An example of such a plan is included herein in Section 4. This plan is a requirement in addition to the use of best management practices used to avoid impacting the river.

This permitting handbook sets forth a streamlined process of obtaining the many permits required to conduct work on the river, based on experiences gained from restoration projects conducted to date. It guides the designer with a step-by-step process required to obtain the many required permits to work on or adjacent to the river. Integral to this project is a "road map" or flow chart that sets forth the various regulatory agencies and their required permits. This

road map is shown in section 3 of this document and can also be viewed on-line at http://www.co.washoe.nv.us/water/nnwpc.htm. Also included is a real-world case study of a restoration project conducted on the lower Truckee River and the permitting process that was followed. There will be a discussion of Best Management Practices (BMPs) that are acceptable for working in the Truckee River, and those that were utilized in the case study to prevent sediment from entering the river from the adjacent on-shore work while maintaining in-stream water quality standards during the construction process. Permit Applications for all agencies discussed in this Handbook are attached as Appendix A. The BMPs that have been used or are approved for working in or around the Truckee River are attached as Appendix B.

2.1.1 Representative Projects

Over the past five years, involvement by The Nature Conservancy (TNC) to restore reaches of the Truckee River has been strongly supported by the former Washoe County Regional Water Planning Commission, the newly formed Northern Nevada Water Planning Commission (NNWPC), the Cities of Reno and Sparks, Nevada Division of Environmental Protection (NDEP), Nevada Department of Wildlife (NDOW), the Pyramid Lake Paiute Tribe (PLPT), the U.S. Fish and Wildlife Service (USFW), and the U.S. Army Corps of Engineers (USACE). The experiences gained from this work via the processes of permitting, design, construction and water quality monitoring can be used to facilitate more restoration projects in Northern Nevada, and to incorporate restoration into other construction projects. The experiences gained from other environmental improvement projects locally in the Lake Tahoe Basin, watershed protection by the Carson Water Subconservancy District, and statewide by erosion control in the Las Vegas Wash by the Southern Nevada Water Authority all can provide up-to-date perspectives on practices that create sustainable rivers and support desirable fish and wildlife habitat. As stated, the primary activities occurring on or adjacent to the river that will require this permitting process are restoration, flood control projects and construction activity.

2.1.2 Restoration Activities

Restoration has been conducted worldwide as a means to improve habitat, water quality, and provide flood attenuation, with an overall goal to restore a water body to more natural conditions. Water bodies such as the Truckee River that flow through highly urbanized areas are subject to degradation, hence the need to bring them back to more properly functioning, natural conditions. The Truckee River has experienced channel straightening, flow regulation, degradation of water quality and loss of habitat as a result of years of activities by the USACE, diversions of water for irrigation and hydropower, and nutrient-rich discharges from urban activities. Restoration work has been conducted on the main stem of the Truckee River between Reno and Derby Dam since 2003, with additional restoration projects planned for the lower river in the immediate future. Every one of these projects is going to have to go through the permitting process described in this handbook, and will likely have to follow a specific water quality monitoring plan during the course of project work. By following the road map included in this handbook, permitting will be easier and less time consuming for managers of future projects.

The restoration on the Truckee River, beginning with the McCarran Ranch Restoration Project located on the lower Truckee River, has been and continues to be conducted toward improving water quality, habitat, and flood control. Restoration objectives of McCarran Ranch match those of the Clean Water Act (CWA), on which water quality standards are based. The restoration will substantially advance the purpose of the CWA to restore the physical, chemical and biological integrity of the lower Truckee River by cooling the water, reducing nitrogen and suspended

solids, and increasing dissolved oxygen. Restoration projects can lead to reduced erosion of banks and provide riparian and aquatic plants that provide food and shelter for macroinvertebrate and fish populations, as well as bird and mammal populations.

2.1.3 Flood Control Projects

Washoe County has an agreement with the City of Reno, City of Sparks, and Storey County to formulate a community-wide effort to achieve flood control. The "Truckee River Flood Management Project" is a $900M dollar project that will involve several different aspects of flood control. Construction of early projects (Truckee River Action Projects) has begun in the Truckee Meadows, projects which include improvements such as river restoration, levees, bridge pier and abutment rehabilitation, and realignment of a man-made drainageway, North Truckee Drain. Overall, the flood project is expected to take about 10 years, with an ultimate goal of reducing flood damage throughout Reno, Sparks, Washoe County, and Storey County.

2.1.4 Construction Activities

There are certain instances in which construction activities must take place within the Truckee River. Public involvement, by way of reporting excess sediment in the river observed during construction activities, brings to light the importance of keeping the river in good condition and free of excess sediment, especially during necessary construction activities. Some examples of typical construction activity occurring in or near the river include:

- Development of the land adjacent to the river (commercial or residential)
- Removal, replacement or abandonment of pipelines crossing through or near the river
- Bridge rehabilitation, abutments, piers or seismic improvements
- Enhancements for recreation, including boat ramps or public access

2.2 Water Quality Standards

Water quality standards are designed to protect a water body, its ecosystem, and its users and inhabitants (fish, wildlife, people). Every water body has different water quality issues, depending on its flow characteristics, location within a watershed, types of nutrient inputs and amount of water withdrawn for other uses. Locally on the Truckee River, the health of the fish population on the lower river is especially important to the Pyramid Lake Paiute Tribe, who maintain a fish hatchery on the river. Other established beneficial uses for the Truckee River include recreation, irrigation, municipal water supply, and propagation of aquatic life. In this section, water quality constituents that may have an effect on the quality of the river water, and therefore its ability to sustain life and meet its beneficial uses, are briefly detailed. Because restoration or construction activity taking place in the river can lead to disturbance of sediment, vegetation, and habitat, the activity must be conducted with prevention and care to cause as little impact as possible, impacts of which may be considered short term impacts.

Short term impacts that we seek to avoid are excess sediment entering the river; loss of natural riffle structures in the river due to the impact of construction activities; and prevention of input of foreign substances entering the river from construction equipment (oil and grease), or any

activity that can affect the river's temperature, which in turn affects the dissolved oxygen supply. Disturbance or removal of riparian vegetation or trees on the river bank can allow more sunlight to reach the water surface, subsequently increasing water temperature and decreasing dissolved oxygen. The aim of a permit granted from such regulatory agencies as the NDEP is to outline a plan to prevent these disturbances to the water body, and to monitor the effects of the project on water quality.

When work is planned or designed in an area adjacent to the river, project planners should initially look at the EPA's list of constituents of concern for that water body. A complete list of Nevada's river bodies and constituents of concern can be found at the EPA's website http://ndep.nv.gov/bwqp/index.htm. When applying for a permit, the NDEP will also review these constituents, and how the project could potentially affect them. Representative best management practices will be suggested, and a monitoring and sampling plan will be detailed accordingly. For example, if work is planned to rehabilitate bridge abutments on the Truckee River, a sampling plan will likely be set up with collection of TDS and pH samples at specific locations in the river upstream and downstream from the work, at specific times before and during the actual in-river work. These locations and times will be detailed in the permit by the permitting agency on project approval.

The NDEP permit for Working in the Waterway will include details for a water quality sample collection program, including locations at which to take samples and frequency of samples taken daily during a project. Samples are required to be taken either in the middle of the river (thalweg), or in immediately disturbed areas. These samples must be taken to a certified laboratory for testing of pre-determined constituents, with results reported usually within a day. In some instances, a permit may require that in-river work not cause the pH to go above 9 or below 7; or it may require that the turbidity in the river not exceed 10 normal turbidity units (NTUs) during in-river work. In these cases, there is also the requirement of notification to the regulator in the event of an observed exceedence of a parameter. These instances also require the use of a field turbidimeter and pH meter, to test the turbidity in the stream in-situ. This would be necessary when, during in-river work, an amount of sediment is disturbed that causes a visuall exceedence of the permit limitations. In this case, a sample must be collected of the plume and field results reported within a specified time frame (6 to 24 hours) to the NDEP. It is very important to honor the terms of the permit and notify the regulatory agency in the event of such an exceedence. In the event a citizen instead notifies NDEP that they see a large plume, an exceedence which had not been reported by you, it may cause a violation of the terms of the permit, and possible monetary fine. Frequent and close communication with NDEP regarding the status of the permitted project, results of required monitoring and immediate notification of visible exceedences will demonstrate to the NDPE that the project managers are following the monitoring plan, and are on-site and aware of the work being conducted in the river and the work's effect on its environment. This proactive approach will lend to open communication with the regulators during project work, an important part of following the permit. Short term exceedences of parameters will likely occur, as some work on the river will require heavy equipment to be operating in the river. As long as this type of activity occurs for only short durations, and attempts are made to minimize potential impacts to the river through the use of Best Management Practices, then these effects will be short lived. Permits are aimed to help a project minimize these short term effects while trying to achieve the overall, long-term goals of the project.

Section 4 herein contains a case-study of a restoration project that followed the permitting process, permits acquired and the monitoring and sampling plan followed during the restoration-

construction work. The NDEP Permit for Working in Waterways is also attached as an example. However, project planners should note that different projects will have different monitoring requirements, and that the information detailed in the case-study is only applicable for that particular project. A project located 10 miles downstream from the case-study location may have different monitoring requirements, a different sampling plan, and may even have additional constituents of concern. Care must be taken by project planners to minimize impacts to the water body adjacent to the work at hand, and follow the recommended BMPs and monitoring plan accordingly.

The next few sections detail the most common water quality indicators that may be regulated during a project, and how changes in them can impact the river water quality. Additionally, commonly used best management practices used to prevent negative impacts to these water quality constituents are discussed briefly here, and found in their entirety in Appendix B.

2.2.1 Dissolved Oxygen

Dissolved oxygen (DO) is the amount of oxygen dissolved in water, and a very important indicator of a water body's ability to support aquatic life. Sources of DO are diffusion from the surrounding air, aeration of water from rapids in a stream or river, and as a byproduct of photosynthesis. The amount of DO in a water body depends on several factors, including temperature (the colder the water, the more oxygen that can be dissolved), the volume and velocity of flowing water, and the amount of organisms using oxygen for their metabolic processes. Similar to terrestrial animals, fish and other aquatic organisms need oxygen to live. As water moves past their gills (or other breathing apparatus) DO is transferred from the water to their blood. Because the gas diffusion transfer process is most efficient above certain concentrations, oxygen needs to be present in the water at concentrations high enough to sustain aquatic life (Mortimer, 1956).

2.2.2 Turbidity and Total Suspended Solids

Turbidity is an indication of water quality via water clarity. The greater the amount of Total Suspended Solids (TSS), or particulates in the water, the murkier it appears and the higher the measured turbidity. High concentrations of particulate matter can modify light penetration and smother benthic habitats by impacting organisms and eggs. TSS can block light from reaching submerged vegetation, resulting in slower photosynthetic rates and less DO released into the water from photosynthesis. As particles of silt, clay, and other organic materials settle to the bottom, they can suffocate newly hatched larvae, or fill in spaces between rocks, reducing the amount of habitat for aquatic organisms. Fine particulate material can also clog or damage sensitive gill structures, decrease fish resistance to disease, prevent proper egg and larval development, and potentially interfere with feeding activities. Aquatic plant growth may decrease if light penetration is reduced significantly, with impacts to organisms dependent on them for food and cover.

2.2.3 Phosphorus and Nitrogen

Phosphorus is a natural element found in rocks, soils and organic material, and although its concentration in clean waters is generally very low, it may be found in higher concentrations in areas of human activity because it is used extensively in fertilizer and other chemicals. Phosphorus binds to soil particles, and when applied to fields, remains relatively immobilized and stable on land as long as the soil remains intact. When land erodes and soil is transported

into surface water, the phosphorus detaches from the soil particles and is available for plant uptake.

Nitrogen is required by all organisms for the basic processes of life: to make proteins, grow, and reproduce. Nitrogen is very common and found in many forms in the environment. Inorganic forms include nitrate, nitrite and ammonia. High levels of nutrients including nitrogen and phosphorous can overstimulate the growth of aquatic plants and algae, resulting in large DO depletions during plant respiration that affect fish and other aquatic organisms' health.

2.2.4 Total Dissolved Solids

Total dissolved solids (TDS) are solids in water that can pass through a filter (usually with a pore size of 0.45 micrometers). TDS is a measure of the amount of material dissolved in water, and can include bicarbonate, calcium, carbonate, chloride, magnesium, phosphorus, sodium, sulfate, organic ions, and other ions. A certain level of these ions in water is necessary; however, changes in TDS concentrations can be harmful to aquatic life because the density of the water is affected, and it is the water density that determines flow into and out of organisms' cells (Mitchell and Stapp 1992). If TDS concentrations are too high or too low, the growth of life can be limited and death may occur.

2.2.5 Temperature

Most aquatic organisms are cold-blooded and unable to internally regulate their core body temperature; therefore, temperature exerts a major influence on the biological activity and growth of aquatic organisms. Fish, insects, phytoplankton, zooplankton, and other aquatic species all have preferred temperature ranges, and temperature variations too far outside these ranges can result in increased mortality. Temperature is also important because of its influence on water chemistry, specifically DO. Warm water cannot hold as much DO as cold water and it is possible to have warm water that, while saturated with oxygen due to its lower holding capacity, does not contain high enough DO concentrations to support aquatic life.

2.3 Best Management Practices

Disturbances within watersheds from activities such as construction, mining and overgrazing can greatly accelerate the processes of erosion and sediment transport, resulting in excessive deposition of sediments in streams and rivers, and other negative environmental impacts. Best Management Practices (BMPs) are used to help control adverse impacts of such activities from affecting the environment. Erosion and sediment transport are natural processes that form landscapes and provide the bedloads required to maintain stable streams and rivers. Sediment and gravel transported from undeveloped land surfaces also provides important fish spawning media and is critical to support other aquatic, riparian and terrestrial habitats. Excessive sediment loads into a water body can cause increased turbidity and reduced light penetration resulting in the adverse effects previously described. Sediment inputs can also lead to suppression of both aquatic and terrestrial vegetation and may add nutrient particles and other pollutants to lakes and streams. In addition, increased sediment loading can result in changes to the physical characteristics of streams and rivers. Changes may include streambed degradation, stream widening, and streambank erosion (Urban Drainage and Flood Control District, 1999).

As a result of the potential impacts of in-river work on certain water quality constituents, approval of certain permits will be accompanied by suggested BMPs and a monitoring/sampling plan. The permit may also recommend other BMPs to be used in addition to the planned BMPs. The use of additional BMPs is advised to provide redundancy for water quality protection. In the event of failure of a primary BMP, the back-up or redundant BMP may prevent a spill of sediment or exceedance of permit limitations. Proper planning and strategic use of BMPs can help prevent such exceedences. Communication with the regulators of the effectiveness of BMPs, especially through a monthly report to the regulators accompanying the water quality constituent lab reports, will help the regulators determine the most effective BMPs for future projects. A comprehensive list of BMPs used in the vicinity of the Truckee River can be found in Appendix B, along with fact sheets describing their application and use.

Section 3: Permitting

3.1 The Permitting Process

The primary purpose of this Handbook is to provide an overview of the current steps required to obtain approval for a construction project in the Truckee River from the numerous regulatory agencies (Figure 1). It will address both the procedures required for obtaining the permits and approvals needed, and suggested BMPs to which the project design may incorporate towards attaining the necessary permits and approvals.

A large portion of this Handbook is devoted to discussing the various permitting agencies that have jurisdiction over all or part of the Truckee River in northwestern Nevada (Figure 2). These agencies require any applicant that wishes to complete construction work, whether it is restoration, flood control, or any other type of work within the Truckee River, to comply with their particular requirements and regulations. Each of these agencies has their own process of permitting and approval, as each agency has its own authority, concerns and practices. The requirements from each agency vary, and can include completion of permit applications, reports, environmental assessments, design plans, fees, copies of applications, and coordination with other agencies of authority. It is in the best interest of the applicant to begin their permitting process with the U.S. Army Corps of Engineers (USACE) by attending their Pre-Application Meeting. It is sufficient in almost all cases to submit a duplicate set of plans and specifications to each agency requiring either a permit application or submittal. Fees or requirements listed in the attached permit applications may change upon printing of this manual. Therefore it is advisable to confirm the appropriate fees and permits versions with each permitting agency.

A “Permitting Process Flowchart” (Figure 1) has been created to demonstrate the entire permitting process required for permit approvals. The details of the various agencies and their associated permits are explained below. There are over a dozen agencies that have jurisdiction over work occurring in the river, depending on what their particular concerns are, i.e., fish, water quality, or wildlife. Some agencies require an actual permit application, while others require submittal of various letters, reports, or other agencies’ application package. Actual permit applications in the Agency list that follows are specified, and are attached hereto in Appendix A.

The following individuals provided information or were consulted during the development of this Handbook:

Kathleen Dadey, U.S. Army Corps of Engineers; Glen Gentry, Nevada Division of Environmental Protection; Shawn Gooch, City of Sparks; Dean Haymore, Storey County; Icyl Mulligan, Nevada Division of Environmental Protection; David Potter, U.S. Fish & Wildlife Service; Kevin Roukey, U.S. Army Corps of Engineers; Kim Tisdale, Nevada Department of Wildlife; Mickey Hazelwood, The Nature Conservancy; and John Martini, City of Sparks.

Figure 1. Permitting Process Flowchart

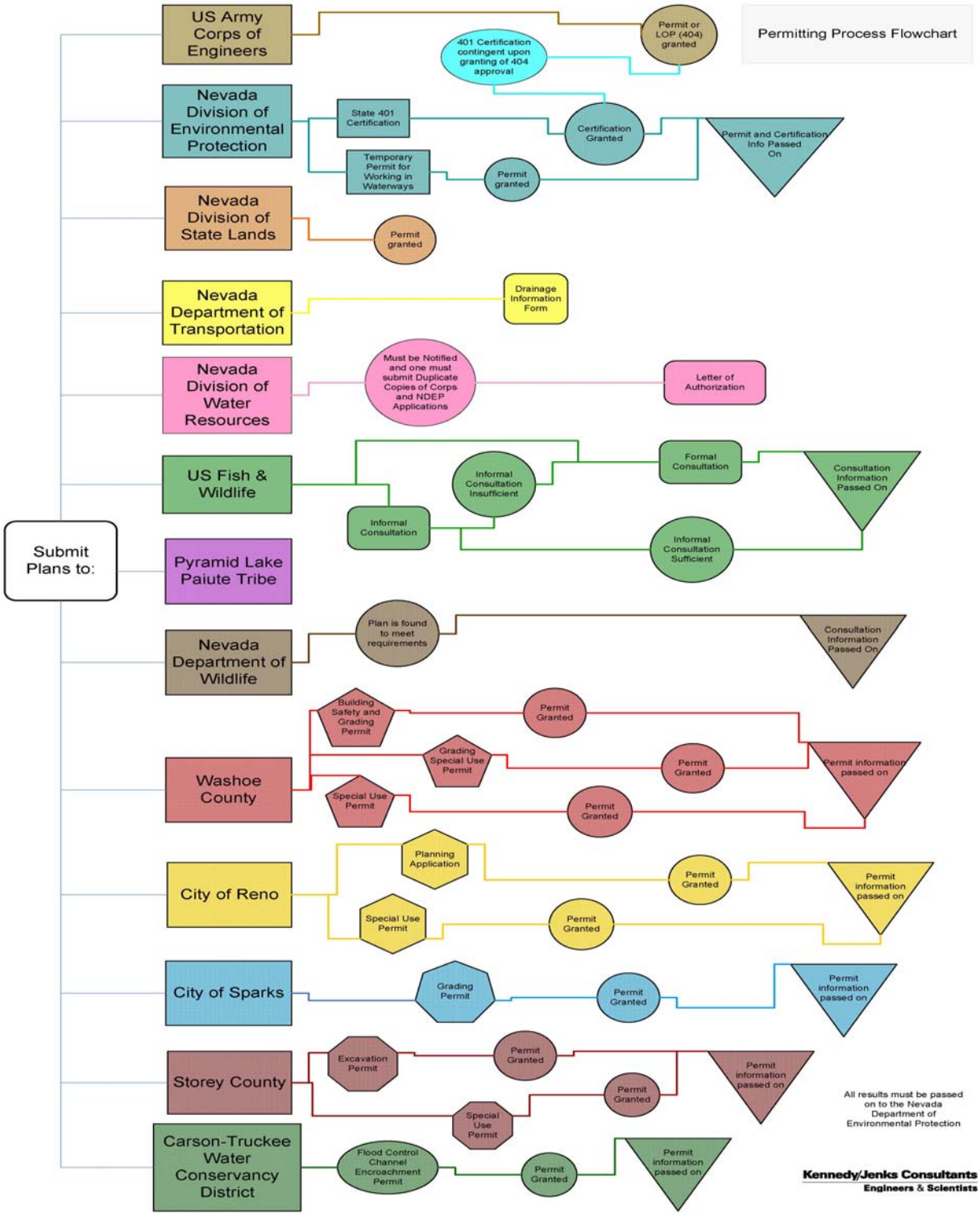
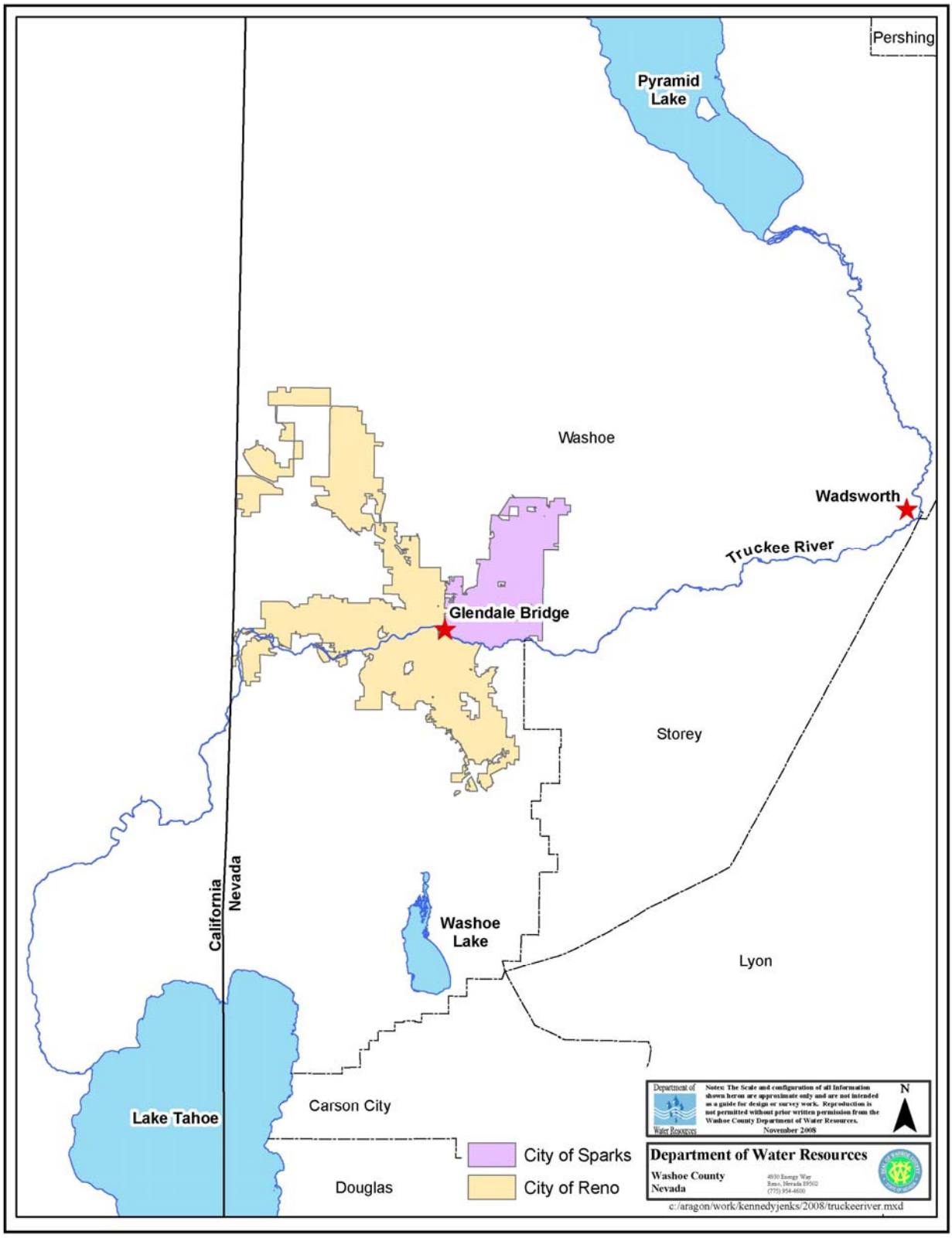


Figure 2. Truckee River overview



3.1.1 U.S. Army Corps of Engineers

The USACE has three main types of permit: Nationwide General Permits, Regional General Permits, and Individual Permits. Generally on the Truckee River, Nationwide General permits are the most common. Construction work on the Truckee River in Nevada is not yet covered under a Regional General Permit. The application to be filled out and submitted to the local USACE office is the Application for Department of the Army Permit (33 CFR 325). Based on information supplied in this application, the USACE determines which of the three permits is applicable for the proposed work.

- Nationwide General Permits

  These permits are issued to those projects which fall under the various Nationwide Permit headings. For work within the Truckee River, these permits may include

  - Nationwide 27, permission for stream and wetland restoration activities
  - Nationwide 33, temporary construction, access and dewatering
  - Nationwide 41, reshaping existing drainage ditches
  - Nationwide 43, stormwater management facilities

  These various permit designations are determined by the Corps of Engineers during their review process, as a project may fit under the provisions of several Nationwide Permits.

- Regional General Permits

  This permit is granted after a description of all the work to be done, in a specific area and within a specific time frame, is submitted along with other application materials. This type of permit is often granted for long term maintenance work, or similar projects that can easily fit under the description of work allowed by the Regional General Permit. This is not the best solution if someone is trying to get a permit for a single project, but may be worth the effort for various agencies to coordinate an effort to have much of the construction work done in the Truckee River covered under one permit.

- Individual Permits, including 404 Letters of Permission (also known as 404 Permit)

  These permits are issued on an individual basis when the provisions of the Nationwide and Regional General Permits do not cover the work being done. Depending on the project, this may be the more appropriate forum for permitting. Most projects can fit under the Regional and Nationwide General Permits, but if it is a project with higher impact, then an Individual Permit may be required. Two local examples of individual permits are the Sparks White Water Park, and the South Truckee Meadows Water Treatment Plant. The individual permit process requires public notice and commenting, unlike the Regional and Nationwide General Permits. The Letter of Permission is an abbreviated version of the Individual Permit.

The Corps offers a pre-application meeting for those who are interested in working in the Truckee River, meetings which allow the USACE and other agencies to express any comments and concerns they have regarding the proposed project before it goes through the permit review process. The Pre-Application meeting is the real "Key to Success" in the permitting process. Attendance at this meeting ensures that each applicant is applying for the correct permit, and that the permit application is submitted with the proper materials. Applicants are encouraged to provide as much information as possible in advance of the pre-application meeting to allow for agency review.

- Pre-Application Meetings

  The pre-application meeting allows the applicant to be better prepared in submitting their applications to the various agencies. As part of that goal, each applicant should be prepared and provide, at least two weeks before the pre-application meeting, the following: location / vicinity map; project map; project description; planned or anticipated environmental impacts; and a plan for avoidance, minimization, and mitigation of possible environmental impacts. This information helps the USACE determine which additional agencies should attend the pre-application meeting.

  The meetings are currently held on the fourth Thursday of every month, as long as there is interest from applicants, starting at 9:00 a.m. in the Army Corps office in the Clifton J. Young Federal Building in Reno. The content of each meeting is different due to the differences in projects and applicants. Each applicant usually receives one hour to present and discuss their project with the agencies, although an applicant may be given more time depending on the project's size and possible difficulty in permitting. It is recommended that each applicant spend 20 minutes on a presentation, and allow the rest of the time for agency questions and feedback; a time in which each agency's representatives have a chance to express their concerns and comments. The USACE and other agency representatives inform the applicant as to which documents are necessary to prepare for each agency.

3.1.2 Nevada Division of Environmental Protection

Nevada Division of Environmental Protection (NDEP) has regulatory authority over waters in Nevada, including that of the Truckee River from the state line to the Pyramid Lake Paiute Tribe's land downstream of Wadsworth. Two approvals are issued by NDEP, both of which are necessary for work in the Truckee River: (1) 401 Certification, and (2) Temporary Permit for Working in Waterways. The applicant must submit completed permit applications which detail the necessary requirements to apply for these permits. For example, in some instances an applicant may have to submit full sets of proposed/conceptual project plans and specifications along with mitigation/monitoring and erosion control plans to NDEP.

- <u>401 Certification</u>

  This certification is granted at the state level, and is contingent upon the applicant's acquisition of the US Army Corps of Engineers' 404 permit. Much of the information necessary for the certification is also required for the Temporary Permit for Working in Waterways, therefore some of the elements may be duplicated for submittal; an

environmental document is appreciated if one has been prepared, otherwise it is not a requirement. The process may take from 45 days to a year for approval.

- Temporary Permit for Working in Waterways

  This permit is necessary for all work in rivers within the State of Nevada's jurisdiction. Supplemental information required for this permit may include project plans, specific location information, and in some cases design plans stamped by a Professional Engineer. The length of time for a permit to be granted is variable, with each permit following an individual timeline that can take anywhere from 6 months to a year. This permit usually sets forth guidelines of the water quality standards that must be maintained during the construction process, and a water quality monitoring plan that must be followed to demonstrate that the standards are met during construction activity.

- Nevada General Stormwater Permit NVR100000

  When all other permits to work in the River are obtained, and the Contractor has been awarded the project, the Contractor and the Owner should work together to obtain NDEP's General Stormwater Permit. NDEP's General Stormwater Permit requires the owner/operator of all applicable private and public construction sites statewide to submit to a Notice of Intent (NOI), an annual fee, and to develop and implement a Storm Water Pollution Prevention Plan (SWPPP) that includes erosion, sediment and waste control measures, self-inspection, monitoring and reporting. The SWPPP must be prepared prior to submittal of the NOI and is not to be submitted to NDEP, but must remain on the project site during the duration of the project. The annual fee is due when the NOI is initially filed and on or before July 1 every year. When construction is complete and all disturbed soils are stabilized, the site owner/operator is required to submit a Notice of Termination (NOT) to NDEP. Copies of NDEP's Notice of Intent (NOI) and Notice of Termination (NOT) forms are presented in Appendix B. A model Storm Water Pollution Prevention Plan (SWPPP), which provides the preferred format for use in the Truckee Meadows, is presented in Appendix C. Guidance on preparing and implementing a SWPPP is presented in Sections 4.0 and 5.0.

  Construction sites that will require permit coverage under NDEP's General Construction Permit include the following:

  - Any construction activity including clearing, grading, excavation, and demolition that disturbs one or more acres of land;
  - Any land disturbance on a site that is part of a larger common plan of development or sale with a planned disturbance of one acre or greater;
  - All temporary plants or operations set up to produce concrete, asphalt or other materials for a permitted construction project (does not apply to commercial operations or those that serve multiple projects);
  - Any repaving operation of one or more acres that creates fine-grained sediments that are not immediately removed from the site and properly disposed of at an acceptable facility[1], and,

[1] Although not specified in the General Construction Permit or 40 CFR 122.26, NDEP has the authority to enforce this additional requirement.

- Any construction activity, including sites disturbing less than one (1) acre that are designated by the NDEP or the EPA to have a potential for contribution to a violation of a water quality standard or may significantly contribute pollutants to waters of the United States. This includes construction projects that may impact receiving waters within a 1/4-mile radius of the project.

3.1.3 Nevada Division of State Lands

The Nevada Division of State Lands (NDSL) owns the land under the Truckee River from the state line to the Pyramid Lake Paiute Tribe boundary. As the property owner, they must grant permission to allow construction or work in the Truckee River. The applicant will have to submit a completed Application for Authorization to use State-Owned Submerged Lands to NDSL, which may include submission of a full set of plans and specifications. This application also requires submission of project documentation to neighboring land owners for their review and comment.

- Application for Authorization to use State-Owned Submerged Lands

  This application enables the Nevada Division of State Lands to determine the type of permission they grant for the specific project. These permissions may be permits, licenses, or other authorizations, including leases for the state lands in question.

3.1.4 Nevada Department of Transportation

The Nevada Department of Transportation (NDOT) is concerned with work in the Truckee River as it interacts with the NDOT Right-of-Way. There are several ways in which this could happen during project work, as much of the river flows adjacent to state highways. NDOT has a drainage information form, designed to assist in determining the impact of a proposed project within the Truckee River and potential effect on their Right-of-Way. Preparation of this form helps the applicant determine if a comprehensive drainage study will be required. The following applications must be completed and submitted to NDOT:

- Revocable Application and Permit for Occupancy of Nevada Department of Transportation Right-of-Way

  This application requires general detail about the project, including type, size, and time frame. Multiple sets of full-size drawings must also be included.

- Drainage Information Form

  This form requires conceptual drainage information from the project engineer about the proposed project, and provides a list of possible ways in which an NDOT Right-of-Way may be affected by the work. If the project does involve the NDOT Right-of-Way, then the project engineer must prepare a Drainage Report for the NDOT.

Drainage Report

This report (not a form or application) must include detailed calculations, drawings, and an analysis of potential impacts on the Right-of-Way. Guidance for preparing this report can be found in the Department's Drainage Manual, and the report must be stamped by an engineer registered in the State of Nevada. This report may be

waived by the Department's District Engineer, otherwise it must be submitted and meet NDOT Standards.

3.1.5 Nevada Division of Water Resources

The Nevada Division of Water Resources (NDWR) is a co-sponsoring entity for maintaining the Truckee River as a flood conveyance channel from the Glendale Avenue Bridge to the Pyramid Lake Paiute Tribal Boundary. They were appointed by the USACE to perform maintenance on the Truckee River along that corridor. The NDWR must be notified of new project proposals, and must receive copies of the applications submitted to the USACE and NDEP. The applicant must submit a full set of plans and specifications similar to those submitted to the USACE along with a request to receive a Letter of Authorization for the proposed project.

Letter of Authorization (LOA)

After review of the application, NDWR will either request changes or approve the application. If approved, the applicant will receive a Letter of Authorization, with copies going to the Corps.

3.1.6 U.S. Fish and Wildlife Service

According to Section 7 of the Endangered Species Act (16 U.S.C. Section 1536 (a)(2)), all federal agencies must consult with the U.S. Fish and Wildlife Service (FWS) if they approve a permit or provide funding for a project that may affect listed species or their designated habitat. On the Truckee River, species have been listed as threatened (Lahontan Cutthroat Trout) or endangered (Cui-ui), making this a necessary and important step in the permitting process. Through a consultation with the FWS, the federal agency (the USACE, in most cases) must ensure that the proposed work will not jeopardize the continued existence of a listed species or result in the destruction of designated critical habitat. When listed species are present, a biological assessment must be conducted which analyzes the potential effects of the project on the listed species. If the project is determined to impact the listed species or habitat, a biological opinion must be prepared. This biological opinion may recommend alternatives to avoid impacting the species or habitat. Complete information on the consultation can be found online (http://www.mrsc.org/Subjects/Environment/esa/esa-bioass.aspx). The USACE is responsible for sending copies of 404 permit applications to the FWS, and incorporates subsequent findings into the permit report.

Informal Consultation

In the early stages of a project, an informal consultation is used to discuss the type of species affected and potential impacts in the proposed project area. If these discussions find no impact on listed species in the project area, then the Informal Consultation is complete, and the proposed project moves forward.

Formal Consultation

During the Informal Consultation if it is determined that there is a potential impact of the project on listed species, a biological assessment must be prepared to determine the impact of the project on the species. This initiates a Formal Consultation. During the 90-day Formal Consultation period, the FWS and the USACE (or other federal agency) share information about the proposed project's effect on species. The FWS

is then allowed 45 days to prepare a biological opinion, which details whether the proposed activity will either jeopardize the continued existence of the listed species, or allow for the incidental "take," or level of harm of the listed species. The opinion details alternative actions for implementation in the project.

3.1.7 Pyramid Lake Paiute Tribe

The members of the Pyramid Lake Paiute Tribe (PLPT) are the end-users of the water in the Truckee River, which flows into Pyramid Lake at its terminus. The PLPT maintain a fish hatchery for the threatened Lahontan Cutthroat Trout and the endangered Cui-ui fish. Therefore, it is of the utmost importance that the water they receive be of good quality to maintain aquatic life. Plans should be submitted to the PLPT for their review, and possible consultation. An approval of plans is not required by the PLPT; however, it is considered a courtesy to the Tribe, as they have a great interest and take great care in maintaining the water quality of the river.

3.1.8 Nevada Department of Wildlife

The Nevada Department of Wildlife (NDOW) also acts in a consulting role, providing review during the permitting process. NDOW reviews the application package previously submitted to NDEP, and their concerns are expressed to the applicable regulatory bodies. Their concern is for the protection of wildlife living in and around the Truckee River.

3.1.9 Washoe County

Washoe County issues permits within its sphere of influence. Various permits are granted depending on the scope and location of the project. Each application requires different materials be supplied along with the completed application. Each applicant is encouraged to read through the Washoe County Code to be certain they are requesting the proper permits, and that their design meets the regulations set forth in the Code. To satisfy Washoe County requirements for working in or near the Truckee River within Washoe County, the potential applications must be submitted as detailed below. Applicants should contact Washoe County Community Development to ensure they are submitting the correct permit applications.

- Special Use Permit

  To perform work in the Truckee River or within the riparian zone, a Washoe County Special Use Permit is needed. This is a lengthy application process requiring information such as type of project, intended use, intended improvements, schedule/phasing, impacts directly to the area and surrounding areas, and mitigation plans for those impacts, etc. This application must be approved by the Board of County Commissioners for the applicant to receive the permit.

- Special Use Permit for Grading

  The special use permit for grading requires a narrative regarding the purpose of the proposed project and the impacts it will have. It is required for grading projects involving excavation of over 1,000 cubic yards, importing more than 5,000 cubic yards of fill, disturbing more than 25,000 square feet, or placing more than 1,000 cubic yards of fill in a flood hazard area. This application must be approved by the

Board of County Commissioners for the applicant to receive the permit. To apply for this permit, an applicant must complete a Washoe County Development Application, and a Supplemental Information Form.

- Washoe County Building and Safety Grading Application

  This application must be submitted after the special use permit has been granted. It is a simple application which requires the special use permit number and other general information about the project. Additional applications or paperwork may be necessary, as detailed in Washoe County Grading Plan Submittal – Grading Permit Submittal Guidelines.

3.1.10 City of Reno

The City of Reno grants permits for actions within its sphere of influence. Several permits may be issued depending on the scope of the project. Each applicant should review the Reno Municipal Code to ensure their design meets all requirements set forth in the Code. Because various permits are granted depending on the scope and location of the project, a thorough review of the different applications should be made to ensure the correct application is submitted for a particular project. Each application requires a variety of different materials necessary (such as plans, photographs, calculations, etc.) to be supplied along with the completed copy of the application. Applicants are encouraged to contact the Permit Place (City of Reno Community Development) to be certain they are submitting the correct application. Because of the complicated nature of these permits, additional time should be allotted for their acquisition. Typically, permits that may be necessary to work in or near the Truckee River within the City of Reno are as follow:

- Building Permit Application, Grading/Site Improvements

  The City of Reno requires all new site development to obtain a grading permit. A grading permit falls under the "building permit" category, and gives the City information such as the name of the contractor, the amount of material to be moved (imported and exported), and total area disturbed.

- Special Use Permit

  A special use permit is required of any applicant intending to perform work within the Truckee River or to change the zoning due to their proposed project. The special use permit application requires hydrology reports, public participation (Neighborhood Advisory Board Meeting Presentations), Planning Commission approval, and site plans and maps. A Development Application is also required to be completed as part of this submittal.

- Development Application

  A Development Application must be included in the application for a special use permit. Depending on the scope of the project, there are several checklists to help meet the requirements of this application. Each checklist includes a detailed list of all documents required for submission of the application, including maps, a grading and drainage plan, legal description, and preliminary hydrology, geotechnical and sewer reports.

3.1.11 City of Sparks

The City of Sparks provides permits for actions within its sphere of influence. Various permits are granted depending on the scope and location of the project, therefore it is advisable to review all applications to ensure completion of the correct application. Applicants are advised to look at Sparks' Municipal Code Titles 15 and 20 when performing work in or near the Truckee River. These sections of code may be applicable and contain design criteria to be followed, or additional permits or variances (flood variance, Special Use Permits, etc.) to be acquired. Applicants are also encouraged to contact the City of Sparks Community Development to ensure they are submitting the proper permit applications. The more common permits necessary to perform work in or near the Truckee River within the City of Sparks are as follows:

- Site Plan Review

  A Site Plan Review application includes a Development Application (Appendix A) for the City of Sparks. This submittal must be made to the City, which helps them determine what additional requirements may be necessary for the applicant. This review requires submittal of project plans and specifications to the Community Development Department.

- Grading and Sitework Permit Application

  A grading permit is required for any project that moves 50 or more cubic yards of soil, obstructs or diverts a drainage course, involves excavating more than two feet below existing grade, or creates a cut slope greater than five feet in height and steeper than 1.5:1. The grading plans must be prepared by a Professional Engineer or Surveyor licensed in the State of Nevada, and must include a number of requirements including maps, property lines, easements, proposed finished ground contours, existing and proposed drainage structures, and FEMA benchmark. This application and its requirements can be found in Appendix A.

- Encroachment/Excavation Permit Package

  The City of Sparks requires that anyone wishing to excavate, tunnel under, or fill in any sidewalk, curb, gutter, public street, highway, avenue, alley, public right-of-way, or easement within the City limits must first obtain an excavation permit to do so from the City Engineer.

3.1.12 Storey County

Storey County issues permits within Storey County, and their purview is specific to work done above the high water mark in the Truckee River as it flows through Storey County, primarily along the south bank of the river east of Washoe County. Numerous permits are required depending on the scope and location of the project. It is important that the applicant read the Storey County Code to ensure they are complying with the regulations set forth in that code, and also contact the Storey County Building Department for verification. Each application requires different materials to be submitted with the application. Additionally, Storey County requires that any entity conducting any type of work within Storey County must also acquire a Storey County Business License.

- Grading Permit (Application)

  This permit is required to perform grading work in Storey County, and is similar to the grading permits offered by other agencies. A description of the work to be done, location, and contractor information shall be supplied. The Storey County application also details the procedure to follow in the event any historic artifacts are found during the course of excavation.

- Permit Application

  This is a building permit that is required if performing earth disturbing activities within Storey County. This application requires information such as project vicinity, grading plan, contractor, name of owner, etc.

- Special Use Permit

  This permit is typically required when building a structure within 1000' of the Truckee River, an example of which is a bridge pier. This permit application requires a plot plan, property owner information, and vicinity map as well as a justification statement and a narrative of the work to be done. Work in the river is classified at various levels depending on the size and scope of the work to be done, including the Minor, Routine, and Major Special Use Permits.

3.1.13 Carson Truckee Water Conservancy District (CTWCD)

The CTWCD is a co-sponsoring entity in maintaining the Truckee River as a flood conveyance channel from the Nevada/California state line to the Glendale Avenue Bridge. Within this section of the Truckee River, the agency is concerned with encroachments caused by development along the waterway.

- Flood Control Channel Encroachment Permit

  This permit is issued "for any proposed work that will potentially impact the conveyance capacity of the Truckee River" (CTWCD Applicant Letter). This permit application requires a narrative of the proposed work, area maps, surveyed cross-sections and drawings prepared by an engineer or surveyor professionally licensed in the State of Nevada, and hydraulic model output.

3.1.14 Nevada State Historic Preservation Office (NSHPO)

The NSHPO is involved in the permitting process by performing or authorizing a cultural survey for the land to be used. This survey establishes whether or not the areas to be disturbed have cultural and historical value and may prevent changes due to the proposed project. The U.S. Army Corps of Engineers initiates a Section 106 survey, and incorporates the information received into their permit report. This survey must be done by someone who meets the qualifications established by NSHPO. NSHPO prefers for the survey to be coordinated by the federal agency involved in the project, which would fall under the same nexus of federal ownership, funding, or permitting authority as the US Fish & Wildlife Service's Section 7 Consultation.

3.2 Permit Matrix

	POTENTIAL PERMITS REQUIRED	WEB ADDRESS
1	COE Nationwide, Regional and Individual	http://www.spk.usace.army.mil/organizations/cespk-co/regulatory/pdf/ENG4345.pdf
2	NDEP 401 Certification	http://ndep.nv.gov/bwqp/file/401application.pdf
3	NDEP Temp. Permit for Working in Waterways	http://ndep.nv.gov/bwpc/tmpwtrwy.pdf
4	NV Division of State Lands Permit, License or Other	http://lands.nv.gov/forms/APPLICATION%20FORM%20NavWaters.pdf
5	NDOT Occupancy Permit	http://www.nevadadot.com/business/forms/pdfs/ROW_OccupancyPermitApp.pdf
6	NDOT Drainage Information Form	http://www.nevadadot.com/business/forms/pdfs/ROW_DrainageInformationForm.pdf
7	NDWR Letter of Authorization	http://water.nv.gov/Home/contactCC.cfm
8	US FWS Consultation	http://www.fws.gov/Endangered/factsheets/consultations.pdf
9	Washoe County Special Use Permit	http://www.co.washoe.nv.us/comdev_files/app_fy08_09/special_use_permit/sup_app_fill_in_2008.pdf
10	Washoe County Special Use Permit for Grading	http://www.washoecounty.us/comdev_files/app_fy08_09/sup_grading/sup_grading_app_fill_in_2008.pdf
11	Washoe County Grading Permit (Note: 2 websites)	http://www.co.washoe.nv.us/repository/files/5/reno_grading_application.pdf http://www.co.washoe.nv.us/repository/files/5/grading_handout_cmplt.pdf
12	City of Reno Grading Permit Application	http://www.cityofreno.com/Index.aspx?page=154
13	City of Reno Special Use Permit	http://www.cityofreno.com/Index.aspx?page=158
14	City of Reno Development Application	http://www.cityofreno.com/Index.aspx?page=158
15	City of Sparks Development Permit Application/Site Plan Review	http://www.cityofsparks.us/business/planning_dev/dev_app_forms/pdfs/siteplan.pdf
16	City of Sparks Grading Permit	http://www.cityofsparks.us/business/building_permits/commercial/pdfs/Grading__Sitework_Application_2007.pdf
17	Storey County Business License Application	http://www.storeycounty.org/Biz_license/App%20CONTRACTORS%20In%20County.pdf
18	Storey County Grading Permit Application	http://www.storeycounty.org/Building/Docs/Grading%20Application.pdf
19	Storey County Building Permit Application	http://www.storeycounty.org/Building/Docs/APP%20-%20All%20-%207%201%2006.pdf
20	Storey County Special Use Permit	http://www.storeycounty.org/Planning/Special_Use_FILL_IN.pdf
21	Carson-Truckee Water Conservancy District Flood Control Channel Encroachment Permit	Go to or Call Office: 295 Holcomb Ave. Reno, NV 89502 Phone: (775) 322-8041
22	NV State Historic Preservation Office	http://nevadaculture.org/docs/shpo/staff.htm

Section 4: Case Study

4.1 McCarran Ranch Case Study

This brief case study presents a real-world example of a Truckee River restoration project and the procedures that were followed to obtain and comply with the permits necessary by local, state and federal agencies. The first phase of restoration on the lower Truckee River began in 2003 at the former McCarran Ranch. This area is located about 15 miles east of Reno, encompassing a land area adjacent to about 5 miles of the river. The Nature Conservancy purchased this former working ranch for the purpose of restoration, with support from the Cities of Reno and Sparks. The McCarran Ranch restoration project included construction of a new meander, increased riffle habitat, excavation of large areas of wetlands, and the planting of trees throughout the property. Such activity results in disturbances to the river banks and substrate, effectively stirring up or re-distributing sediment if not properly controlled and monitored. Although the primary goal of a restoration project is to restore an ecosystem to a more natural state, the activity of heavy construction equipment working in or adjacent to the river can lead to a temporary decline in water quality conditions. The Temporary Permit for Working in Waterways (formerly known as the Rolling Stock permit), the permit granted by Nevada Division of Environmental Protection (NDEP), and required implementation of best management practices (BMPs) to prevent and mitigate potential environmental impacts associated with these restoration activities.

This case study reviews the permitting process that led up to the actual restoration work in the McCarran Ranch section of the Truckee River, and a review of the effectiveness of BMPs designated for use during restoration as outlined in the NDEP Permit. The designated BMPs were intended to achieve protection from short-term adverse conditions during the construction phase of the project. Overall, restoration was focused on long-term improvements to the physical, chemical and biological integrity of the lower Truckee River. Therefore, any immediate impacts must be minimized as much as practicable during the restoration process in order to continue to meet the river's beneficial uses and water quality criterion. Kennedy/Jenks Consultants (K/J) was retained by The Nature Conservancy (TNC) to conduct the daily river water quality monitoring and BMP evaluation pursuant to the NDEP "Working in Waterways" permit.

4.2 Benefits of Restoration

Restoration is recognized worldwide as a means to improve water quality, flow conditions, in-stream habitat, and to provide a river access to the floodplain. The initial phase of restoration at McCarran Ranch involved excavation of numerous wetlands, placement of rocks and boulders in the river to enhance riffle habitat, transplanting of trees, raising the river bed, and excavation of a new meander (and subsequent abandonment of the old channel – now a wetland area). Restoration work at this location continued through 2006. Goals of this restoration were to restore access to the floodplain (enhance flood attenuation), improve water quality by assimilating more nutrients, improve existing in-stream habitat and provide additional habitat in-stream and in the adjacent wetlands. (For a complete description of the restoration, go to www.nature.org). The increased river length provided by the meander increases the travel-time of the river – the time it takes for the river to flow from one point to another. This not only provides additional time for nutrient uptake by algae in the water column, but also for the transformation of nutrients into either bioavailable forms or forms that could be completely removed from the water column (nitrogen gas). The increased pool and riffle sequences not only provide better in-stream habitat for fish and other aquatic organisms, but also help to increase the oxygen supply in the water, through the roughness caused by the water moving over and around the riffle areas. Raising the river bed and providing it access to its floodplain will enable it to spread out over the floodplain during high flow events, instead of "bottlenecking" and causing flooding upstream. It is also anticipated that restoration would improve water quality by assimilating more nutrients input from upstream point and non-point sources. Support from the City of Reno has funded research and water quality models to evaluate this hypothesis, and work has been published on the success and/or results.

4.3 Construction Activity for Restoration

While much of the restoration work was adjacent to the river, some work required heavy equipment to operate within the river itself. This consisted of the placement and positioning of large boulders in the river to create the pool and riffle sequences. This required the movement of heavy equipment in and out of the water to deposit the boulders in the river. These boulders were then distributed around the river bottom from another piece of heavy equipment stationed in the river. Heavy equipment moving across the river bed can stir up sediment in the water column, causing varying effects on water quality, including increased turbidity. The intent of the permit process is to set forth measures that must be implemented during the construction activity to minimize the amount of sediment entering the river from activities on-shore, and to minimize the in-stream impact of the restoration construction process.

4.4 Permits Acquired

The type of work to be conducted and a project's location determine which completed permits must be submitted to the various agencies. This project's geographic location made it fall under the jurisdiction of the USACE, NDEP, Washoe County and Storey County. As described, this project involved excavating and stockpiling of sediment adjacent to the river, in-river activity of heavy equipment, relocating trees, and equipment river crossings. This type of work involves grading, excavation, stockpiling of material, and work within the river. As detailed below, numerous permits were obtained for all such work.

As a first step in the permit process, a meeting was held that included staff from TNC, Kennedy/Jenks, and NDEP. This meeting included an initial review of the BMPs that TNC considered implementing during the project. NDEP recommended the use of additional BMPs, in order to most adequately protect the river and its inhabitants and beneficial uses during the river work. During subsequent meetings with NDEP, additional questions were raised, and the need to contact additional entities was recognized. TNC then met with or submitted plans to the other various agencies for their review. The overall process of obtaining all permits took about 18 months. In all, the permits or authorizations obtained are as follows:

- Storey County
    - Excavation Permit
    - Special Use Permit
- Washoe County
    - Dust Control Permit
    - Grading Permit
    - Construction Permit Submittal Checklist

- Nevada Division of Water Resources
    - Letter of Authorization
- Nevada Department of Wildlife
    - Letter of Support

- Nevada State Lands
    - Letter of Authorization
    - Grant of Easement
- Nevada Division of Environmental Protection
    - Stormwater Permit
    - Temporary Working in Waterways Permit (Rolling Stock Permit)
    - 401 Certification
- USACE
    - Completed 404 Permit Application
    - Nationwide Permit
    - Informal Consultation with USFWS
- U.S. Fish and Wildlife Service
    - Informal Consultation (in conjunction with USACE)

Due to the multiple-year time span in which these permits were granted, the titles of some may have changed, in comparison to what is presented in this Handbook.

4.5 Monitoring

The most labor and monitoring intense permits are assigned by the Nevada Division of Environmental Protection. In particular, is the "Temporary Working in Waterways" permit for the restoration work. This permit set forth monitoring requirements to be followed during the in-river construction and restoration activity to maintain water quality standards established by NDEP for this particular work. The parameters to be monitored set forth in this type of permit vary based on project location and background water quality conditions at that location. The permit that was issued for this project specified that the water quality constituents to be monitored during the in-river work were pH, turbidity, total suspended solids (TSS) and total dissolved solids (TDS). The permit also detailed the use of specific best management practices (BMPs) for work adjacent to the river to prevent sediment from entering the river, and to prevent sediments disturbed in-stream from traveling downstream. A copy of this permit is attached as a supplement to this case study.

All water quality samples were "discrete" samples that were taken at locations prescribed by the permit pertaining to the location of work conducted daily. For example, during the in-river work consisting of placement of boulders in the river for riffle construction, one downstream sample was taken daily prior to any activity in the river (a location downstream from all planned activity throughout the whole project). A sample taken at this same location every day during construction was considered representative of background conditions. During actual in-stream

activity, additional samples were taken at specific points upstream and downstream of the construction activity itself, usually 100 feet downstream and 50 feet upstream from the activity. Additionally, if a significant "plume" of sediment was seen in the water due to the activity, a grab sample was to be collected, and reported to the NDEP within 6 hours, along with a lab analysis of the sample constituent quality and an approximation of the size of the plume. All samples were taken to a certified laboratory for a daily report on all variables' concentrations. When values were exceeded, a report was submitted to the NDEP. In the event of a "plume," staff was also to notify the Fish and Wildlife and Tracy Power Plant.

Data collected during pilot construction sampling events showed that exceedances of TSS and turbidity criteria occurred during construction. It seems reasonable that exceedances would occur, considering the extent of construction activity taking place in the river, and also reasonable to assume future exceedances associated with restoration projects will occur. Despite these exceedances, the daily monitoring by K/J personnel ensured that everyone working on the project was aware of their need to minimize their impacts while working on the project, and that they must follow the designated BMPs. Work would have had to stop in the event of specific exceedances.

Although the Temporary Permit for Working in Waterways permit requires monitoring parameters specific to the water quality at a project's location, these can include parameters that are exceeded naturally. The short term impacts to the river's quality should be deemed acceptable due to the long term benefits provided overall by the restoration project.

4.6 BMPs

A number of BMPs were recommended and used to maintain water quality during the restoration project. The overall goal of implementing BMPs was to minimize the disturbance to the river by the activity of the heavy equipment and work adjacent to and in the river. According to the NDEP Permit, the types of BMPs used were classified as precautionary, land-based, and in-river.

Precautionary

Typical BMPs considered precautionary included the use of new or like-new heavy equipment for use in-river, preventing the possibility of pollution from oil leaks, grease drips, stuck-on sediments, etc. To this end, new equipment was purchased by the construction company for use on this project. Additionally, equipment was steam cleaned daily, and a comprehensive pre-flight check of the equipment was made to check for any sort of fluid leaks. It is important that this be done in any project to prevent cross-contamination of aquatic or biotic plants from other sites. This is especially an issue locally, considering the influx of the zebra mussel at Lake Tahoe. Precautions were taken to avoid any unnecessary destruction of existing plants, especially trees and other riparian vegetation adjacent to the river. When the heavy equipment was in the river, care was taken to lessen the dispersal of sediment in the river bed. To assist with this, the equipment operator kept the equipment in one place as long as possible rather than constantly moving it around which continually stirs up bottom sediment while in the river.

Land Based

BMPs were implemented to contain, control and prevent any potential spills of fuels, hydraulic fluids or other pollutants from exiting the containment site and entering the river or groundwater. Staging areas were created at the project site for spill containment, vehicle fueling, and vehicle service. These types of areas are required to be a minimum of 100 feet away from the river. A spill containment plan was in place before operations begin. As stated, restoration work involved placing large rocks and boulders in the river, towards the development of the riffle structures. This rock, imported from upstream (the Reno ReTRAC Project) was screened to remove fine material, and washed to meet the specifications of "clean rock fill." Silt fencing was utilized at the project site, mainly for containment around stockpiles, and for erosion and sediment control in other areas of the project. The fencing was specified according to the plans to be wire-backed mesh; however the Contractor installed regular mesh fence. This was noted in the BMP inspection reports, and monitored carefully. The silt fence that was installed performed its function throughout the course of the project, and was approved by project engineers as a replacement in this situation.

In-river

NDEP strongly suggested that TNC utilize a turbidity curtain in the river, downstream of the construction activity, in their sediment control plans. TNC complied with this suggestion and a turbidity curtain was installed in the river, near the downstream limit of construction, for purposes of slowing the spread of sediment downstream. About 20 feet downstream from this a large rock check dam was installed. When discrete samples were taken upstream and downstream from the check dam and turbidity curtain, there did appear to be less sediment downstream from the turbidity curtain. Whether the decrease in stream sediment concentration was due to the turbidity curtain or the rock check dam, the samples demonstrated that the curtain was successful at keeping the sediment down, and would likely be recommended for use again along with a rock check dam.

4.7 Modeling Performed

Water quality models can be used to help design a restoration project or assess the effectiveness of restoration's impact on water quality. Essentially, a model is developed that is representative of pre-restoration river conditions, input with known water quality constituent

concentrations and river flows. This model should be calibrated with meteorological data, flow data, and water quality data collected on the river. It should also be validated if possible. Changes are then made to the pre-restoration model to simulate the effects of restoration (such as increased riffles, increased shade, altered hydraulic or channel characteristics), resulting in a restored model version. Both models are then run side-by-side with the same upstream nutrient concentrations and flow values, for a comparison of the constituents of interest before and after restoration. Output from these models can be used to assess any increase (or decrease) in water quality parameters of concern (dissolved oxygen, for example) due to the restoration. For example, if a hypothesis has been made that "restoration will improve the river's assimilative capacity of nitrogen", meaning that the river can uptake more nitrogen, then both models could be run with increased nitrogen loadings to see if the restored version can uptake more nitrogen while still maintaining the same in-stream dissolved oxygen and nutrient levels. Other water quality improvements due to restoration include increased dissolved oxygen concentrations. To assess this, the output from both models is viewed at the downstream end of the model. If there is more dissolved oxygen in the river in the restored version, then restoration was successful in improving dissolved oxygen.

In this case, a modeling investigation was conducted during the initial, pilot phase of restoration at McCarran Ranch. Due to the lengthy nature of the modeling investigation, results were not used to justify future modeling efforts. However, that is a primary goal of performing such an investigation – to validate a restoration's effectiveness and encourage more to be conducted. The HSPF model (Hydrologic Simulation Program – FORTRAN) has been used to evaluate the effectiveness of restoration in this section of the river for this project (Peternel-Staggs et al., 2008). Performing modeling such as this allows the permitting agencies to see what the effects on river water quality would be as a result of the proposed project.

4.7.1 Copy of NDEP Permit

Nevada Division of Environmental Protection

TEMPORARY

AUTHORIZATION TO DISCHARGE

In compliance with the provisions of Chapter 445A of the Nevada Revised Statutes,

The Nature Conservancy
One East First Street, Suite 1007
Reno, Nevada 89501

for

The McCarran Ranch Restoration Project, Phase II Truckee River

is authorized to work in water operating heavy equipment to conduct this Truckee River restorationproject to include construction of 14 cobble riffles, the creation of 9 wetland areas, and to excavate one large river meander to redirect Truckee River flows east of Shamrock House on the McCarran Ranch at Patrick, east of Sparks, Nevada in accordance with plans and information submitted to NDEP.

Washoe/Storey Countys, Nevada

Section 6, T. 19N., R. 22E. MDB&M
Section 1, T. 19N., R. 21E. MDB&M
Latitude: 39°32'45" N., Longitude: 119°33'45"W.

in receiving waters named

Truckee River

in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Part I, II and III hereof.

EFFECTIVE DATE OF PERMIT July 27, 2006

EXPIRATION DATE OF PERMIT (midnight), January 27, 2007

Icyl C. Mulligan DATE July 27, 2006

Icyl C. Mulligan, MS, ES
Bureau of Water Pollution Control

C:\MCCARRAN.TMP4

Part I

A. LIMITATIONS, MONITORING REQUIREMENTS AND CONDITIONS

Introduction: Water quality management shall be such that the water quality in the Truckee River shall not be degraded below natural conditions, and the downstream water quality shall meet the water quality standards for beneficial use required in NAC 445A.188. The single value standard shall not be exceeded if it applies.

1. During the period beginning on the effective date of this permit, and lasting until the permit expires, the Permittee and their agents/sub-contractor(s), are authorized to operate heavy equipment - in and along the Truckee River and its streamzone for the construction of 14 in-river cobble riffles with placed cobble, for the creation of 9 wetlands, and for the excavation of one large river meander on the north side of the Truckee River east of McCarran Ranch's Shamrock House.

I.A.2. MONITORING REQUIREMENTS

a. The McCarran Ranch Phase II Restoration project shall be monitored by a narrative report that describes each portion of the project activities, with photos documenting the construction sequences for both the "in river" activities (e.g. riffles and BMPs placement) and the streamzone (wetlands, meander area)work sequences undertaken, and the related BMPs installed for those activities. A record of the water quality sampling and analyses conducted shall be submitted to NDEP monthly. The photos shall illustrate the work activities conducted as presented in the permit application information and stamped construction drawings.

b. **Water Quality samples** shall be taken in compliance with the monitoring requirements specified below and shall be taken at the following locations:

RIFFLES: approximately 50 feet upstream (west) of each of the subject 14 riffles (Outfall 001a - n) and approximately 100 feet downstream of each of the subject riffles (Outfall 002a - n), both in the centroid of flow in the River.

NEW MEANDER: approximately 50 feet upstream (west) of the excavation area to the west of the feature in the centroid of flow in the river (Outfall 003a), and 100 (Outfall 003b), 150 (Outfall 003c), and 200 feet (Outfall 003d)immediately downstream of the outlet of the new meander into the river.

The water quality shall be limited and monitored by the Permittee as specified below: one background downstream sample shall be collected prior to work in the river; sampling shall be initiated upstream and downstream when the track excavator or other equipment enters the river, and is actively placing the boulders along the crest of the riffle structures. Sampling shall be conducted daily. Sampling is not required when the equipment is out of the river:

EFFLUENT LIMITATIONS	DISCHARGE LIMITATIONS NAC. 445A.188		MONITORING REQUIREMENTS Measurement Frequency	Sample Type
TSS:	Avg. ≤ 40 mg/l	S.V. ≤ 50 mg/l	Daily *	Discrete
pH:	Between 7.0 and 8.6 S.U.		Daily	Discrete
TDS:	S.V.≤ 265 mg/l	Avg. ≤ 500 mg/l	Daily	Discrete
Turbidity:	Avg. ≤ 8 NTU	S.V. ≤ 10 NTU	Daily *	Discrete

* Sample daily on an active work day during working hours and active work in the river.
Part I.A.

2. One upstream sample is required (001a - n), and one downstream (002a - n) sample is required Daily as specified above, in the Truckee River, and the same for Outfall 003a-upstream and then downstream for each of the 003b - d Outfalls as specified above, in the centroid of flow during normal working hours when work is active. **If a visible plume is generated or other unusual event occurs, a grab sample shall be taken immediately for analysis for TSS and Turbidity from the center of the plume, and the width and length of the plume must be estimated at that time and recorded and reported to NDEP within 6 hours of incidence.**

SAMPLING FREQUENCY: Sampling will only be required daily during actual work in the river.

Sampling results shall be submitted monthly as per Part I.B.1.

I.A.3. SPECIFIC CONDITIONS

For any heavy equipment used in the Truckee River in the project area in Washoe/Storey Countys, Nevada, the operations shall be conducted in accordance with all information and other documentation submitted to the Division (BWPC), and the following terms and conditions:

a.) Any heavy equipment (excavator, cat, tracked loader, hoe etc.) to be used in the Truckee River must be **steam cleaned** at least once before work in the River streamzone. All equipment shall be inspected for leaks daily prior to use. All leaks shall be repaired immediately. See "c" below.

b.) Precautions must be taken to minimize damage to any woody riparian vegetation (willow, cottonwood, etc.) along the banks of the River which are to be protected during the operation of equipment and in conduct of the proposed construction activities on the project. Riparian vegetation shall be restored as much as practicable to pre-disturbance conditions and or in accordance to plans submitted to NDEP.

c.) A daily record shall be kept of each day's use of heavy equipment in the River at the project site.

d.) Every precaution must be taken in the conduct of the

boulder placement to prevent and control the downstream transport of sediments during the redistribution or placement of rock in the River.

e.) The Nature Conservancy and any sub-contractors or consultants (Kennedy Jenks Consultants) bear the sole and separate responsibilities to ensure that the requirements of this temporary permit are fully satisfied.

f.) All fueling and service areas, staging areas, and approved storage areas where petroleum based products, and any other products which are toxic, hazardous, or otherwise could be a threat to water quality shall be conducted at least 100 feet away from the River, as feasible. Best Management Practices shall be implemented to contain, control and prevent any potential spills of any fuels, hydraulic fluids or other pollutants from entering the river and or the groundwater. A Spill Containment Plan shall be developed before fuel storage and fueling operations begins.

I.A.3.1. SPECIFIC BEST MANAGEMENT PRACTICES REQUIRED IN ADDITION TO THOSE PROPOSED AND APPROVED FOR THE PROJECT

a.)all rock and cobble shall be screened to remove dirt and fines and washed to meet specification of clean rock fill.

b.)Rock shall be placed with as little impact to the river as possible during rifle construction.

c.)Additional erosion control materials shall be available on site for rapid deployment should they be needed.

d.)All soils harvested from behind silt fences shall be disposed in an upland area prior to removal of silt fencing.

e.) All silt fencing shall be welded wire reinforced on the backside to ensure durability and performance characteristics.

f.)Turbidity Curtains, if used, shall be properly installed with the curtain bottoms carried and anchored to the riverbed.

g.)The Sierra Pacific Power Company Tracy Power Plant environmental personnel shall be notified at least 2 days in advance of release of the river water into the new meander. Other downstream interested parties such as the Bureau of Reclamation and the Pyramid Lake Paiute Tribe, and NDOW and the US Fish and Wildlife Service shall also be similarly notified.

h.)Bank stabilization revetments shall be properly installed on the southern river bank opposite the outfall of the new meander to be constructed prior to any waters being released into the newly excavated channel meander.

i.)Every attempt shall be made to avoid and prevent avulsion events due to backwatering or other water management practices.

j.)Additional silt fencing or similar BMPs shall be installed downstream of the outlet of the new meander to capture as much sediment as possible. Photos of this/these installations shall be taken and copies included with the final report and photo documentation for the project.

I.A.4. Documentation, and sampling, must be submitted as specified in Part I.A.1.b. and I.A.2..

I.A.5. The copy of the narrative report with photos describing and documenting the results of the project's activities, and the final month's water quality monitoring analyses shall be submitted after the end of the project and shall be received by the 28th day of the month following the work and sampling. A copy of all sample results shall be included in this report, and it shall be submitted to the address given below, by the 28th day of the month following the conclusion of the project. The reports shall contain the original signature of the responsible party. Water quality monitoring results are to be submitted ti the Division monthly by the 28th day of the month following the sampling as stated above.

Division of Environmental Protection
Bureau of Water Pollution Control
ATTN: Compliance Coordinator
901 South Stewart Street, Suite 4001
Carson City, Nevada 89701

I.A.6. There shall be no objectionable odors generated in the conduct of this project.

I.A.7. There shall be no discharge of substances that would cause a violation of water quality standards of the State of Nevada.

I.A.8. There shall be no work in waters with heavy equipment or related activities undertaken except those as authorized by this permit.

I.A.9. The project elements/components/activities shall be constructed and or conducted in accordance with plans and documentation submitted to and approved by the Division.

I.A.10. There shall be no discharge of floating solids or visible foam in other than trace amounts.

I.A.11. **Schedule of Compliance**

The Permittee shall achieve compliance with the permit limitations and conditions upon issuance of the permit.

I.B. MONITORING AND REPORTING

1. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. Analyses shall be performed by a laboratory certified by the State of Nevada except for Turbidity, and pH which may be determined by use of a field meter.

2. **Definitions**

   a. The "30-day average discharge" means the total discharge during a month divided by the number of samples in the period that the facility was discharging. Where less than daily sampling is required by this permit, the 30-day average discharge shall be determined by the summation of all the measured discharges divided by the number of samples during the period when the measurements were made.

   b. The "daily maximum" is the highest measurement during the monitoring period.

   c. The "30-day average concentration", other than for fecal coliform bacteria, means the arithmetic mean of measurements made during a month. The "30-day average concentration" for fecal coliform bacteria means the geometric mean of measurements made during a month. The geometric mean is the "n^{th}" root of the product of "n" numbers.

   d. A "discrete" sample means any individual sample collected in less than 15 minutes.

   e. For flow-rate measurements a "composite" sample means the arithmetic mean of no fewer than six individual measurements taken at equal time intervals for 24 hours, or for the duration of discharge, whichever is shorter.

      For other than flow-rate a "composite" sample means a combination of no fewer than six individual flow-weighted samples obtained at equal time intervals for 24 hours, or for the duration of discharge, whichever is shorter. Flow-weighted sample means that the volume of each individual sample shall be proportional to the discharge flow rate at the time of sampling.

3. **Test Procedures**

   Test procedures for the analysis of pollutants shall conform to regulations (40 CFR, Part 136) published pursuant to Section 304(h) of the Act, under which such procedures may be required unless other procedures are approved by the Division.

4. **Recording the Results**

For each measurement or sample taken pursuant to the requirements of this permit, the Permittee shall record the following information:

a. the exact place, date, and time of sampling;
b. the dates the analyses were performed;
c. the person(s) who performed the analyses;
d. the analytical techniques or methods used; and
e. the results of all required analyses.

5. **Additional Monitoring by Permittee**

If the Permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Discharge Monitoring Report Form. Such increased frequency shall also be indicated.

6. **Records Retention**

All records and information resulting from the monitoring activities required by this permit, including all records of analyses performed and calibration and maintenance of instrumentation and recordings from continuous monitoring instrumentation, shall be retained for a minimum of three years, or longer if required by the Administrator.

7. **Modification of Monitoring Frequency and Sample Type**

After considering monitoring data, stream flow, discharge flow and receiving water conditions, the Division, may for just cause, modify the monitoring frequency and/or sample type.

PART II

A. MANAGEMENT REQUIREMENTS

1. **Change in Discharge**

All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit. Any anticipated facility expansions, or treatment modifications which will result in new, different, or increased discharges of pollutants must be reported by submission of a new application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the permit issuing authority of such changes. Any changes to the permitted treatment facility must comply with Nevada Administrative Code (NAC) 445A.283 to

445A.285. Pursuant to NAC 445A.263, the permit may be modified to specify and limit any pollutants not previously limited.

2. **Facilities Operation**

The Permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities, collection systems or pump stations installed or used by the Permittee to achieve compliance with the terms and conditions of this permit.

3. **Adverse Impact**

The Permittee shall take all reasonable steps to minimize any adverse impact to receiving waters resulting from noncompliance with any effluent limitations specified in this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

4. **Noncompliance, Unauthorized Discharge, Bypassing and Upset**

a. Any diversion, bypass, spill, overflow or discharge of treated or untreated wastewater from wastewater treatment or conveyance facilities under the control of the Permittee is prohibited except as authorized by this permit. In the event the Permittee has knowledge that a diversion, bypass, spill, overflow or discharge not authorized by this permit is probable, the Permittee shall notify the of Division immediately.

b. The Permittee shall notify the Division within twenty-four (24) hours of any diversion, bypass, spill, upset, overflow or discharge of treated or untreated sewage other than that which is authorized by the permit. A written report shall be submitted to the Administrator within five (5) days of diversion, bypass, spill, overflow, upset or discharge, detailing the entire incident including:

(1) time and date of discharge;
(2) exact location and estimated amount of discharge;
(3) flow path and any bodies of water which the discharge reached;
(4) the specific cause of the discharge; and
(5) the preventive and/or corrective actions taken.

c. The following shall be included as information which must be reported within 24 hours: any unanticipated bypass which exceeds any effluent limitation in the permit; any upset which exceeds any effluent limitation in the permit; and violation of a limitation for any toxic pollutant or any pollutant identified as the method to control a toxic pollutant.

d. The Permittee shall report all instances of noncompliance not reported under Part II.A.4.b. at the time monitoring reports are submitted. The reports shall contain the information listed in Part II.A.4.b.

e. An "upset" means an incident in which there is unintentional and temporary noncompliance with the permit effluent limitations because of factors beyond the reasonable control of the Permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

f. In selecting the appropriate enforcement option, the Division shall consider whether or not the noncompliance was the result of an upset.

g. The burden of proof is on the Permittee to establish that an upset occurred.

In order to establish that an upset occurred, the Permittee must provide, in addition to the information required under paragraph II.A.4.b. above, properly signed contemporaneous logs or other documentary evidence that:

(1) The facility was at the time being properly operated as required in paragraph II.A.2. above; and

(2) All reasonable steps were taken to minimize adverse impacts as required by paragraph II.A.3. above.

5. **Removed Substances**

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of waste waters shall be disposed of in a manner such as to prevent any pollution from such materials from entering any navigable waters.

6. **Safeguards to Electric Power Failure**

In order to maintain compliance with the effluent limitations and prohibitions of this permit the Permittee shall either:

a. provide at the time of discharge an alternative power source sufficient to operate the wastewater control facilities; and

b. halt or reduce all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.

II.B. RESPONSIBILITIES

1. Right of Entry

The Permittee shall allow the Administrator and/or his authorized representatives, upon the presentation of credentials:

a. to enter upon the Permittee's premises where an effluent source is located or in which any records are required to be kept under the terms and conditions of this permit; and

b. at reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any monitoring equipment or monitoring method required in this permit; and to perform any necessary sampling to determine compliance with this permit or to sample any discharge.

2. Transfer of Ownership or Control

In the event of any change in control or ownership of facilities from which the authorized discharge emanates, the Permittee shall notify the succeeding owner or controller of the existence of this permit, by letter, a copy of which shall be forwarded to the Administrator. ALL transfer of permits shall be approved by the Division.

3. Availability of Reports

Except for data determined to be confidential under NRS 445A.665, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the office of the Division. As required by the Act, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in NRS 445A.710.

4. Furnishing False Information and Tampering with Monitoring Devices

Any person who knowingly makes any false statement, representation, or certification in any application, record, report, plan or other document filed or required to be maintained by the provisions of NRS 445A.300 to 445A.730, inclusive, or by any permit, rule, regulation or order issued pursuant thereto, or who falsifies, tampers with or knowingly renders inaccurate any monitoring device or method required to be maintained under the provisions of NRS 445A.300 to 445A.730, inclusive, or by any permit, rule, regulation or order issued pursuant thereto, is guilty of a gross misdemeanor and shall be punished by a fine of not more than $10,000 or by imprisonment. This penalty is in addition to any other penalties, civil or criminal, provided pursuant to NRS 445A.300 to 445A.730, inclusive.

5. **Penalty for Violation of Permit Conditions**

Nevada Revised Statutes (NRS) 445A.675 provides that any person who violates a permit condition is subject to administrative and judicial sanctions as outlined in NRS 445A.690 through 445A.705.

6. **Permit Modification, Suspension or Revocation**

After notice and opportunity for a hearing, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:

a. violation of any terms or conditions of this permit;

b. obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or

c. a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge.

7. **Toxic Pollutants**

Notwithstanding Part II.B.6. above, if a toxic effluent standard or prohibition (including any schedule of compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the Act for a toxic pollutant which is present in the discharge and such standard or prohibition is more stringent than any limitation for such pollutant in this permit, this permit shall be revised or modified in accordance with the toxic effluent standard or prohibition and the permittee so notified.

8. **Liability**

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable Federal, State or local laws, regulations, or ordinances.

9. **Property Rights**

The issuance of this permit does not convey any property rights, in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

10. **Severability**

The provisions of this permit are severable, and if any provision if this permit, or the application of any provisions of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

PART III

III.A. OTHER REQUIREMENTS

1. **Signature on Reporting Form Required.** Reporting forms submitted to the department must be signed by the authorized representative who is responsible for the overall operation of the facility from which the discharge described in the application or reporting form originates.

2. **Holding Pond Conditions**

   If any wastewater from the Permittee's facility is placed in ponds, such ponds shall be located and constructed so as to:

   a. contain with no discharge the once-twenty-five year 24 hour storm at said location;

   b. withstand with no discharge the once-in-one-hundred year flood of said location; and

   c. prevent escape of wastewater by leakage other than as authorized by this permit.

3. The Permittee shall implement and comply with the provisions of the schedule of compliance after approval by the Administrator, including in said implementation and compliance, any additions or modifications which the Administrator may make in approving the schedule of compliance.

Section 5: References

California Stormwater Quality Association, 2004, California Stormwater BMP Handbook – Construction.

Kennedy/Jenks Consultants, 2003, McCarran Ranch Restoration Pilot Project - Truckee River Washoe and Storey Counties, Permit Set.

Kennedy/Jenks Consultants, 2008, Construction Site Best Management Practices Handbook, prepared for the Truckee Meadows Regional Stormwater Quality Management Program.

Mortimer, C.H. 1956. The oxygen content of air-saturated fresh waters, and aids in calculating percentage saturation. Intern. Assoc. Theoret. Appl. Commun. No 6.

Nevada Department of Transportation: http://www.nevadadot.com

Nevada Division of Environmental Protection, Bureau of Water Pollution Control, Nonpoint Source Pollution Management – Best Management Practices Handbook (2005)

Otis Bay Ecological Consultants, 2004, Ecological Restoration Plan for the McCarran Reach of the Truckee River.

Schueler, T., 1987. *Controlling Urban Runoff, A Practical Manual for Planning and Designing Urban BMPs*, July 1987.

The Nature Conservancy, 2003, Compliance Report McCarran Ranch Restoration Pilot Project, Permit No. TNEV2003340.

"The Truckee Meadows Construction Site Best Management Practices Handbook"

"Truckee Meadows Structural Controls Design Manual"

Urban Drainage and Flood Control District, 1999. *Urban Storm Drainage – Criteria Manual, Vol. 3 – Best Management Practices*, Denver, Colorado, September 1999.

APPENDIX A

U.S. ARMY CORPS OF ENGINEERS
PERMIT APPLICATION

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT (33 CFR 325)	OMB APPROVAL NO. 0710-003

Public reporting burden for this collection of information is estimated to average 5 hours per response, including the time for reviewing instructions, Searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Service Directorate of Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302; and to the Office of Management and Budget, Paperwork Reduction Project (0710-003), Washington, DC 20503. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.

PRIVACY ACT STATEMENT

Authority: 33 USC 401, Section 10; 1413, Section 404. Principal Purpose: These laws require permits authorizing activities in, or affecting, navigable waters of the United States; the discharge of dredged or fill material into waters of the United States, and the transportation of dredged material for the purpose of dumping it into ocean waters. Routine uses: Information provided on this form will be used in evaluating the application for a permit. Disclosure: Disclosure of requested information is voluntary. If information is not provided, however, the permit application cannot be processed nor can a permit be issued.

One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the proposed activity. An application that is not completed in full will be returned.

(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)

1. APPLICATION NO.	2. FIELD OFFICE CODE	3. DATE RECEIVED	4. DATE APPLICATION COMPLETED

Pages 3 and 4 Contain Instructions for Completing this Application

(ITEMS BELOW TO BE FILLED BY APPLICANT)

5. APPLICANT'S NAME	8. AUTHORIZED AGENT'S NAME & TITLE (an agent is not required)
6. APPLICANT'S ADDRESS	9. AGENT'S ADDRESS
7. APPLICANT'S PHONE NUMBERS WITH AREA CODE a. Residence b. Business	10. AGENT'S PHONE NUMBERS WITH AREA CODE a. Residence b. Business

11. STATEMENT OF AUTHORIZATION

I hereby authorize _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.

_____ _____

APPLICANT'S SIGNATURE DATE

NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY

12. PROJECT NAME OR TITLE (see instructions)	
13. NAME OF WATERBODY, IF KNOWN (if applicable)	14. PROJECT STREET ADDRESS (if applicable)
15. LOCATION OF PROJECT COUNTY STATE	
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions)	
17. DIRECTIONS TO THE SITE	

18. NATURE OF ACTIVITY (Description of project, include all features)

19. PROJECT PURPOSE (Describe the reason or purpose of the project, see instructions)

USE BLOCKS 20-22 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. REASON(S) FOR DISCHARGE

21. TYPE(S) OF MATERIAL BEING DISCHARGED AND THE AMOUNT OF EACH TYPE IN CUBIC YARDS

22. SURFACE AREA IN ACRES OF WETLANDS OR OTHER WATERS FILLED (see instructions)

23. IS ANY PORTION OF THE WORK ALREADY COMPLETE? YES ○ NO ◉ IF YES, DESCRIBE THE WORK

24. ADDRESSES OF ADJOINING PROPERTY OWNERS, LESSEES, ETC. WHOSE PROPERTY ADJOINS THE WATERBODY (If more than can be entered here, please attach a supplemental list)

25. LIST OF OTHER CERTIFICATIONS OR APPROVALS/DENIALS RECEIVED FROM OTHER FEDERAL, STATE, OR LOCAL AGENCIES FOR WORK DESCRIBED IN THIS APPLICATION

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED

* Would include but is not restricted to zoning, building and flood plain permits.

26. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.

SIGNATURE OF APPLICANT	DATE	SIGNATURE OF AGENT	DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.
18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and will fully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, facticious, or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than $10,000 or imprisoned not more than five years or both.

Instructions For Preparing A
Department of the Army Permit Application

Blocks 1 thru 4 - To be completed by Corps of Engineers.

Block 5 - APPLICANT'S NAME. Enter the name of the responsible party or parties. If the responsible party is an agency, company, corporation, or other organization, indicate the responsible officer and title. If more than one party is associated with the application, please attach a sheet with the necessary information marked "Block 5".

Block 6 - ADDRESS OF APPLICANT. Please provide the full address of the party or parties responsible for the application. If more space is needed, attach an extra sheet of paper marked "Block 6".

Block 7 - APPLICANT PHONE NUMBERS. Please provide the number where you can usually be reached during normal business hours.

Block 8 - AUTHORIZED AGENT'S NAME AND TITLE. Indicate name of individual or agency, designated by you, to represent you in this process. An agent can be an attorney, builder, contractor, engineer or any other person or organization. Note: An agent is not required.

Blocks 9 and 10 - AGENT'S ADDRESS AND TELEPHONE NUMBER. Please provide the complete mailing address of the agent, along with the telephone number where he/she can be reached during normal business hours.

Block 11 - STATEMENT OF AUTHORIZATION. To be completed by applicant if an agent is to be employed.

Block 12 - PROPOSED PROJECT NAME OR TITLE. Please provide name identifying the proposed project (i.e., Landmark Plaza, Burned Hills Subdivision, or Edsall Commercial Center).

Block 13 - NAME OF WATERBODY. Please provide the name of any stream, lake, marsh, or other waterway to be directly impacted by the activity. If it is a minor (no name) stream, identify the waterbody the minor stream enters.

Block 14 - PROPOSED PROJECT STREET ADDRESS. If the proposed project is located at a site having a street address (not a box number), please enter it here.

Block 15 - LOCATION OF PROPOSED PROJECT. Enter the county and state where the proposed project is located. If more space is required, please attach a sheet with the necessary information marked "Block 15".

Block 16 - OTHER LOCATION DESCRIPTIONS. If available, provide the Section, Township, and Range of the site and/or the latitude and longitude. You may also provide a description of the proposed project location, such as lot numbers or tract numbers. You may choose to locate the proposed project site from a known point (such as the right descending bank of Smith Creek, one mile down from the Highway 14 Bridge). If a large river or stream, include the river mile of the proposed project site, if known.

Block 17 - DIRECTIONS TO THE SITE. Provide directions to the site from a known location or landmark. Include highway and street numbers as well as names. Also provide distances from known locations and any other information that would assist in locating the site.

Block 18 - NATURE OF ACTIVITY. Describe the overall activity or project. Give approximate dimensions of structures such as wingwalls, dikes, (identify the materials to be used in construction, as well as the methods by which the work is to be done), or excavations (length, width, and height). Indicate whether discharge of dredged or fill material is involved. Also, identify any structure to be constructed on a fill, piles, or float-supported platforms.

The written descriptions and illustrations are an important part of the application. Please describe, in detail, what you wish to do. If more space is needed, attach an extra sheet of paper marked "Block 18".

Block 19 - PROPOSED PROJECT PURPOSE. Describe the purpose and need for the proposed project. What will it be used for and why? Also include a brief description of any related activities to be developed as the result of the proposed project. Give the approximate dates you plan to both begin and complete all work.

Block 20 - REASONS FOR DISCHARGE. If the activity involves the discharge of dredged and/or fill material into a wetland or other waterbody, including the temporary placement of material, explain the specific purpose of the placement of the material (such as erosion control).

Instructions For Preparing A
Department of the Army Permit Application

Block 21 - TYPES OF MATERIAL BEING DISCHARGED AND THE AMOUNT OF EACH TYPE IN CUBIC YARDS. Describe the material to be discharged and amount of each material to be discharged within Corps jurisdiction. Please be sure this description will agree with your illustrations. Discharge material includes: rock, sand, clay, concrete, etc.

Block 22 - SURFACE AREAS OF WETLANDS OR OTHER WATERS FILLED. Describe the area to be filled at each location. Specifically identify the surface areas, or part thereof, to be filled. Also include the means by which the discharge is to be done (backhoe, dragline, etc.). If dredged material is to be discharged on an upland site, identify the site and the steps to be taken (if necessary) to prevent runoff from the dredged material back into a waterbody. If more space is needed, attach an extra sheet of paper marked "Block 22".

Block 23 - IS ANY PORTION OF THE WORK ALREADY COMPLETE? Provide any background on any part of the proposed project already completed. Describe the area already developed, structures completed, any dredged or fill material already discharged, the type of material, volume in cubic yards, acres filled, if a wetland or other waterbody (in acres or square feet). If the work was done under an existing Corps permit, identify the authorization if possible.

Block 24 - NAMES AND ADDRESSES OF ADJOINING PROPERTY OWNERS, LESSEES, etc., WHOSE PROPERTY ADJOINS THE PROJECT SITE. List complete names and full mailing addresses of the adjacent property owners (public and private) lessees, etc., whose property adjoins the waterbody or aquatic site where the work is being proposed so that they may be notified of the proposed activity (usually by public notice). If more space is needed, attach an extra sheet of paper marked "Block 24".

Block 25 - INFORMATION ABOUT APPROVALS OR DENIALS BY OTHER AGENCIES. You may need the approval of other Federal, State, or Local agencies for your project. Identify any applications you have submitted and the status, if any (approved or denied) of each application. You need not have obtained all other permits before applying for a Corps permit.

Block 26 - SIGNATURE OF APPLICANT OR AGENT. The application must be signed by the owner or other authorized party (agent). This signature shall be an affirmation that the party applying for the permit possesses the requisite property rights to undertake the activity applied for (including compliance with special conditions, mitigation, etc.).

DRAWINGS AND ILLUSTRATIONS - GENERAL INFORMATION

Three types of illustrations are needed to properly depict the work to be undertaken. These illustrations or drawings are identified as a Vicinity Map, a Plan View, or a Typical Cross-Section Map. Identify each illustration with a figure or attachment number.

Please submit one original, or good quality copy, of all drawings on an 8.5 X 11 inch plain white paper (tracing paper or film may be substituted). Use the fewest number of sheets necessary for your drawings or illustrations.

Each illustration should identify the project, the applicant, and the type of illustration (vicinity map, plan view, or cross-section). While illustrations need not be professional (many small, private project illustrations are prepared by hand), they should be clear, accurate and contain all necessary information.

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION
PERMIT APPLICATIONS

NEVADA DIVISION OF ENVIRONMENTAL PROTECTION

CLEAN WATER ACT §401 WATER QUALITY CERTIFICATION

APPLICATION FORM

1. Name of Project:					
2. Applicant's Information:		**3. Agent's Information:**			
Name:		Name:			
Address:		Address:			
City:		City:			
State:		State:			
Zip Code:		Zip Code:			
Phone:	Fax:	Phone:	Fax:		
Email:		Email:			
4. Project Information:		**5. Project Location: (Include Topo Map-7.5 min Scale)**			
Address:		Latitude (UTM or Dec/Deg):			
City:					
State:		Longitude (UTM or Dec/Deg):			
County:					
Type of Waterbody:		Township:	Range:	Section:	¼ Section:
Name of Waterbody (if known):					

6. Project Description: (Include site plan with specific location and details of work elements)

7. Quantity of Dredge and/or Fill Activity:

a) Amounts of Fill or Excavation in Acres and/or Linear Feet:

a.1) Temporary Impact:

a.2) Permanent Impact:

b) Amounts of Dredge Material to be discharged in Waters of the State in Cubic Yards:

b.1) Temporary Impact:

b.2) Permanent Impact:

8. Best Management Practices (BMPs):

(Describe BMPs to be implemented to Avoid and/or Minimize impacts to waters of the State, including sediment/erosion control measures, preservation of habitats, project scheduling, flow diversions, dewatering, etc.)

9. Certification:

I certify that the information in this application is complete and accurate and that I have personally examin and am familiar with the information in this application and any attached documents.

Name and Title (Print)	**Telephone Number**
Signature of Responsible Official	**Date**

NEVADA DEPARTMENT OF ENVIRONMENTAL PROTECTION

TEMPORARY PERMIT APPLICATION FOR WORKING IN WATERWAYS

(Formerly Rolling Stock)

A temporary permit may be issued for a maximum of 180 days (6 months) NRS 445A.485.

$250.00 Application Fee must be submitted with application

1. Name of Project:	**2. Permit Request Start Date:**
3. Facility/Site – Name and Address/Area: Name:_____ Address:_____ City:_____ State/Zip:_____ County:_____ Phone:_____ Fax:_____	**4.** ☐ **Owner** ☐ **Contractor/Operator** ☐ **Both** Name:_____ Address:_____ City:_____ State/Zip:_____ Phone:_____ Fax:_____ (Include any partnership information on separate page)
5. Permittee: Name:_____ Address:_____ City:_____ State/Zip:_____ County:_____ Phone:_____ Fax:_____	**6. Official Representative/Agent:** Name:_____ Address:_____ City:_____ State/Zip:_____ Phone:_____ Fax:_____
7. River, stream or lake where work is to be conducted: Location: _____ County(s):_____ _____	**Wetland or other water body where work is to be conducted:** Location:_____ County(s):_____ _____
8. Type of Project:	**Duration of Project:**

9. Existing Environmental Permits:

*	*	*
*	*	*
*	*	*
*	*	*

10. Location of Project Latitude			Longitude			**Township and Range**				**Location and Property**			
Deg	Min	Sec	Deg	Min	Sec	Twsp	Range	Section	¼ Sec	River	Wash	Wetland	Other

11. Certification

I certify under penalty of law that I have personally examined and am familiar with the information in this and attached documents. I believe the information is true, accurate and complete.

Name and Title (Type or Print)	**Telephone Number**
Signature of Responsible Official	**Date**

GUIDANCE – LIST OF REQUIREMENTS FOR COMPLETING A TEMPORARY PERMIT APPLICATION FOR WORKING IN WATERWAYS

1. NAME AND SCOPE OF PROJECT – A narrative description or a mini workplan providing the nature and scope of the project to include:

a.) the purpose of the project and what it involves
b.) the timeframe of the proposed project – the expected duration
c.) the type of equipment to be used, how it will be operated and in which location(s)
d.) a description of the site and its physical location (stream, wetland, wash – low gradient stream, steep drainage, mainstem river, tributary, etc.)
e.) a description of the work to be performed – where and how – for each stream reach or individual site or area

2. TOWNSHIP, RANGE AND SECTION(S), LATITUDE AND LONGITUDE –

3. TOPOGRAPHIC MAP – Showing the general area of the project site where work in the waterbody(s) will be conducted. U.S.G.S. 7.5 Minute Scale recommended.

4. SITE PLAN – of the proposed area showing the site specific location and details of specific work elements planned for the project.

5. A DETAILED DESCRIPTION OF THE BEST MANAGEMENT PRACTICES to be implemented during the disturbance and or work activities proposed in and along the stated waterbody for: water quality protection; erosion control; sediment control; riparian stream zone protection and restoration; stream bank stabilization/protection/rehabilitation; water pollution control/prevention; dewatering controls, etc.

6. OTHER PERMITS REQUIRED, CONTACTS, OR APPROVALS AND OR CLEARANCES WHERE APPLICABLE:

U.S. Army Corps of Engineers: (775) 784-5304, Richard Gebhart/Kevin Roukey
State Lands (Division of State Lands, NDCNR): (775) 684-2720, Robert Nellis
State 401 Certification: (775) 687-9448, Glen Gentry
Nevada Division of Wildlife (fisheries concerns and certain restrictions for work in Truckee River): (775) 688-1209, Kim Tisdale
U.S. Fish & Wildlife Service: (775) 861-6300
City or County Permits
Conservation Districts

7. FEE - $250.00

8. SEND APPLICATION FORM TO:

Nevada Division of Environmental Protection
901 South Stewart Street, Suite 4001
Carson City, NV 89701-5249
ATTN: Icyl Mulligan, Bureau of Water Pollution Control
(775) 687-9432

The ability to process your application for a permit depends heavily on the completeness and accuracy of the requested information listed on the application.

9. CERTIFICATION – All Permit applications must be signed by the responsible party, either as the Permittee, or as an Agent for the Permittee. This person, company or corporation will be the responsible party named to ensure the terms and conditions of the permit are satisfied; and is responsible for permit violations noted by the Division.

NEVADA DIVISION OF STATE LANDS
PERMIT APPLICATION

ALLEN BIAGGI
Director
Department of Conservation
and Natural Resources

JAMES LAWRENCE
Administrator

JIM GIBBONS
Governor

State Land Office
Nevada Tahoe Resource Team
Address Reply to
Division of State Lands
901 S. Stewart St, Suite 5003
Carson City, Nevada 89701-5246
Phone (775) 684-2720
Fax (775) 684-2721
Web www.lands.nv.gov

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

Division of State Lands

INSTRUCTIONS AND CHECKLIST FOR

APPLICATION FOR AUTHORIZATION TO USE STATE-OWNED SUBMERGED LANDS

Required Application Fees:

- On the Application Form, please check the appropriate fee box under either a new Application or an Amendment.

REQUIRED APPLICATION FEES
As per NRS 322.110

NEW APPLICATIONS		AMENDMENTS *	
$200	Commercial Uses	$100	Commercial Uses
$150	Agricultural Uses	$75	Agricultural Uses
$100	All Other Uses	$50	All Other Uses
$10	Recreational Dredging		

Notes: 1. The required application fee is for filing purposes only.
2. * Includes amendments to:
- Pending Applications
- Existing authorized uses

- Per **NRS 322.110**, the application fees are for the filing of the application with the Division of State Lands only, and are non-refundable. The application fee must be received with the application to be processed.

- The Division also charges fees for the issuance of Permits, Licenses, or other Authorizations.

    - Once the project is considered permittable, additional permit fees will be outlined, as well as the necessary insurance requirements.

    - Fees for leases and easements must be based on fair market value.

    - Fees for Permit for buoys, piers or other related facilities are set by statute.

    - For a list of the current standard Permit fees, please refer to NRS 322.120.

Application Form:

For help in filling out the application form, the instruction list below is numbered according to the items on the application.

1. **Application Number**: Leave blank. ***For Division of State Lands use only.***

2. **Date:** Enter Current Date.

3. **Name of Applicant**: Fill out name of applicant exactly as you wish it to appear on the permit document that State Lands will issue. This will be the **"Permittee**", for example.

4. **Contact Information:** Please include a project contact person's name and information including mailing address, phone number, fax, and email address, if available. We need the name and title of the person who will be signing the document on behalf of the permittee. ***In the case of an agent acting on behalf of an owner, corporation or other business entity; please include a copy of the corporate resolution or other document giving that person the authority to sign on behalf of the organization***. The person signing must have the authority to bind the permittee to the indemnity and liability requirements.

5. **Project Location:** A current Assessor's Parcel Number must be entered, along with the physical (street) address of the parcel. (Enter parcel numbers of adjacent parcels if it is a water application.) The Public Land Survey System (PLSS) description is also required; for example:

Subdivision:	*NWNW*
Section:	*6*
Township:	*14 North*
Range:	*18 East*

Note: A copy of the current assessor's parcel map must be included with the application packet.

6. **Waterbody:** Check the name of the applicable state waterway or waterbody.

7. **Project Summary**: Provide a brief summary of the proposed use in narrative form.

    a. FOR NEW CONSTRUCTION OR EXPANSION OF COMMERCIAL OR RESIDENTIAL PIERS, WATER INTAKE LINES OR BUOY FIELDS:

        - Discuss the impacts of your proposal and actions to mitigate negative impacts. Attach any additional supporting documentation as needed. Please provide the official name of the project. For leases and easements, accurate legal descriptions are required.
        - Provide an original engineered site plan depicting the location, including the distance from the low water elevation of 6,223.0 and the lake bottom elevation for the intended use, any existing structures or improvements and any planned or existing disturbance including removal or fill of material.
        - The site plan must be accurate, to scale and show appropriate detail. Structures lakeward of the adjoining properties and property projection lines extending

lakeward from the low water elevation must be included. Examples of structures lakeward of a littoral parcel include piers, water intake lines, buoys, buoy fields and swim lines.

- A map(s) showing the project location and proposed plans must also be attached.

b. FOR RENEWALS OR A CHANGE OF OWNERSHIP OF A COMMERCIAL OR RESIDENTIAL PIER, WATER INTAKE LINE OR BUOY FIELD:

- Copies of previously submitted documents (maps, engineered site plans, etc.) along with a *new application* are acceptable if there have been **no** changes to the structure(s) lakeward of the littoral parcel.

c. FOR 1 OR 2 NEW RESIDENTIAL BUOYS:

- A copy of the County Assessor's Parcel Map, or a professionally prepared site plan showing the location, including the distance from the low water elevation of 6,223.0 feet and the lake bottom elevation for the proposed buoy(s) and property projection lines extending lakeward from the low water elevation. This map should indicate the applicant's parcel, the 2 adjoining littoral parcels and the locations of structures lakeward of the adjoining parcels. Examples of structures lakeward of littoral parcels are listed above in 7.a.

d. FOR 1 OR 2 RESIDENTIAL BUOY RENEWALS OR CHANGE IN OWNERSHIP:

- A copy of the County Assessor's Parcel Map showing the location of the buoy(s) and property projection lines extending lakeward from the low water elevation of 6,223.0 feet is acceptable.

Submit seven (7) copies of the narrative and drawings, in addition to one copy for each of the adjacent or interested property owners listed ***in Item #8 below.***

8. **Notifications:** This is to enable the Division of State Lands to send a request for review and comment to all abutting property owners and other interested parties. Please give complete names and addresses of all:

   a. Owners of adjacent or abutting parcels.

   b. Governmental bodies. Local governmental jurisdiction.

   c. Homeowners Associations or General Improvement District.

   d. Additional notification may be required on a case by case basis.

9. **Proposed Start and Completion Dates:** Enter the date for which the final document is requested and the proposed project completion date. All applications are sent out for a mandatory 30 day review and comment period to other state agencies. Allow a minimum of 90 days for processing permits and authorizations. Allow a minimum of 6 months for processing leases and easements. (Leases must be approved by the Board of Examiners & the Interim Finance Committee, a minimal 90 day process.)

10. **Additional Comments:** Use additional sheets, if needed.

11. **Recreational Purposes Disclaimer:** Indicate whether this application is for Recreational Use. *See "Use of State Land for a Recreational Purpose Defined" on Page 4 of the Application Form.* NRS 322.1003 requires that the child support declaration on Page 4 must be filled out and signed only if the application is made by an individual for a recreational use.

12. Applicant name and signature.

ADDITIONAL NOTES AND INSTRUCTIONS:

A. Application must be complete, including necessary attachments, in order to be considered for processing. Required attachments and formats:

- Applications for easements, leases and some other documents must have a complete surveyed legal description, wet-stamped and signed by a surveyor licensed in Nevada, and a map stamped and signed by the surveyor.
- Metes and bounds descriptions must contain the name & address of the person who prepared the description per NRS 111.312 (4). These must be in a format capable of being attached as an exhibit to a legal document and accepted by the county recorder. (See NRS 247.110 and NRS 111.312.) No color on exhibit documents, one-inch margins around all documents, no type smaller than 9 point, 8½ x 11 format preferred.
- Do not mark the maps "exhibit." The project name must appear on the legal description and the maps.
- Please attach copies of any application filed with or permits received from any other agency.
- You may be asked to provide a current appraisal or market data for the property.

B. The completed application packet must contain one original set of signed supporting documents and full-sized maps.

C. Also required are seven (7) copies of the application with the supporting maps. These copies must be attached and ready to send out for review and comment. Please provide one additional copy for each abutting or interested property owner as listed in item Number 8, Notifications.

D. The Division of State Lands will determine the correct form of authorization (e.g. permit, license, authorization) to issue. A pre-application conference by appointment may be necessary.

E. The State of Nevada cannot issue perpetual easements

F. The State of Nevada may deny any application, and incomplete applications may be returned. Please note that the application analysis does not begin until the Division of State Lands receives a complete application.

DOCUMENTATION CHECKLIST

- ☐ Application Form
- ☐ Application Fee (See Page #1)
- ☐ Owner Authorization (if agent acting in behalf of another party. (See #4.)
- ☐ Assessor's Parcel Map
- ☐ Original Signed Survey Map, if required. (See #7.)
- ☐ Copies of signed application with supporting maps. (Minimum of 7 sets for agency use, with one additional set for each adjacent property owner or interested party as listed on #8.)
- ☐ Copies of approvals or permits from other interested agencies
- ☐ Recreational Purposes Declaratory Statement

ALLEN BIAGGI
Director
Department of Conservation
and Natural Resources

JAMES LAWRENCE
Administrator

JIM GIBBONS
Governor

State Land Office
Nevada Tahoe Resource Team

Address Reply to

Division of State Lands
901 S. Stewart St, Suite 5003
Carson City, Nevada 89701-5246
Phone (775) 684-2720
Fax (775) 684-2721
Web www.lands.nv.gov

STATE OF NEVADA
DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES

Division of State Lands

APPLICATION FOR AUTHORIZATION TO USE STATE-OWNED SUBMERGED LANDS

REQUIRED APPLICATION FEES
As per NRS 322.110

NEW APPLICATIONS		AMENDMENTS *	
☐ $200	Commercial Uses	☐ $100	Commercial Uses
☐ $150	Agricultural Uses	☐ $75	Agricultural Uses
☐ $100	All Other Uses	☐ $50	All Other Uses
☐ $10	Recreational Dredging		

Notes: 1. The required application fee is for filing purposes only.
2. * Includes amendments to:
- Pending Applications
- Existing authorized uses

1.	**Application Number:** (Assigned by Division)		**2.**	**Date:**	
3.	**Name of Applicant:** (Filed on behalf of)				
4.	**Contact Information:** (Designated Representative)				
	Name:				
	Mailing Address:				
	Telephone Number:				
	Fax Number:				
	Email Address:				
5.	**Location of proposed use:**				
	Assessor's Parcel Number(s):		**PLSS Location:**	Subdivision:	
	Physical Address:			Section:	
	City:			Township:	
	County:			Range:	

Revised 7/7/2008

6.	**Waterbody:**	☐ Truckee River ☐ Carson River ☐ Colorado River ☐ Virgin River	☐ Lake Tahoe ☐ Walker Lake ☐ Washoe Lake
7.	**Project Summary:** Provide a brief summary of the proposed use in narrative form. (See Application Instructions, Page 2)		
Use additional sheets, if necessary.			
8.	**Notifications:** Please give complete names and addresses of all abutting property owners and other interested parties. Note: Interested parties to include any applicable homeowner's associations, General Improvement Districts. (See Application Instructions, Page 2) *Use additional sheets, if necessary.*		
9.	**Proposed Start Date:**		
	Proposed Completion Date:		

10.	**Additional Comments:**
	Use additional sheets, if necessary.
11.	**Is this application for a recreational purpose?**
	☐ Yes (If "Yes," attach required statement as described below)
	☐ No
	Pursuant to **NRS 322.1003**, an applicant for a permit, license or other authorization to use state land or state facilities for a recreational purpose shall, if the permit, license or other authorization does no expire less than six (6) months after it is issued, submit to the State Land Registrar the statement prescribed by the Welfare Division of the Department of Human Resources pursuant to **NRS 425.520**. The statement must be completed and signed by the applicant. The statement must be attached to this application
12.	Application is hereby made for a permit or permits to authorize the activities described herein. I certify that I am familiar with the information contained in this application, and that to the best of my knowledge and belief such information is true, complete and accurate. I further certify that I possess the authority to undertake the proposed activity.

Name of Applicant (Print) _____ Signature of Applicant

**DECLARATORY STATEMENT BY APPLICANT
FOR A DIVISION OF STATE LAND'S PERMIT, LICENSE OR OTHER AUTHORIZATION
TO USE STATE LAND FOR A RECREATIONAL PURPOSE
PURSUANT TO NRS 322.1003 AND NRS 425.520**

Please mark the appropriate response:

☐ **I am not subject to a court order for the support of a child**

☐ **I am subject to a court order for the support of one or more children and am in compliance with the order or am in compliance with a plan approved by the district attorney or other public agency enforcing the order for the repayment of the amount owned pursuant to the order, or**

☐ **I am subject to a court order for the support of one or more children and am <u>not</u> in compliance with the order or a plan approved by the district attorney or other public agency enforcing the order for the repayment of the amount owed pursuant to the order.**

Failure to mark one (1) of the three (3) will result in denial of the application.

Name of Applicant (print)	**Signature of Applicant**
Applicant Social Security Number:	**Date**

<u>USE OF STATE LAND FOR A RECREATIONAL PURPOSE DEFINED</u>

1. Private piers and docks (single and multiple residential use).
2. Private boat launching ramps, boat rails and boat hoists.
3. Private mooring buoys, boat slips and boat houses.
4. Private swim floats.
5. Recreational dredging.

Revised 7/7/2008

NEVADA DEPARTMENT OF TRANSPORTATION
PERMIT APPLICATIONS

725-1

Fee _____ Permit No. _____
Milepost _____ District _____
District No.: _____
Applicant: _____
Type of Work: _____
_____

FOR DEPARTMENT USE ONLY

REVOCABLE APPLICATION AND PERMIT FOR OCCUPANCY OF
NEVADA DEPARTMENT OF TRANSPORTATION RIGHT-OF-WAY
(Under the provisions of NRS 408.423, 408.210 and NAC 408)

1. Location where excavation, construction, installation and/or occupancy is proposed

_____
Local name of highway Street address or nearest cross street

2. Describe in detail the type and scope of work; capacity or size of facility; stages and time frame for development; scheduled dates for start and completion. Attach 4 sets of detailed plans or drawings.

3. PERMITTEE hereby acknowledges that he has read and received a copy of the specific Terms and Conditions Relating to Right-of-Way Occupancy Permits issued by the State of Nevada Department of Transportation, and accepts said terms and conditions and any additional terms and conditions stated in this permit.

4. **SPECIFIC TERMS AND CONDITIONS APPURTENANT TO THIS PERMIT ARE LISTED ON PAGE 2.**

5. THE PERMIT SHALL BE SIGNED AND RETURNED TO THE DISTRICT OFFICE.

_____ _____
Name of PERMITTEE (Type or Print) Signature of PERMITTEE

_____ _____
Address Title Phone No.

_____ _____
City, State, Zip Date of Application

( ) ( ) _____
Phone No. Fax No. Permittee's I.D. No. or Parcel No.

NDOT
035 001
Rev. 10/03

This Right-of-Way Occupancy permit is granted to the PERMITTEE in accordance with the provisions of Chapter 408 NRS, and NAC 408 and subject to the terms and conditions stipulated to perform the work described.

Dated this _____ day of _____, 20_____

STATE OF NEVADA, DEPARTMENT OF TRANSPORTATION

By _____
Director or District Engineer

NDOT
035 001
Rev. 10/03

DRAINAGE INFORMATION FORM

Date of Application: _____

Applicant: _____ Firm: _____

Name of Development: _____ Contact Person: _____

Encroachment Location: _____ Address: _____

Milepost: _____ Route: _____ _____

City: _____ County: _____ Telephone: _____

Type of Development: _____

Describe nature of encroachment into Department right-of-way: _____

_____

Approximate upstream land area which drains to the subject site: _____

Approximate development land area which drains into Department right-of-way: _____

Is a portion or all of the proposed encroachment/development located in a designated FEMA Flood Hazard area? ☐ Yes ☐ No

As a result of the encroachment/development:

Will peak flows up to the 100-year event entering Department right-of-way be increased over pre-development conditions? ☐ Yes ☐ No

Will any flows be diverted into or away from Department right-of-way? ☐ Yes ☐ No

Will flows entering or leaving Department right-of-way be obstructed (e.g., berms, property walls, etc.)? ☐ Yes ☐ No

Will established drainage conditions (velocities, depths, flow paths, etc.) be altered within Department right-of-way? ☐ Yes ☐ No

Will curb, gutter, sidewalk, medians or any other obstruction to roadway surface flows be constructed within Department right-of-way? ☐ Yes ☐ No

Will drainage facilities be constructed in Department right-of-way? ☐ Yes ☐ No

From a drainage standpoint, does the proposed encroachment in any way adversely affect Department right-of-way or any of the upstream or downstream property owners? ☐ Yes ☐ No

A drainage report, as described in Section II. 6.1 of the Department's Terms and Conditions Relating to Right-of-Way Occupancy Permits, is required if the answer to any of the above questions is yes unless waived by the District Engineer.

Unless completion of this form is waived by the Department's District Engineer, the form shall be completed and sealed by a licensed Civil Engineer.

Engineer's Seal

OR ⇨ Waived By:

_____

District Engineer

WASHOE COUNTY
PERMIT APPLICATIONS

Staff Assigned Case No.: _____

Washoe County Development Application

Project Information

Project Name (commercial/industrial projects only):

Project Description:

Project Address:

Project Area (acres or square feet):

Location Information

Project Location (with point of reference to major cross streets AND area locator):

Assessor's Parcel No(s):	Parcel Acreage:	Assessor's Parcel No(s):	Parcel Acreage:

Section(s)/Township/Range:

Indicate any previous Washoe County approvals associated with this application:

Case Nos.

Applicant Information

Property Owner:		**Professional Consultant:**	
Name:		Name:	
Address:		Address:	
	Zip:		Zip:
Phone:	Fax:	Phone:	Fax:
Email:		Email:	
Cell:	Other:	Cell:	Other:
Contact Person:		Contact Person:	
Applicant/Developer:		**Other Persons to be Contacted:**	
Name:		Name:	
Address:		Address:	
	Zip:		Zip:
Phone:	Fax:	Phone:	Fax:
Email:		Email:	
Cell:	Other:	Cell:	Other:
Contact Person:		Contact Person:	

For Office Use Only

Date Received:	Initial:	Planning Area:	
County Commission District:			
CAB(s):		Land Use Designation(s):	

Owner Affidavit

Project Name:	
Application Type	
☐ Abandonment	☐ Final Map Certificate of Amendment
☐ Administrative Permit	☐ Final Map Major/Minor Amendment
☐ Agricultural Exemption Land Division	☐ Final Subdivision Map/Const Plan Review
☐ Amendment of Conditions of Approval	☐ Parcel Map Waiver
☐ Boundary Line Adjustment	☐ Reversion to Acreage
☐ Comprehensive Plan Amendment	☐ Special Use Permit ☐ with EIS/EA
☐ Land Use Designation Change	☐ Specific Plan
☐ Text Change	☐ Tentative Map of Div into Large Parcels
☐ Design Review Committee Submittal	☐ Tentative Parcel Map
☐ Development Agreement	☐ Tentative Subdivision Map
☐ Development Code Amendment	☐ Hillside Development ☐ Significant Hydrologic Resource ☐ Common Open Space Development
☐ Ext of Time Requests (Approved Applications)	
☐ Ext of Time Requests (Tent Subdivision Maps)	☐ Variance

The receipt of an application at the time of submittal does not imply the application complies with all requirements of the Washoe County Development Code, the Washoe County Comprehensive Plan or the applicable area plan, or that it is deemed complete and will be processed.

STATE OF NEVADA)
)
COUNTY OF WASHOE)

I,_____,
being duly sworn, depose and say that I am an owner* of property involved in this petition and that the foregoing statements and answers herein contained and the information herewith submitted are in all respects complete, true and correct to the best of my knowledge and belief. I understand that no assurance or guarantee can be given by members of the Department of Community Development staff.

(A separate Affidavit must be provided by each property owner named in the title report.)

*Owner refers to the following: (Please mark appropriate box.)

- ☐ Owner
- ☐ Corporate Officer/Partner (Provide copy of record document indicating authority to sign.)
- ☐ Power of Attorney (Provide copy of Power of Attorney.)
- ☐ Owner Agent (Provide notarized letter from property owner giving legal authority to agent.)
- ☐ Property Agent (Provide copy of record document indicating authority to sign.)
- ☐ Letter from Government Agency with Stewardship

Signed_____

Address_____

_____

Subscribed and sworn to before me this _____ day of _____, _____.

(Notary Stamp)

_____
Notary Public in and for said county and state
My commission expires:_____

July 1, 2008

Special Use Permit Application
Supplemental Information

(All required information may be separately attached)

Chapter 110 of the Washoe County Code is commonly known as the Development Code. Specific references to special use permits may be found in Article 810, Special Use Permits.

1. What is the type of project being requested?

2. What currently developed portions of the property or existing structures are going to be used with this permit?

3. What improvements (e.g. new structures, roadway improvements, utilities, sanitation, water supply, drainage, parking, signs, etc.) will have to be constructed or installed and what is the projected time frame for the completion of each?

Special Use Permit (Residential) for PC or BOA Fee Worksheet

Case Number:	Project Name: APN:	
Department	**Fees**	
Community Development 328-6100		$1,366
Additional Community Development Fees	Environmental Impact Statement/Environmental Assessment (EIS/EA)	$692
Engineering Division 328-2041	❑ Minor permit ❑ Major permit	$82 $93
Environmental Health Services 328-2434	❑ Minor permit ❑ Major permit	$138 $1,658
Vector-Borne 328-2434		$114
Water Resources Utility Operations 954-4600	❑ Tahoe plan area ❑ Other areas	$0 $203
Total Fees (Tahoe Area) (See note 1)	❑ Minor permit ❑ With EIS/EA ❑ Major permit ❑ With EIS/EA	$1,700 $2,392 $3,231 $3,923
Total Fees (Other Areas) (See note 1)	❑ Minor permit ❑ With EIS/EA ❑ Major permit ❑ With EIS/EA	$1,903 $2,595 $3,434 $4,126

Notes

1. The following is considered a major permit application: Multi family residential. All other uses constitute minor permits.
2. In accordance with Nevada Revised Statutes, application fees must be deposited the day of receipt. This does not guarantee that the application is complete.

Make check payable to Washoe County.
Bring check with your application to Community Development.

Submit this page with "Original Packet" only.
Do not include this page in other copies of the packet.

Fees collected per Washoe County Development Code, Article 906, Fees.

Special Use Permit (Commercial/Industrial/Civic) for PC or BOA Fee Worksheet

Case Number:	Project Name: APN:	
Department	**Fees**	
Community Development 328-6100		$2,581
Additional Community Development Fees	❑ Environmental Impact Statement/Environmental Assessment (EIS/EA)	$1,526
Engineering Division 328-2041	❑ Minor permit ❑ Major permit	$164 $655
Environmental Health Services 328-2434	❑ Minor permit ❑ Major permit	$138 $1,658
Vector-Borne 328-2434		$114
Water Resources Utility Operations 954-4600	❑ Tahoe plan area ❑ Other areas	$0 $203
Total Fees (Tahoe Area) (See note 1)	❑ Minor permit ❑ With EIS/EA ❑ Major permit ❑ With EIS/EA	$2,997 $4,523 $5,008 $6,534
Total Fees (Other Areas) (See note 1)	❑ Minor permit ❑ With EIS/EA ❑ Major permit ❑ With EIS/EA	$3,200 $4,726 $5,211 $6,737

Notes

1. The following are major permit applications: bed and breakfast inns, commercial animal slaughtering, convention and meeting facilities, destination resorts, eating and drinking establishments, gasoline sales and service stations, convenience and full service, gaming facilities: limited and unlimited, hostels, hotels and motels, liquor sales on premises, lodging services, major public facilities, recycling centers: full service and remote collection and residential hazardous substances, vacation time shares. All other uses constitute minor permits.
2. In accordance with Nevada Revised Statutes, application fees must be deposited the day of receipt. This does not guarantee that the application is complete.

Make check payable to Washoe County.
Bring check with your application to Community Development.

Submit this page with "Original Packet" only.
Do not include this page in other copies of the packet.

Fees collected per Washoe County Development Code, Article 906, Fees.

Staff Assigned Case No.: _____

Washoe County Development Application

Project Information			
Project Name (commercial/industrial projects only):			
Project Description:			
Project Address:			
Project Area (acres or square feet):			

Location Information			
Project Location (with point of reference to major cross streets AND area locator):			
Assessor's Parcel No(s):	Parcel Acreage:	Assessor's Parcel No(s):	Parcel Acreage:
Section(s)/Township/Range:			
Indicate any previous Washoe County approvals associated with this application: Case Nos.			

Applicant Information			
Property Owner:		**Professional Consultant:**	
Name:		Name:	
Address:		Address:	
	Zip:		Zip:
Phone:	Fax:	Phone:	Fax:
Email:		Email:	
Cell:	Other:	Cell:	Other:
Contact Person:		Contact Person:	
Applicant/Developer:		**Other Persons to be Contacted:**	
Name:		Name:	
Address:		Address:	
	Zip:		Zip:
Phone:	Fax:	Phone:	Fax:
Email:		Email:	
Cell:	Other:	Cell:	Other:
Contact Person:		Contact Person:	

For Office Use Only			
Date Received:	Initial:	Planning Area:	
County Commission District:			
CAB(s):		Land Use Designation(s):	

Owner Affidavit

Project Name:	
Application Type	
☐ Abandonment	☐ Final Map Certificate of Amendment
☐ Administrative Permit	☐ Final Map Major/Minor Amendment
☐ Agricultural Exemption Land Division	☐ Final Subdivision Map/Const Plan Review
☐ Amendment of Conditions of Approval	☐ Parcel Map Waiver
☐ Boundary Line Adjustment	☐ Reversion to Acreage
☐ Comprehensive Plan Amendment	☐ Special Use Permit ☐ with EIS/EA
☐ Land Use Designation Change	☐ Specific Plan
☐ Text Change	☐ Tentative Map of Div into Large Parcels
☐ Design Review Committee Submittal	☐ Tentative Parcel Map
☐ Development Agreement	☐ Tentative Subdivision Map
☐ Development Code Amendment	☐ Hillside Development ☐ Significant Hydrologic Resource ☐ Common Open Space Development
☐ Ext of Time Requests (Approved Applications)	
☐ Ext of Time Requests (Tent Subdivision Maps)	☐ Variance

The receipt of an application at the time of submittal does not imply the application complies with all requirements of the Washoe County Development Code, the Washoe County Comprehensive Plan or the applicable area plan, or that it is deemed complete and will be processed.

STATE OF NEVADA)
)
COUNTY OF WASHOE)

I,_____,
being duly sworn, depose and say that I am an owner* of property involved in this petition and that the foregoing statements and answers herein contained and the information herewith submitted are in all respects complete, true and correct to the best of my knowledge and belief. I understand that no assurance or guarantee can be given by members of the Department of Community Development staff.

(A separate Affidavit must be provided by each property owner named in the title report.)

*Owner refers to the following: (Please mark appropriate box.)

- ☐ Owner
- ☐ Corporate Officer/Partner (Provide copy of record document indicating authority to sign.)
- ☐ Power of Attorney (Provide copy of Power of Attorney.)
- ☐ Owner Agent (Provide notarized letter from property owner giving legal authority to agent.)
- ☐ Property Agent (Provide copy of record document indicating authority to sign.)
- ☐ Letter from Government Agency with Stewardship

Signed_____

Address_____

_____

Subscribed and sworn to before me this _____ day of _____, _____.

(Notary Stamp)

_____
Notary Public in and for said county and state
My commission expires:_____

July 1, 2008

Special Use Permit Application
for Grading
Supplemental Information

(All required information may be separately attached)

Chapter 110 of the Washoe County Code is commonly known as the Development Code. Specific references to special use permits may be found in Article 810, Special Use Permits. Article 438, Grading, and Article 418, Significant Hydrologic Resources, are the ordinances specifically involved in this request.

1. What is the purpose of the grading?

2. How many cubic yards of material are you proposing to excavate on site?

3. How many square feet of surface of the property are you disturbing?

4. How many cubic yards of material are you exporting or importing? If none, how are you managing to balance the work on-site?

Special Use Permit (Residential) for Grading

Case Number:	Project Name: APN:	
Department	**Fees**	
Community Development 328-6100		$1,366
Additional Community Development Fees	Environmental Impact Statement/Environmental Assessment (EIS/EA)	$692
Engineering Division 328-2041	❑ Minor permit ❑ Major permit	$82 $93
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Notes

1. The following is considered a major permit application: Multi family residential. All other uses constitute minor permits.
2. In accordance with Nevada Revised Statutes, application fees must be deposited the day of receipt. This does not guarantee that the application is complete.

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Bring check with your application to Community Development.

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Do not include this page in other copies of the packet.

Fees collected per Washoe County Development Code, Article 906, Fees.

Special Use Permit (Commercial/Industrial/Civic) for Grading

Case Number:	Project Name: APN:	
Department	**Fees**	
Community Development 328-6100		$2,581
Additional Community Development Fees	❑ Environmental Impact Statement/Environmental Assessment (EIS/EA)	$1,526
Engineering Division 328-2041	❑ Minor permit ❑ Major permit	$164 $655
Environmental Health Services 328-2434	❑ Minor permit ❑ Major permit	$138 $1,658
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Notes

1. The following are major permit applications: bed and breakfast inns, commercial animal slaughtering, convention and meeting facilities, destination resorts, eating and drinking establishments, gasoline sales and service stations, convenience and full service, gaming facilities: limited and unlimited, hostels, hotels and motels, liquor sales on premises, lodging services, major public facilities, recycling centers: full service and remote collection and residential hazardous substances, vacation time shares. All other uses constitute minor permits.
2. In accordance with Nevada Revised Statutes, application fees must be deposited the day of receipt. This does not guarantee that the application is complete.

Make check payable to Washoe County.
Bring check with your application to Community Development.

Submit this page with "Original Packet" only.
Do not include this page in other copies of the packet.

Fees collected per Washoe County Development Code, Article 906, Fees.

WASHOE COUNTY BUILDING AND SAFETY GRADING APPLICATION

1001 EAST NINTH STREET P.O.BOX 11130
RENO NEVADA 89520-0027
(775) 328-2020
FAX (775) 328-6132
WWW.CO.WASHOE.NV.US

GENERAL INFORMATION:

Job address:_____

Lot:_____Block_____Subdivision:_____

Parcel No._____Project Valuation: $_____

Special Use Permit Number _____
(please have letter attached)

Total Cubic Yards_____

DESCRIPTION OF WORK:

OWNER INFORMATION:

Owners Name_____

Address:_____

City_____State_____Zip Code:_____

Phone:_____Fax:_____E-Mail_____

CONTRACTOR INFORMATION:

Builders Name:_____

Phone: _____Fax:_____E-Mail_____

State License Number:_____Washoe County Business Lic:_____

CITY OF RENO
PERMIT APPLICATIONS

BUILDING PERMIT APPLICATION ***GRADING/SITE IMPROVEMENTS***

City of Reno
Community Development Department
450 Sinclair Street – P.O. Box 1900, Reno, NV 89505
(775) 334-2063 ~ cityofreno.com
Fax (775) 334-2043

Case No.:_____

Rec'd By:_____

Parcel Number: **Address:**

Description of Work:

Property Owners Name:_____ Phone No.:_____
Corporate Office Address:_____ Fax No.:_____

Contractor Information:
General Contractor:_____ Contact Name:_____
Address:_____
Phone No.:_____ Fax No.:_____
Nevada License No.:_____ City License No.:_____

Design Professional Information:
Architect's Name:_____ Phone No.:_____
Engineer's Name:_____ Phone No.:_____

Project Information:

Valuation: $_____ Planning Case No.:_____

Subdivision:_____

Fema Flood Hazard Area: A ☐ AE ☐ AH ☐ AO ☐ SHX ☐ X ☐

Critical Flood Pool: Zone 1 ☐ Zone 2 ☐ Zone 3 ☐ Zone 4 ☐

Retaining Wall Permit No.:_____ Mass Grading Permit No.:_____

Mass Grading Total Cubic Yards of Material:_____

Site Improvements/Private (Valuation)_____ Site Improvements/Public (Valuation)_____

Total Valuation of Site Improvement (Public & Private)_____

Fire Sprinkler System: Yes ☐ No ☐ Septic Tank: Yes ☐ No ☐

Grease or Sand/Oil Interceptor: Existing ☐ New ☐ Not Applicable ☐

Please fill out grading checklist on other side→

COMMUNITY DEVELOPMENT DEPARTMENT
P. O. BOX 1900
RENO, NV 89505

Submitted herewith is the checklist as per City of Reno Grading Permit requirements:

GRADING CHECKLIST

		Yes	No
1.	Does grading balance on site?	☐	☐
2.	Total cubic yards to be moved including on-site, import and export? _____cubic yards		
3.	Will material be exported? If **yes**, give the cubic yards to be exported and the permit number for the export site. _____ cubic yards _____ active permit number or pit name	☐	☐
4.	Will material be imported? If **yes**, give the cubic yards to be imported and the permit number for the import site. _____ cubic yards _____ active permit number or pit name	☐	☐
5.	Total disturbed area _____ (acreage or sq. ft.) Total project land area _____ (acreage or sq. ft.)		
6.	If disturbed area equals or exceeds one acre in size, &/or has a potential to violate water quality standards, &/or may significantly contribute pollutants to sensitive water areas, attach:		
	(a) Construction Permit Submittal Checklist	☐	☐
	(b) Performance Standards Compliance Checklist	☐	☐
	(c) Copy of NOI application fee receipt or exemption approval letter from NDEP. CSW number _____	☐	☐
	(Note: 6a and 6b forms can be found in Appendix D of the BMP.)		
7.	If this project is subject to Conditions of Approvals, a copy must be attached to the plans. Case No.:_____	☐	☐

I hereby certify that each of the above items have been addressed on the Grading Permit plans. I understand that all BMP's must be in place prior to the start of any grading operations, and to contact the SWP Inspector a minimum of 24 hours prior to construction for inspection and verification of BMP's. To schedule an inspection for a project north of the Truckee River, call 334-4275. If the project is south of the Truckee River, call 334-4276.

Submitted by_____ Date_____

North Team ☐ South Team ☐

SPECIAL USE PERMIT

PROCEDURES

All property owners within 750 feet of the subject site boundaries will be notified by mail regarding the project and the time, date and location of the public hearing.

One sign shall be placed adjacent to each street abutting the property by the applicant within fourteen (14) days of the acceptance of the application.

City staff will prepare a report with recommendation which will be made available to the applicant before the Commission hearing.

At the advertised public hearing, the applicant and all other interested parties will be heard. Following the public hearing, the Planning Commission will make its decision: approval, denial, or tabling pending more information or site inspection. After a recommendation is made, the Planning staff will notify the City Clerk's office of the action with a copy of this written notice forwarded to the applicant.

THE PLANNING COMMISSION'S DECISION ON A SPECIAL USE PERMIT IS FINAL UNLESS THE SPECIAL USE PERMIT IS COMBINED WITH OTHER APPLICATIONS WHICH REQUIRE CITY COUNCIL APPROVAL (I.E., A ZONE CHANGE) OR IS APPEALED.

Appeals of any decision taken by the Planning Commission must be made within ten (10) calendar days of the Commission meeting. Any person aggrieved by the decision may file an appeal by submitting the appropriate form and fee to the City Clerk's office (334-2030).

After the appeal period expires the City Clerk will schedule the hearing by the City Council. If any appeal has been filed, the public hearing will be advertised and heard by the City Council. Final decision is made by the Council.

An applicant whose proposal is denied by the City Council may not institute a new application on substantially the same project within a period less than twelve (12) months from the date of action by the City Council on the original application, unless the City Council has first determined that its original decision was based on an error, lack of information, a misrepresentation of the facts, or that there has been a substantial change in the subject property.

CITY OF RENO

APPLICATION FOR SPECIAL USE PERMIT

The owner or duly authorized agent of the owner of the property herein described requests the Planning Commission of the City of Reno to approve a special use permit for the use described herein.

PROJECT NAME: _____

PROJECT DESCRIPTION: _____

This property is (check one): North of the Truckee River ☐
South of the Truckee River ☐

PROVIDE A DESCRIPTION OF THE SPECIAL USE PERMIT REQUESTED (Including type of activity, number of employees, description of structures to be built/used, etc):

_____

_____

_____

_____

_____

IDENTIFY THE IMPACTS OF THE PROPOSED USE ON ADJACENT LAND USES AND PUBLIC FACILITIES (Such as noise, traffic generation, hours of operation, odors, smoke, dust):

_____

_____

_____

_____

_____

ENVIRONMENT:

1) Is the project situated on steep or severe terrain (15.1% or greater) and/or does this application trigger a Special Use Permit for Hillside Developments?

_____

_____

2) Will the project disturb areas within or adjacent to wetlands, stream environments, major drainageways, or significant hydrologic resources?_____

(If so, explain the impact(s) and describe proposed mitigating measures. Such environmentally sensitive areas must be shown on the subdivision map.)

_____

_____

3) Describe the methods for stabilization and/or revegetation of exposed and disturbed soils due to proposed grading activities:

_____

_____

Does the project trigger an SUP for residential adjacency? If yes, explain how and refer to section for submittal requirements.

_____

_____

Is the project located on a major arterial?

_____

Is the project an expansion of an existing facility? Please indicate existing and proposed square footages.

_____

4) How does this site, building, and landscape development incorporate green technologies to reduce energy consumption?

_____

_____

_____

UTILITIES:

WATER:

IS A CONCEPTUAL WATER SUPPLY AND CONVEYANCE STUDY INCLUDED WITH THIS APPLICATION? _____

(If no, provide an explanation): _____

_____

Indicate the source of water, water purveyor, and the estimated water demand for the project:

_____

_____

SEWER:

IS A PRELIMINARY SEWER REPORT INCLUDED WITH THIS APPLICATION? _____

(If no, provide an explanation):

_____

_____

1) Indicate which entity and facility will provide sewer collection and treatment and provide an estimate of the project generated sewage contribution:

_____

_____

_____

2) Provide a description of the size, location, and ownership of existing and proposed sewer lines connecting to sewer lines of the sewage treatment provider:

_____

_____

_____

ALL OTHER UTILITIES:

ARE POWER LINE RELOCATIONS PROPOSED FOR THIS PROJECT? _____

(If yes, provide an explanation):

_____

_____

_____

Provide a description of the type and ownership of existing and proposed public and quasi public utilities proposed to serve the project:

_____

_____

_____

TRAFFIC:

IS A PRELIMINARY TRAFFIC STUDY INCLUDED WITH THIS APPLICATION?
_____

(If no, provide an explanation):

_____

_____

_____

1) Provide peak hour and average daily traffic volume generation estimates for the proposed project.

_____

_____

_____

2) Identify potential impacts to existing and proposed streets, intersections, and major transportation corridors affected by the project and describe mitigating measures proposed:

_____

_____

_____

PUBLIC AND EMERGENCY SERVICES:

Provide the location and source of garbage disposal, police, fire, and emergency medical service providers and describe potential impacts the project may have upon the capacity of these service providers:

_____

_____

_____

IS SUBJECT PROPERTY WITHIN THE AIRPORT NOISE IMPACT AREA (65 Ldn noise level)?
_____

(If so, explain the impact of the hazard on the proposed development and describe proposed mitigating measures. Such areas must be shown on the subdivision map.)

_____

_____

WILL THE PROPOSED USE GENERATE HAZARDOUS WASTE? _____

1. If the applicant has never operated a facility which generates hazardous waste, a letter stating such; or

2. If the applicant has operated a facility which generates hazardous waste, a letter including the name and location of any and all facilities the applicant has operated which generate hazardous waste. This letter must include a disclosure of any citations or correction notices issued against such facility and their status or disposition.

WILL THE PROPOSED USE INVOLVE ANY EXPLOSIVE MATERIAL AS DEFINED IN NRS 459.3816 AND 459.38332? _____

(If so, identify the materials, quantities stored on site, safety precautions which will be taken and method of disposal.)

_____

_____

_____

_____

You must include the following with this application:

- ☐ Reno Development Application
- ☐ Owner and Applicant Affidavit
- ☐ Notice of Mobile Home Park within 750 Ft.
- ☐ Advisory Board Information
- ☐ 8 ½ " x11" Site Plan
- ☐ 8 ½ "x 11" Zoning/Vicinity Map
- ☐ 24” x 36” Colored Display Map (1 copy for original application)
- ☐ 24” x 36” Non-Colored Display Map
- ☐ 8 ½” x 11” Color Building Elevations
- ☐ 24” x 36” Building Elevations (original to be in color)
- ☐ 24” x 36” Preliminary Grading and Drainage Plan
- ☐ 24” x 36” Preliminary Landscape Plan
- ☐ Calculate handicap parking spaces and regular parking spaces
- ☐ Information on Signage
- ☐ Exterior lighting
- ☐ Slope Map (for hillside developments)
- ☐ Supporting Information
- ☐ Application Checklist
- ☐ Check or Money Order (see Planning Fee Schedule)

PLEASE FOLD ALL 24” X 36” MAPS TO APPROXIMATELY 9” X 12”

****Original Application and <u>Fifteen Copies</u> are required for this application****

*Additional copies may be requested on a case-by-case basis dependent on distribution requirements

www.cityofreno.com

Project Location: North of River ☐ South of River ☐

RENO DEVELOPMENT APPLICATION

ACTION REQUESTED:
(Please Check)

- ☐ ABANDONMENT
- ☐ **ANNEXATION ****
- ☐ BOUNDARY LINE ADJUSTMENT
- ☐ MASTER PLAN AMENDMENT
- ☐ MINOR DEVIATION
- ☐ PARCEL MAP
- ☐ REVERSION TO ACREAGE
- ☐ SITE PLAN REVIEW
- ☐ SPECIAL USE PERMIT - MAJOR
- ☐ SPECIAL USE PERMIT - MINOR
- ☐ TENTATIVE MAP
- ☐ WITH MAINTENANCE DISTRICT
- ☐ VARIANCE
- ☐ ZONING MAP AMENDMENT
- ☐ AMENDMENT IN A COOPERATIVE PLANNING AREA

****Annexations are required to be submitted separately and may not be combined with other applications**

For Community Development Department Use Only:

CASE NUMBER:

Date Received _____
Time Received _____

PROJECT NAME: _____

PROJECT DESCRIPTION: _____

PROJECT ADDRESS: _____

PROPERTY SIZE: _____ ASSESSOR'S PARCEL NO(S).: _____

ATTACH LEGAL DESCRIPTION OF PROPERTY.

ZONING - EXISTING: _____ PROPOSED: _____

MASTER PLAN - EXISTING: _____ PROPOSED: _____

EXISTING LAND USE: _____

PROPERTY OWNER(S)

NAME: _____

ADDRESS: _____

_____

PHONE: _____

APPLICANT/DEVELOPER(S)

NAME: _____

ADDRESS: _____

_____

PHONE: _____

FAX NO: _____

PERSON TO CONTACT REGARDING APPLICATION:

NAME: _____
(IF SAME AS OWNER OR APPLICANT, PLEASE INDICATE)

ADDRESS: _____

_____

PHONE: _____

FAX NO: _____

E-MAIL ADDRESS: _____

The City of Reno will direct all mail on this project to the contact person designated above.
The above information is required.

APPLICATION PROCESSING

1. Submittal Dates:

   Applications for minor deviations, site plan reviews, parcel maps, reversions to acreage, or boundary line adjustments may be submitted any regular business day.

   Master Plan Amendments are accepted on the first business day of each calendar quarter (January, April, July, and October). See submittal date list for exact intake dates.

   All other applications are accepted on approximately the first and third Tuesday day of each month. See submittal date list for exact intake dates.

2. For all cases which require a public hearing, the contact person identified on the application will be sent a letter acknowledging receipt of the application as complete and any committee meetings requiring their attendance.

3. The following applications require a hearing before the Reno City Planning Commission:

   Special Use Permit
   Tentative Map
   Variance

   The following applications require a hearing before the Reno City Planning Commission and City Council:

   Master Plan Amendment
   Zoning Map Amendment

4. The following applications go directly to the City Council, unless packaged with another application that requires Planning Commission review:

   Abandonment
   Annexation
   Development Agreement

5. Notice:

   Master Plan Amendments, Special Use Permits, Site Plan Reviews, Tentative Maps, Variances, Annexations, and Zoning Map Amendments: All property owners within 750 feet of the subject site boundaries will be notified by mail regarding the project and the time, date and location of the hearing.

   Abandonment: Abutting property owners will be notified by mail regarding the project and the time, date and location of the City Council hearing.

   The applicant is responsible for posting notices on the site within fourteen (14) calendar days prior to the public hearing after the administrator has accepted an application as completed for a Master Plan Amendment, tentative map, site plan review, special use permit, abandonment, variance, or zoning map amendment request. Posting notices will be provided by the administrator. **Please see the Master Plan Application for special noticing and neighborhood meeting requirements to be held by the applicant.**

6. At the hearing, the applicant and all other interested parties will be heard. The protocol is as follows:

Staff	Five (5) minutes
Applicant	Fifteen (15) minutes total (no rebuttal time); or ten (10) minutes presentation, five (5) minutes rebuttal
Opponents/ Interested Persons	Fifteen (15) minutes per group or three (3) minutes each per person

   The chair of the Planning Commission may modify the protocol at his/her discretion.

7. Decisions: Following the hearing, the Planning Commission will make its recommendation (approval, denial, or table pending more information or site inspection). After a recommendation, staff will notify the City Clerk's office of the action.

The Planning Commission is the final decision maker on tentative maps, special use permits, and variances which are not part of a multiple request application that includes an annexation, abandonment, development agreement, zone change, or Master Plan Amendment. Applications may be approved with one hearing unless they are appealed.

The City Council is the final decision maker on appealed cases, abandonments, annexations, development agreements, Master Plan amendments and zoning map amendments. However, projects of regional significance and Master Plan amendments must be found in conformance with the Truckee Meadows Regional Plan by the Regional Planning Commission.

OWNER AFFIDAVIT

I am the owner/authorized agent of the property involved in this petition and that I authorize _____ (name) to request development related applications for _____ _____ (*use list below) on my property. This authorization is inclusive of Assessor Parcel Numbers_____, which are further described in the attached legal descriptions. I declare under penalty of perjury that the foregoing is true and correct for development case number LDC_____ (to be filled in by City of Reno staff).

Executed on _____, in _____, _____
(date) (City) (State)

_____
Signature

_____
Printed Name

STATE OF NEVADA)
) ss
COUNTY OF WASHOE)

On this _____ day of_____, 20___, _____(name) personally appeared before me, a Notary Public in and for said County and State, known to me to be the owner/authorized agent of the above property who acknowledged to me that they are authorized to and did execute the above instrument on behalf of said application.

_____
Notary Public

* Abandonment
Annexation
Boundary Line Adjustment
Master Plan Amendment
Minor Deviation
Parcel Map
Reversion to Acreage
Site Plan Review
Special Use Permit
Tentative Map
Variance
Zoning Map Amendment

APPLICANT AFFIDAVIT

I am the applicant and/or consultant/firm involved in this petition and the foregoing statements and answers herein contained and the information herewith submitted for _____ _____ (*use list below) are in all respects complete, true, and correct to the best of my knowledge and belief. I declare under penalty of perjury that the foregoing is complete, true and correct for development case number LDC_____ (to be filled in by City of Reno staff).

Executed on _____, in _____, _____
(date) (City) (State)

Company:_____

Name:_____

Title:_____

Signed:_____

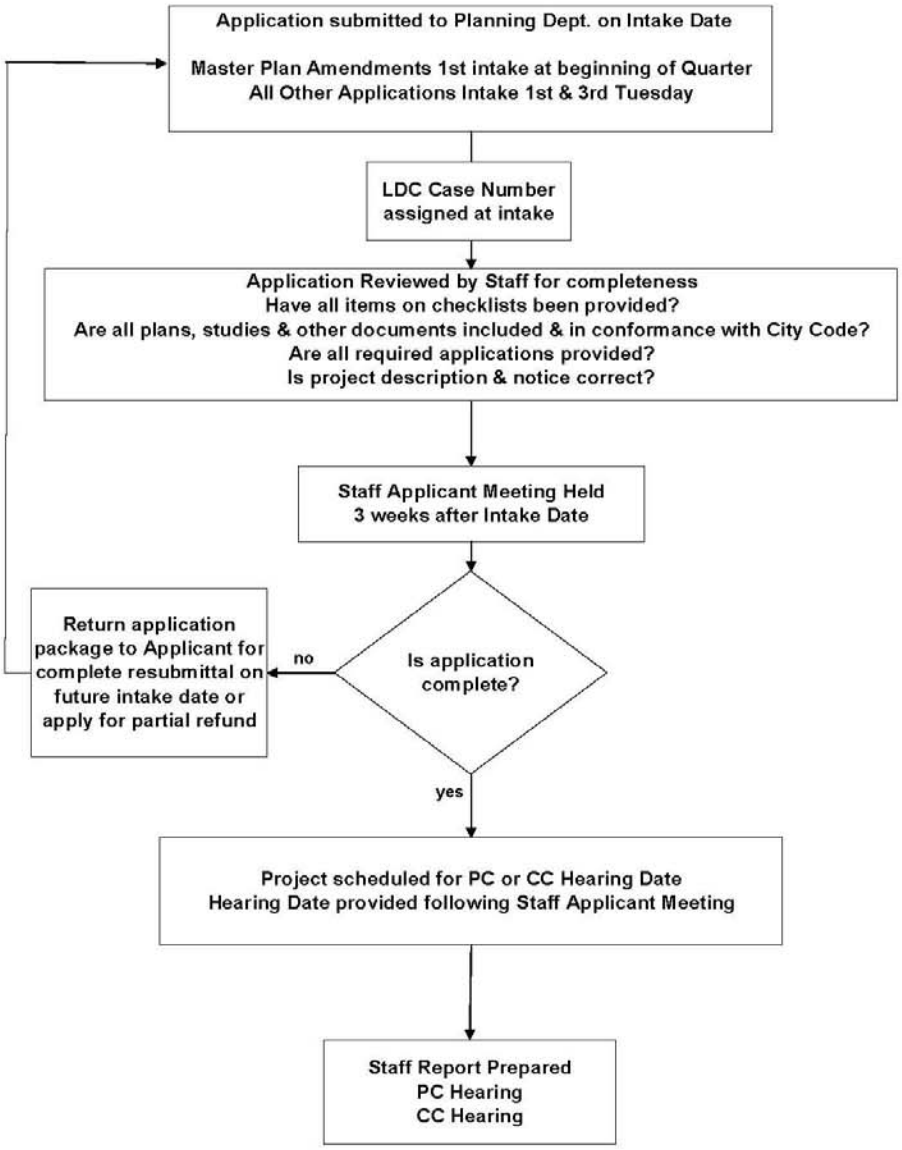
STATE OF NEVADA)
) ss
COUNTY OF WASHOE)

On this _____ day of_____, 20___, _____(name) personally appeared before me, a Notary Public in and for said County and State, known to me to be the applicant and/or consultant/firm involved in this petition who acknowledged to me that they are authorized to and did execute the above instrument on behalf of said application.

_____
Notary Public

* Abandonment
Annexation
Boundary Line Adjustment
Master Plan Amendment
Minor Deviation
Parcel Map
Reversion to Acreage
Site Plan Review
Special Use Permit
Tentative Map
Variance
Zoning Map Amendment

Applications will be processed as follows:



APPLICATION REQUIREMENTS

The administrator reserves the right to require additional information on any application prior to determining that it is complete.

Application submittals shall include the following information:

1. All application materials shall be submitted in a digital format in addition to hard copies as specified in this application. In addition to the digital application documents (applications, affidavits, legal descriptions maps, elevations, checklists, reports, signage documents, light documents and other supporting documents), a GIS shape file or Auto CAD drawing of the project boundaries for annexations, abandonments, Master Plan Amendments, and zone changes shall be submitted. For dual or multi-zoned parcels, boundaries must be shown for each zoning district.

2. If a PUD or Development Agreement handbook is requested, a digital copy of the handbook that can be amended by City staff shall be submitted with the application. If the project is approved by the City Council with major changes to the handbook, an amended digital copy of the document shall be submitted with the final copy of the handbook and shall include the following:

    a. One file in PDF form of the entire document

    b. All individual graphic files in *tif* or *jpg* format

    c. All word processing files in Microsoft word format

    No copyright or proprietary information may be included in the text or graphics in the document. The front cover may include the name of the firm it was prepared by and for whom it was prepared for.

3. If a power point presentation to the Planning Commission or City Council is made during the public hearing for the project, two (2) digital copies (or hard copies) of the presentation materials shall be submitted to the City for record keeping purposes. All new maps, pictures or other presentation materials shown during the presentation must be surrendered to staff at the close of the public hearing.

Postponements and Invalid Applications are subject to the following (Section 18.06.205 of the Community Development Code):

a. Postponement of hearing or administrative decision by applicant.

    1. All requests by applicants to postpone a public hearing or administrative decision shall be provided to the administrator in writing no later than 5:00 p.m. the day prior to the scheduled public hearing or decision.

    2. The applicant shall pay for notification and advertising costs caused by requested postponement when filing the request for postponement.

    3. Any application that is postponed by the applicant and is not reactivated within 90 days shall become invalid ten days after a notice of invalidation is provided by the administrator to the applicant by certified mail.

    4. Regardless of the stage in the review process, any application which is postponed more than twice by the applicant will become invalid.

b. New application required after an application has become invalid.

1. A new application is required to be submitted after an application has become invalid because of this Section 18.06.205.

2. The applicant shall pay all applicable fees and charges for the new application as if no application had been previously submitted.

3. The new application shall be regularly scheduled with no priority given because a previous application had been submitted on the matter.

Reimbursements for incomplete, withdrawn or invalid applications are as follows:

Site Plan Review and Discretionary Review Cases:

Case Progress	**Amount of Refund**
• Case Setup	80%
• Staff/Applicant meeting	50%
• Research	25%
• Postcards sent out	10%
• Draft staff report written	0%

Boundary Line Adjustment, Minor Deviation and Parcel Map Cases:

• Case set-up	80%
• Research	25%
• Decision Letter Written	0%

Original Application and Seventeen copies (along with 8 CDs) for the following applications:
Master Plan Amendment
Tentative Map

Original Application and Twelve copies (along with 8 CDs) for the following applications unless filed with one of the above-noted requests:
Special Use Permit
Variance
Zoning Map Amendment

Original Application and Ten copies (along with 1 CD) for the following applications unless filed with one of the above-noted requests:
Abandonment
Site Plan Review
Annexation

Additional copies may be requested on a case-by-case basis dependent on distribution requirements.

Applications that include a project of regional significance, an amendment in a cooperative planning area, or environmental constraints shall submit additional copies as described below:

Projects of Regional Significance, add:
Six copies of a Traffic Study to the City of Reno, and One copy of the original application and Traffic Study to the Truckee Meadows Regional Planning Agency. See page 8 of this application for a more detailed description of the application process.

Cooperative Planning:
Original application and Twenty-three copies (along with 8 CDs) including the Cooperative Planning application and its associated supplemental information are required. See page 9 of this application for a more detailed description of the application process.

For tentative maps; parcel maps (with at least one parcel of 2.5 acres or less); special use permits and site plan reviews (where the site is greater than one acre) that include Hillside Development, disturbance of a Major Drainageway(s), or where cut slopes are proposed exceeding 20 feet and/or fill slopes are proposed exceeding 10 feet, the following checklists must be submitted:

- □ Preliminary Grading & Drainage Plan and Checklist
- □ Preliminary Utility Plan and Checklist
- □ Preliminary Hydrology Report and Checklist
- □ Preliminary Geotechnical Report
- □ Preliminary Sewer Report and Checklist

Public Art Requirement
A 2% for public art requirement applies to all projects that are funded in whole or in part by the City of Reno or Reno Redevelopment Agency and/or are a project of a quasi governmental agency (such as Washoe County Airport Authority or RSCV, RTC, etc.) per Title 22 of the RMC. Provide one (1) copy of original to the Arts and Culture Division of the Parks, Recreation and Community Services Department.

Public Amenities Requirements:
If the proposed project is in a TOD or Regional Center Overlay zone, then pedestrian amenities of up to 2% of the entire project costs exclusive of land and financing may be required.

For Master Plan and/or zoning map amendments submitted without an associated project, refer to specific application for checklist.

_____(Applicants Initials) ***Applications with missing plans and checklists or missing components of plans and checklists, will be deemed incomplete and returned within three (3) days of application submittal. The applicant must consult with Community Development Staff prior to submitting an application without the above information to determine if the information may be eliminated for a particular application. Additional information may be requested through the staff/applicant meeting and the review process.**

GENERAL APPLICATION CHECKLIST

INCOMPLETE APPLICATIONS WILL NOT BE SCHEDULED FOR PUBLIC HEARING.

APPLICATIONS Originals shall be unbound with two hole punch at top of application. Copies shall be collated and bound into separate packets of the following:

Applicant Complete and Correct	Item No.	ITEMS REQUIRED FOR GENERAL APPLICATION CHECKLIST	**Staff** Incomplete
☐	1	Application Form(s)	☐
☐	2	Owner's Affidavit, Applicant Affidavit	☐
☐	3	If there is a mobile home park within 750 feet, provide the park parcel number, name, and address	☐
☐	4	Advisory Board information **(This requirement does not apply to site plan reviews)**	☐
☐	5	Legal Description **(legal descriptions for annexations, zone changes and abandonments must be signed and stamped by a State of Nevada professional land surveyor)**	☐
☐	6	8-1/2" x 11" a Site Plan and the "Site Plan, Access and Circulation Checklist" (see map guidelines and the checklist section of this application)	☐
☐	7	8-1/2" x 11" Zoning/Vicinity Map (see map guidelines)	☐
☐	8	24" x 36" Colored Display Map **(1 copy only for original application)**	☐
☐	9	24" x 36" Non-Colored Display Map	☐
☐	10	8-1/2" x 11" Color Building Elevations	☐
☐	11	24" x 36" Building Elevations (original to be in color)	☐
☐	12	24" x 36" Preliminary Grading & Drainage Plan and Checklist (if applicable)	☐
☐	13	24" x 36" Preliminary Utility Plan and Checklist (if applicable) – may be part of the site/grading plan	☐
☐	14	Preliminary Hydrology Report and Checklist (if applicable)	☐
☐	15	Preliminary Geotechnical Report (if applicable)	☐
☐	16	Preliminary Sewer Report and Checklist (if applicable)	☐
☐	17	24" x 36" Preliminary Landscape Plan and Checklist (if applicable) - may be part of the site plan	☐
☐	18	Traffic study as required by RMC 18.12.903	☐
☐	19	Handicap parking spaces and regular parking space calculations	☐
☐	20	Information on signage	☐
☐	21	Exterior lighting	☐
☐	22	Slope Cell Map (for hillside developments)	☐
☐	23	Supporting Information	☐
☐	25	Check or Money Order	☐
☐	26	Project of Regional Significance Analysis (if applicable)	☐

**Map scale for grading and utility plans shall not exceed 1 inch = 60 feet. FOLD ALL 24" X 36" MAPS TO APPROXIMATELY 9" X 12"

PROJECTS OF REGIONAL SIGNIFICANCE

1. If the project will require a change in zoning, a special use permit, an amendment to a master plan, a tentative map or other approval for the use of land which, if approved, will have an effect on the region of increasing:
   - (a) Employment by not less than 938 employees; Yes☐ No☐
   - (b) Housing by not less than 625 units; Yes☐ No☐
   - (c) Hotel accommodations by not less than 625 rooms; Yes☐ No☐
   - (d) Sewage by not less than 187,500 gallons per day; Yes☐ No☐
   - (e) Water usage by not less than 625 acre feet per year; or Yes☐ No☐
   - (f) Traffic by not less than an average of 6,250 trips daily. Yes☐ No☐

2. The project is:
   - (a) An electric substation; Yes☐ No☐
   - (b) A transmission line that carries 60 kilovolts or more; Yes☐ No☐
   - (c) A facility that generates electricity greater than 5 megawatts; Yes☐ No☐
   - (d) Natural gas storage and peak shaving facilities; Yes☐ No☐
   - (e) Gas regulator stations and mains that operate over 100 pounds per square inch; Yes☐ No☐
   - (f) A performing arts center with 750 or more seats; or Yes☐ No☐
   - (g) A convention facility of 80,000 square feet or more. Yes☐ No☐

3. The project is a geothermal wellfield gathering system and power generation facility or a mining operation on any land shown on the Regional Land Use Diagram or within 20 miles of any land shown on the Regional Land Use Diagram. Sand, gravel and aggregate pits for construction projects within the Truckee Meadows are specifically excluded from this guideline.

4. The project is a social service facility, such as, but not limited to, a homeless shelter or residential alcohol or drug treatment center, addressing the needs of 25 or more persons, which is proposed to be located within 1/2 mile of an adjacent jurisdiction's boundary or Sphere of Influence boundary. Day care facilities for children are specifically excluded from this guideline.

5. The project is located or partially located in an area designated on the map titled "Potential Wetlands, Stream Environment and Regionally Significant Hydrologic Resources Map", and the developer of the project does not propose to leave the designated area in its natural state.

6. The project contains average slopes of 15% or greater, as determined by a site specific analysis of slopes, and the developer does not propose to leave the percentage of land specified in Map 3 in the 2002 Truckee Meadows Regional Plan in a natural state. A project that is not in strict compliance with the numerical standards of Map 3, but that is determined by a local government to be developable without significant effects on slope stability, erosion and the visual impact of the development when viewed from other areas and to be consistent with regional design guidelines used by local governments to help interpret Map 3, shall be determined to be in compliance with the provisions of Map 3.

7. The project site contains an historic, archeological or cultural resource and the developer does not agree to:
   - (a) abide, by the provisions of an Archeological Program that has been adopted by a local government and which is in conformance with policy 25b of the Regional Plan; or
   - (b) in the absence of an adopted Archeological Program, to follow mitigation measures approved by the Washoe Tribe, the Pyramid Lake Paiute Tribe, the Reno-Sparks Indian Colony and the State Division of Historic Preservation and Archeology with respect to resources that are either on or eligible for inclusion on the National Register of Historic Places.

8. The project is a capital improvement program of the Washoe County School District.

9. The project is a new or significantly expanded regional solid or hazardous waste management project.

The determination as to whether or not a project meets any one of the criteria listed above shall be based on the total size of the project, including all phases, additions, expansions, and the master planned development of any adjoining vacant land available for development and controlled by one developer or owner to establish the cumulative total size of the project.

COOPERATIVE PLANNING

Cooperative planning is a concept which arose of the settlement of the case, Washoe County, et. al. v. Truckee Meadows Regional Planning Governing Board, Case No. 02-03469. The concept of cooperative planning is that certain areas within the City of Reno (“City") and Washoe County ("County") will be cooperatively planned with participation from both entities.

Areas subject to cooperative planning are identified in Exhibit 1 of the Settlement Agreement. Annexed properties outside the Reno Sphere of Influence will also be subject to cooperative planning. If you have questions whether your project is subject to cooperative planning, please contact the planner who has been assigned to review your application. If you do not know the name of the planner, you may call (775) 334-2221 to determine that information.

All development proposals within cooperative planning areas are subject to a supplemental package of zoning provisions (RMC 18.08.403).

If your application is a request to amend Master Plan land use designations, zoning map designations or development standards (zoning text) within a cooperative planning area, an analysis of applicable “cooperative plan amendment criteria” [RMC 18.08.404 (e)] will be required in all applications. An analysis of applicable “Interim Water Policies” as adopted by the Regional Water Planning Commission will also be required. Amendments to land use, zoning and development standards are also subject to an appeal process at the regional planning level if Washoe County is aggrieved by the City’s decision. While not required, it is recommended that pre-application meetings be held with Reno and Washoe County Planning staff prior to submittal of cooperative plan amendment requests.

Applicants should also be aware that the City has adopted County-approved Specific Plans that are located within Cooperative Planning Areas. Development proposals are required to comply with applicable provisions of these Specific Plans. The City of Reno Master Plan map indicates the geographic extent of each Specific Plan.

Site Plan, Access, and Circulation Checklist

Project Name: _____ Reviewed By: _____
Case Number: _____ Engineer of Record or Architect: _____
Date: _____ Applicant: _____

Applicant Correct and Complete	Item No.	ITEMS REQUIRED FOR SITE PLAN, ACCESS AND CIRCULATION CHECKLIST	**Staff** Incomplete
☐	1	All required owner affidavits and/or easements from adjacent land owners impacted by the project are included.	☐
☐	2	All required applications provided for the proposed project. All required application documents are provide (applicant affidavit, metes and bounds legal description, title report, treasure tax information, assessors parcel number information, traffic study, sewer report, drainage study, soils report, etc.).	☐
☐	3	Site plan provides adequate level of detail and information for review (boundaries, dimensions, square-footage call-outs, adjacent roadway information, adjacent properties identified, parking and land use statistics, etc.).	☐
☐	4	All existing and propose easements are shown and labeled with all easement abandonments identified.	☐
☐	5	Proposed site accesses, roadway improvements, acceleration/deceleration lanes, intersection designs, and off-site circulation patterns in conformance with the Traffic Study, the Design Manual, City code, and/or good engineering practices (locations, minimum spacing criteria, widths, throat depths, curb return radii, restricted turning movements, gating, configurations, sight distances, on-street parking restrictions, access routes, maximum tangent lengths, median openings, minimum centerline curvatures, minimum cul-de-sac and knuckle radii, etc.).	☐
☐	6	Public rights-of-way, public use easements, private access easements, private streets, emergency accesses, and all other project access concerns are established or proposed to be resolved with application. Ownership and maintenance of adjacent roadways not within City right-of-way are established within application.	☐
☐	7	All required on-site/off-site roadway and intersection improvements, with proposed street cross-sections, are depicted in the application and in conformance with the Design Manual.	☐
☐	8	Common use driveways, alleys, parking spaces, drive aisles, on-site circulation, fire access routes, on-site truck routes, and dead end travel paths are proposed in accordance with the Design Manual and City code (number of units served, backing space, distance form intersections, turning radii, vehicle wheel travel paths, turning templates, travel lane widths, adequate turn-around dimensions, divided entrance for fire access, typical sections, parking restrictions, etc.).	☐

Applicant Correct and Complete	Item No.	ITEMS REQUIRED FOR SITE PLAN, ACCESS AND CIRCULATION CHECKLIST	**Staff** Incomplete
☐	9	Adequate access provided to all utilities, sanitary sewers, and storm water management facilities in accordance with the Design Manual.	☐
☐	10	Proposed demolition, project phasing, infrastructure improvement scheduling provided with the application.	☐
☐	11	Preliminary improvement plans and application documents are legible and meet City standards for applications submittal.	☐
☐	12	Proposed sidewalk improvements will provide pedestrian connectivity throughout the site and to the adjacent public rights-of-way. At least one pedestrian route from adjacent rights-of-way to each building can meet ADA requirements. All required ADA compliant improvements are proposed (pedestrian ramps, parking spaces, ADA routes, etc.).	☐
☐	13	Rehabilitation plans for deteriorated pavement surfaces, curb and gutters, sidewalks, and driveway aprons within on-site or adjacent roadways, alleys, access easements, etc.	☐
☐	14	Proposed off-site roadway and site access lighting is shown with improvements proposed in accordance with City standards.	☐
☐	15	Exiting and proposed public streets are defined using City of Reno Master Plan and RTC Regional Roadway classifications.	☐
☐	16	Proposed signage and stripping is adequate for preliminary plans in accordance with the Design Manual, MUTCD, RTC, and NDOT standards (in that hierarchal order).	☐
☐	17	Proposed curb painting/lettering for parking limitations and/or prohibitions are depicted. All existing and proposed special parking and curb use zones depicted per City standards (fire zones, loading zones, bus/taxi zones, disabled zones, hotel zones, time zones). Speed control, traffic calming, and mid-block crossing provisions depicted per City standards.	☐

The following checklist items are in accordance with the minimum requirements for site design and transportation planning contained in multiple chapters of the Public Works Design Manual and multiple section of Title 18 of the Reno Municipal City code. Address circled items as directed.

SUBMITTED BY (Firm):_____

_____
(Engineer's or Architect's Signature)

(Engineer's or Architect's Seal)

PRELIMINARY GRADING AND DRAINAGE PLANS

Preliminary Grading and Drainage Plans are required for the following applications:

- Tentative Maps,
- Parcel Maps with at least one parcel of 2.5-acres or less,
- Special Use Permits and Site Plan Reviews where:
  - the site is greater than one acre, or
  - the site involves Hillside Development, or
  - the area of disturbance includes a Major Drainageway, or
  - cut slopes are proposed to equal or exceed 20-feet in depth and/or fill slopes are proposed to equal or exceed 10-feet in height.

Preliminary Grading and Drainage Plans shall include, at a minimum, the information specified on the enclosed Preliminary Grading and Drainage Plan Checklist. A signed and sealed copy of the checklist must be submitted.

PRELIMINARY GRADING AND DRAINAGE PLAN CHECKLIST

Project Name: _____ Reviewed By: _____
Case Number: _____ Engineer of Record or Architect: _____
Date: _____ Applicant: _____

Applicant Complete and Correct	Item No.	PLAN ITEMS REQUIRED FOR PRELIMINARY GRADING AND DRAINAGE PLAN CHECKLIST	**Staff** Incomplete
☐	1	Project name, Firm, Engineer's Signature & Seal.	☐
☐	2	The Preliminary Grading Plan for the entire project, stamped by a Nevada registered civil engineer, showing existing contours at maximum 5 foot intervals, approximate street grades, proposed surface drainage, approximate extent of cut and fill slopes, retaining walls and structures, and approximate building envelopes and all pad elevations sufficient to convey the impact of grading.	☐
☐	3	Plan drawn on 24" x 36" sheets using standard engineering scales. Map scale for grading plans shall not exceed 1 inch = 60 feet.	☐
☐	4	Date, north arrow, scale and sheet numbers in relation to the total number of sheets.	☐
☐	5	All streets indicated as either public or private.	☐
☐	6	Soils Report, prepared by a Nevada registered civil engineer, including soils characteristics sufficient for use in tentative structural design, i.e., street sections, building pads, etc.	☐
☐	7	A Hydrology Report and drainage study of the site prepared by a Nevada registered civil engineer prepared in accordance with the minimum requirements of Section 2 of Chapter II of the City of Reno Public Works Design Manual, latest edition. Specifically, the locations, sizes, flow directions, and peak discharges for 5-year and 100-year frequency events for each existing and proposed drainage facility within and abutting the project boundaries, together with the tributary watershed areas for each. In addition to other related checklist items, the report shall include preliminary runoff generation, size, and flow conveyance calculations for all watersheds and storm water management facilities.	☐
☐	8	Indicate any portion of the site within the boundary of the project located within a special FEMA Flood Hazard Zone.	☐
☐	9	Ownership, direction of flow, 5-year and 100-year peak flows, and the approximate location and size of existing and proposed storm drains, culverts, swales, and open channels.	☐
☐	10	All existing and proposed detention/retention basins with approximate sizes and capacities, outlet works, peak inflow and outflow values, and location, type, and direction of emergency overflow/outfall features.	☐
☐	11	The location, size and direction of flow of the nearest available public storm drain installation.	☐

Applicant Complete and Correct	Item No.	PLAN ITEMS REQUIRED FOR PRELIMINARY GRADING AND DRAINAGE PLAN CHECKLIST	**Staff** Incomplete
☐	12	The location and outline to scale of each existing building, permanent structure, or other permanent physical feature, and any alteration or removal of the same.	☐
☐	13	Explanation for handling storm water drainage, and estimated additional runoff generated by the proposed development.	☐
☐	14	The surrounding area within 150' of the exterior boundaries of the proposed subdivision showing the following: a. Topography with maximum 5 foot contours. b. Street location, names, widths of right-of-way, and pavement widths (including existing curb cuts of both sides of the streets). c. Existing maintenance and emergency access roads. d. Direction of drainage for all adjoining roadways. e. Existing flood control/drainage facilities, structures, etc.	☐
☐	15	The width of right-of-way and approximate grade of each street (public or private), alley, and access road within and necessary to serve the proposed project.	☐
☐	16	All known areas of potential hazard, including but not limited to, earthquake faults, earth slide areas, avalanche areas or otherwise hazardous slopes, clearly designated on the map.	☐
☐	17	Design of public and private streets, rights-of-way, and collective driveways such that emergency access by firefighting and other service vehicles is practical. Maintenance and emergency access roads, temporary or permanent, are to be designated on the map with proposed grading and drainage features.	☐
☐	18	Identify slopes steeper than 3:1 and indicate methods proposed for erosion control and slope stabilization for such slopes, with an explanation of how the methods were derived.	☐
☐	19	Identify the amount of material to be imported or exported from the site, and haul routes from the point of origin to the receiving site.	☐

Applicant Complete and Correct	Item No.	PLAN ITEMS REQUIRED FOR PRELIMINARY GRADING AND DRAINAGE PLAN CHECKLIST	**Staff** Incomplete
		Hillside Development Projects	
☐	20	Slope Cell Map with: a scale no less than one inch equals 60 feet, existing ground contour intervals of not more than two feet, proposed contours within intervals matching existing contours, and colored pre-grading slope groups categorized in accordance with the Hillside Density Calculations. Slope ranges shall be colored as follows: 1. 0 – 15% Green 2. 15.1 – 20% Yellow 3. 20.1 – 25% Orange 4. 25.1 – 30% Red 5. Greater than 30% Maroon	☐
☐	21	Additional grading plans and site improvement plans shall be superimposed over the color Slope Cell Map.	☐
☐	22	All additional plans and exhibits required by Reno Municipal Code, Section 18.12.1601 for Hillside Development.	☐
☐	23	All required plans for Hillside Developments shall be wet stamped, signed, and certified accurate by a civil engineer registered in the State of Nevada.	☐
		Supplemental Information	
☐	24	Explanation of measures proposed to eliminate or mitigate areas of potential hazard identified on plans.	☐
☐	25	Indication of prominent landmarks, areas of unique natural beauty, rock outcroppings, vistas and natural foliage which will be deciding considerations in the design of the subdivision.	☐
☐	26	When a project contains potential wetlands, stream environments, and areas of significant hydrologic resources, the Preliminary Grading and Drainage Plan shall be accompanied by a Technical Survey fulfilling the requirements of Section 18.12.1807 of the Reno Municipal Code for Wetlands and Stream Environment Protection Standards (revised November, 2004). If the wetland or stream is a major drainageway as classified in the Major Drainageway Plan, the Technical Survey shall include the items specified in that plan. Relevant design techniques or mitigation measures defined in the Technical Survey shall be incorporated into the Preliminary Grading and Drainage Plan.	☐
☐	27	For applications requiring a Special Use Permit for disturbance of a Major Drainageway, the Preliminary Grading and Drainage Plan shall depict the 100-year floodplain boundary and the 15 foot setback area as measured from grade break for all drainageways in accordance with Reno Municipal Code, Title 18 for Drainageway Protection Standards.	☐

Applicant Complete and Correct	Item No.	PLAN ITEMS REQUIRED FOR PRELIMINARY GRADING AND DRAINAGE PLAN CHECKLIST	**Staff** Incomplete
☐	28	For Tentative Map and Special Use Permit applications, the applicant shall submit additional plans depicting no less than two cross sections of the site with horizontal scales the same as that of the Preliminary Grading and Drainage Plan and vertical scales shown at a 1:1 representation, or proportional to the horizontal scale (e.g., 10-100, 4-40, etc.).	☐
☐	29	For applications requiring a Special Use Permit for excessive cuts and fills, the applicant must submit an additional plan view which graphically delineates all areas of proposed cuts in excess of 20-feet and proposed fills in excess of 10-feet. Within each area, the maximum cut depth or fill height shall be noted (in feet). This sheet shall utilize the same scale as the Preliminary Grading and Drainage Plan.	☐

The application is not considered to be complete by the City until all applicable requirements of this checklist have been fulfilled by the applicant. Incomplete applications will not be scheduled for public hearing.

SUBMITTED BY (Firm):_____

_____
(Engineer's Signature)

(Engineer's Seal)

Preliminary Hydrology/Drainage Report Checklist

Project Name: _____ Reviewed By: _____
Case Number: _____ Engineer of Record or Architect: _____
Date: _____ Applicant: _____

Applicant Correct and Complete	Item No.	ITEMS REQUIRED FOR PRELIMINARY HYDROLOGY/DRAINAGE REPORT CHECKLIST	Staff Incomplete
☐	1	Title Page with project name, engineering firm, engineer's seal and signature, and date.	☐
☐	2	Description of project location, including a Vicinity Map, Site Plan, adjacent roadways, adjacent developments, etc.	☐
☐	3	Area of project, description of existing land use, proposed development, project phasing, topography, ground cover, major drainageways, storm water management facilities, etc.	☐
☐	4	Description and relevance of previous drainage studies pertinent to the development or prepared for the subject site.	☐
☐	5	Exhibit(s) and description(s) of the project site and its relationship to nearby or on-site FEMA Flood Hazard Zones.	☐
☐	6	Exhibit(s) and description(s) of the off-site and on-site watershed and storm water facilities impacting the project and/or adjacent to the project boundaries for the pre-development and post-development site conditions.	☐
☐	7	Hydrologic parameters, assumptions, and methodologies utilized in the 5-year and 100-year rainfall and runoff calculations for off-site and on-site drainage subbasins. Parameters and calculations shall distinguish between pre-development and post-development site conditions with all sources referenced.	☐
☐	8	Hydraulic parameters, assumptions, and methodologies utilized in the 5-year and 100-year peak runoff flow calculations for existing and proposed storm water facilities in the pre-development and post-development site conditions. Storm water facilities to include: swales and open channels, catch basin inlets, storm drains, streets, culverts, detention basins, irrigation ditches, ponds, wetlands, and any special appurtenances (retention basins, infiltration systems, sump pumps, etc.) All calculations and design flow limitation to be in accordance with the Design Manual.	☐

Applicant Correct and Complete	Item No.	ITEMS REQUIRED FOR PRELIMINARY HYDROLOGY/DRAINAGE REPORT CHECKLIST	Staff Incomplete
☐	9	Indicate the ownership and maintenance of all existing and proposed storm water management facilities (i.e., private, public, City of Reno, Sparks, or Washoe County). Describe the entity(s) proposed to provide private storm water facility maintenance as applicable.	☐
☐	10	Demonstrate the adequacy of the proposed storm water management facilities to collect and convey off-site tributary and project generated peak storm water flows in accordance to the performance criteria defined in the Design Manual. Provide preliminary calculations and designs, including sizes, materials, and slopes, for all culverts, storm drains, and drainage channels/swales.	☐
☐	11	Determination of the adequacy of the existing downstream storm water system(s) to accommodate the peak flows from the developed site and the need for on-site storm water detention/retention.	☐
☐	12	Preliminary detention/retention basins calculations and sizing parameters, including: storage volumes, inlet and outlet performance information, maximum water surface elevations, and emergency overflow provisions.	☐
		Supplemental Information (As needed to support the project scope)	
☐	13	Provide information regarding the ownership and maintenance of irrigation facility traversing or abutting the subject site and the development plan to modify or discharge storm waters into this facility.	☐
☐	14	Provide information regarding the sites inclusion within a Truckee River Critical Flood Pool Zone. Describe the development plan for mitigating the project's impact on this flood pool zone in accordance with City code	☐
☐	15	Provide information regarding the soil conditions (percolation testing, etc.), design volumes, redundant volumes, maintenance access, observation ports, and emergency overflow provisions for the proposed storm water retention/infiltration basin.	☐
☐	16	Provide information regarding the discharge of on-site storm waters into the adjacent natural water body and the proposed mitigations to meet City code requirements for minimum water quality standards.	☐
☐	17	Provide information regarding any proposed FEMA Flood Hazard Zone map revision or amendment applications intended to support this project.	☐

Applicant Correct and Complete	Item No.	ITEMS REQUIRED FOR PRELIMINARY HYDROLOGY/DRAINAGE REPORT CHECKLIST	**Staff** Incomplete
☐	18	Provide an exhibit and description of all storm water facilities (public or private) proposed to be abandoned, including the method of abandonment.	☐
☐	19	Provide a discussion on the impact of potential shallow groundwater on site improvements and underground facilities and proposed mitigations.	☐

The following checklist items are in accordance with the minimum requirements for Hydrology & Drainage Reports contained in Chapter II of the Public Works Design Manual (Revised: March 2004). Address circled items as directed.

SUBMITTED BY (Firm):_____

_____
(Engineer's Signature)

(Engineer's Seal)

PRELIMINARY UTILITY PLANS

Preliminary Utility Plans shall include, at a minimum, the information specified on the enclosed Preliminary Utility Plan Checklist: a signed and sealed copy of the checklist must be submitted.

Whenever a Preliminary Utility Plan is required it shall be accompanied by a Preliminary Sewer Report, and a Preliminary Sanitary Sewer Report Checklist, in addition to a Conceptual Water Supply and Conveyance Study. The Preliminary Utility Plan shall have the same horizontal scale as the Preliminary Grading and Drainage Plan when submitted together.

A Preliminary Utility Plan is required whenever the project proposes to construct, upsize, or relocate a private or public utility main, pump station, or service lateral, including: sanitary sewer systems, storm drains, potable water supplies and transmission mains, reclaimed water systems, groundwater dewatering systems, overhead utility services, and underground utility services. The information required for a Preliminary Utility Plan may be incorporated onto other plans (site plans or grading plans) as long as the integrity and legibility of the combined information is preserved.

PRELIMINARY UTILITY PLAN CHECKLIST

Project Name: _____ Reviewed By: _____
Case Number: _____ Engineer of Record or Architect: _____
Date: _____ Applicant: _____

Applicant Complete and Correct	Item No.	ITEMS REQUIRED FOR PRELIMINARY UTILITY PLAN CHECKLIST	**Staff** Incomplete
☐	1	Project name, Firm, Engineer's Signature & Seal.	☐
☐	2	The Utility Plan for the entire project, stamped by a Nevada registered civil engineer, showing all requirements of this checklist and other pertinent and project specific details sufficient to convey the intent of the project and regional facility impacts.	☐
☐	3	Plan drawn on 24" x 36" sheets using standard engineering scales. Map scale for utility plans shall not exceed 1 inch = 60 feet.	☐
☐	4	Date, north arrow, scale, sheet numbers in relation to the total number of sheets.	☐
☐	5	A Sewer Report for the entire project, stamped by a Nevada registered civil engineer, prepared in accordance with the minimum requirements of Section 4 of Chapter IV of the City of Reno Public Works Design Manual, latest edition.	☐
☐	6	The location, size, direction of flow, as well as current and designed capacity, of the nearest available public sewer along with the estimated amount of sewage to be contributed.	☐
☐	7	The location, size, direction of flow, as well as designed capacity, for all proposed public sewer facilities along with the estimated amount of sewage to be contributed.	☐
☐	8	The location, size, direction of flow, as well as current and designed capacity, for existing and/or proposed private sewer facilities including lift stations, force mains, septic systems, and pressure sewer systems along with the estimated amount of sewage to be contributed.	☐
☐	9	A Conceptual Water Supply and Conveyance Study for the entire project, stamped by a Nevada registered civil engineer. This study shall include a description, estimation of water demand, and needs analysis for all existing and proposed water mains, storage facilities, pumping facilities, and water wells proposed to serve the project or encumber the lands within the project boundaries for regional water supply and conveyance needs. Note: This information may require the applicant to coordinate with the water purveyor on a tentative project planning level prior to submittal of City application.	☐

Applicant Complete and Correct	Item No.	ITEMS REQUIRED FOR PRELIMINARY UTILITY PLAN CHECKLIST	**Staff** Incomplete
☐	10	Size, location, and ownership of the nearest available public water mains and all proposed points of connection thereto. Note: Prior to approval of any final map the source of water with "will serve" letter from the water purveyor is required.	☐
☐	11	Size, location, and ownership of all proposed water distribution and service mains within the project boundary and/or adjacent lands necessary to serve the project or provide water supply to adjacent lands. Note: This information may require the applicant to coordinate with the water purveyor on a tentative project planning level prior to submittal of the Tentative Map.	☐
☐	12	Ownership, all Points of Connection (POC), direction of flow, and the approximate location and size of existing and proposed storm drains, sanitary sewers, electrical power services, and all other 'dry' utility services. All existing and proposed easements and access roads and their associated grading shall be shown in conjunction with these facilities and services.	☐
☐	13	The location, size, and description of all existing and proposed drainage pipes, culverts, detention basins, and open channel facilities with all required access roads.	☐
☐	14	Power facilities on or adjacent to the development and method of service to individual buildings. The plan must identify the location, ownership, and nature of all existing overhead utilities and identify those proposed to be relocated or placed underground as part of the project. All relocations shall be schematically shown.	☐
☐	15	The width and approximate location of all existing or proposed easements within the project boundary, whether public or private, for access, roadways, drainage, sewers, water, irrigation, and all other public utility purposes and their associated grading.	☐
☐	16	The surrounding area within 150' of the exterior boundaries of the proposed subdivision showing the following: a. Street location, names, widths of right-of-way, and pavement widths (including existing curb cuts on both sides of the streets). b. Easement location, descriptions, widths, and information regarding the perpetuation or abandonment of same. d. Existing utilities, structures, etc.	☐

The application is not considered to be complete by the City until all applicable requirements of this checklist have been fulfilled by the applicant. Incomplete applications will not be scheduled for public hearing.

SUBMITTED BY (Firm): _____

_____
(Engineer's Signature)

(Engineer's Seal)

Preliminary Sanitary Sewer Report Checklist

Project Name: _____ Reviewed By: _____
Case Number: _____ Engineer of Record or Architect: _____
Date: _____ Applicant: _____

Applicant Correct and Complete	Item No.	ITEMS REQUIRED PRELIMINARY SANITARY SEWER REPORT CHECKLIST	**Staff** Incomplete
☐	1	Title Page with project name, engineering firm, engineer's seal and signature, and date.	☐
☐	2	Description of project location, including a Vicinity Map, Site Plan, adjacent roadways, adjacent developments, etc.	☐
☐	3	Area of project, description of existing land use and proposed development (including potential project phasing).	☐
☐	4	Exhibit(s) and description(s) of the sanitary sewer tributary areas within and outside of the project area and boundaries.	☐
☐	5	Exhibit(s) and description(s) of the existing and proposed sanitary sewer facilities, including: sewer main layouts, preliminary pipe sizes, directions of flow, and special appurtenances (lift stations, force mains, siphons, etc.).	☐
☐	6	Indicate the ownership and maintenance of all existing and proposed sanitary sewer facilities (i.e., private, public, City of Reno, Sparks, or Washoe County). Describe the entity(s) proposed to provide private sewer maintenance as applicable.	☐
☐	7	Preliminary calculations for peak and cumulative sewer flows, including flows generated from areas outside of the project area and boundaries.	☐
☐	8	Preliminary hydraulic calculations, parameter assumptions, and methodologies for depths of flows and velocities for existing and proposed sewer mains per the Design Manual.	☐
☐	9	Determination of the adequacy of the existing and proposed sanitary sewer system to accommodate the proposed development from the point of connection to a public sanitary sewer interceptor in accordance to the performance criteria defined in the Design Manual (contact Community Development Engineering or Public Works Sanitation for assistance in identifying the nearest public interceptor).	☐
☐	10	Provide an exhibit and description of existing sanitary sewer facilities (public or private) proposed to be abandoned or relocated, including the method of abandonment.	☐

Applicant Correct and Complete	Item No.	ITEMS REQUIRED PRELIMINARY SANITARY SEWER REPORT CHECKLIST	**Staff** Incomplete
		Supplemental Information (As needed to support the project scope)	
□	11	Provide sewer flow measurements or contact Public Works Sanitation Department to ascertain existing average daily flows, peak sewer flows, and available additional capacities in the downstream facilities into which this project proposes to discharge.	□
□	12	Identify special land uses and developments, such as hospitals, schools, large office buildings, etc., within the project area or sewer shed. Provide a description of the methods and assumptions used to calculate peak sewer flows generated from each.	□
□	13	Identify all non-domestic waste being introduced into the sanitary sewer system, such as industrial process wastes, cooling waters, contaminated storm waters, parking structure runoff, etc., within the project area or sewer shed. Provide a description of existing or proposed pretreatment devices and an explanation of the methods and assumptions used to calculate peak sewer flows generated from each.	□
□	14	Provide a detailed study for any sanitary sewer lift stations existing or proposed within the sewer system. Include design calculations, operational description, performance analyses, and an economic justification as required by the Design Manual.	□

The following checklist items are in accordance with the minimum requirements for Sanitary Sewer Reports contained in Chapter IV of the Public Works Design Manual. Address circled items as directed.

SUBMITTED BY (Firm): _____

_____
(Engineer's Signature)

(Engineer's Seal)

PRELIMINARY LANDSCAPE PLAN SUBMITTAL REQUIREMENTS CHECKLIST

The plan shall, at a minimum, identify all areas to be landscaped and include required and provided area and tree calculations, water regime, and general types of landscaping proposed for the areas as more specifically described by Section 12.12.1203 of the Reno Municiple Code.

Applicant Complete and Correct	Item No.	ITEMS REQUIRED FOR PRELIMINARY LANDSCAPE PLAN SUBMITTAL CHECKLIST	**Staff** Incomplete
☐	1	Identification of all areas to be landscaped	☐
☐	2	Area and tree calculations	☐
☐	3	Water regime (type of irrigation)	☐
☐	4	General types of landscaping proposed for the area	☐

ESTIMATION OF WATER DEMAND FOR LAND DEVELOPMENT PROJECTS

	Type of Project	Demand Acre Feet/Year					
1.	Single Family Residential Lot: (use the demand that is closest to your square footage)						
	5,000 square foot lot	0.32	x	_____	lots	=	_____
	6,250 square foot lot	0.37	x	_____	lots	=	_____
	7,500 square foot lot	0.41	x	_____	lots	=	_____
	8,750 square foot lot	0.45	x	_____	lots	=	_____
	10,000 square foot lot	0.48	x	_____	lots	=	_____
	12,500 square foot lot	0.53	x	_____	lots	=	_____
	15,000 square foot lot	0.57	x	_____	lots	=	_____
	17,500 square foot lot	0.60	x	_____	lots	=	_____
	20,000 square foot lot	0.63	x	_____	lots	=	_____
2.	Mobile Home Lot	0.25	x	_____	lots	=	_____
3.	Apartments, duplexes, condominiums or townhouses (excluding outside utility and/or recreational uses)	0.19	x	_____	lots	=	_____
4.	Hotel, first class facilities, restaurants, convention space	0.34/room	x	_____	rooms	=	_____
5.	Hotel, limited facilities	0.30/room	x	_____	rooms	=	_____
6.	Motel	0.30/room	x	_____	rooms	=	_____
7.	Commercial or industrial building	2.26/acre	x	_____	acres	=	_____
8.	Laundry - commercial use	0.25/machine	x	_____	machines	=	_____
9.	Landscaping Turf Drip System	3.41/acre	x	_____	acres	=	_____
		TOTAL DEMAND				=	_____

Demand subject to NRS 540.071 and 540.091

Notes:

A. Demand does not include drought year dedication.
B. Residential figures supplied by Truckee Meadows Water Authority.
C. Single family figures include landscaping needs.

PRESENTATION OF PROJECTS TO ADVISORY BOARDS

There are two types of advisory boards, the City of Reno's ("City") neighborhood advisory boards and Washoe County's ("County") citizen advisory boards. More information is available at www.cityofreno.com or www.co.washoe.nv.us.

1. CITY OF RENO'S NEIGHBORHOOD ADVISORY BOARDS

   If your project is located within the City of Reno, you may voluntarily present your project to a neighborhood advisory board. If you choose to do so, please contact the City of Reno's Community/Neighborhood Services program at 775-321-8318 or visit our web site www.cityofreno.com.

2. WASHOE COUNTY'S CITIZEN ADVISORY BOARDS

   A. Development proposals for an administrative variance, boundary line adjustment, parcel map, reversion to acreage or site plan review are not customarily requested to be reviewed by a citizen advisory board.

   B. If your development proposal is outside the City's boundary line, but within the City's Sphere of Influence ("sphere"), the County will request that you present your project to the appropriate citizen advisory board.

   C. To determine if your project is within the City's sphere, you may review the "Reno Sphere Of Influence" map at the Community Development Office or contact the Planning Technician at the City of Reno Community Development Department at 775-321-8309. Please have the Assessor Parcel number for your property ready prior to calling.

   D. If your project is with the City's sphere, please contact Washoe County Community Development Department at 775-328-6100 to obtain instructions on presenting your project to the appropriate citizen advisory board.

   E. If you know the appropriate citizen advisory board for your development proposal, you may obtain further information, such as meeting dates, times, locations, applications, agendas, and membership rosters at Washoe County's web site www.co.washoe.nv.us.

   F. You should submit your development project sufficiently early to the appropriate citizen advisory board to allow review of the project by 8 days before the hearing date which should allow the County's staff to include the review in its report.

NEIGHBORHOOD ADVISORY BOARD AGENDA RESERVATION INFORMATION PACKET

COMMUNITY RELATIONS DIVISION
Neighborhood Services

P.O. Box 1900, 1 East First Street, 5th Floor
Reno, Nevada 89505
775-321-8318
775-334-3124 Fax

Neighborhood Advisory Board Agenda Reservation Process

Welcome to the City of Reno Community Relations Division/Neighborhood Services and the procedures for placing your development project on a Neighborhood Advisory Board's meeting agenda. If you are not familiar with our process, let's begin with a brief introduction of the Neighborhood Advisory Boards.

There are currently eight Neighborhood Advisory Board's (NAB's). Formalized by the City Council in 1995, Neighborhood Advisory Boards were created to give citizens an opportunity to resolve neighborhood issues. The purpose of the Neighborhood Advisory Boards are part of the official citizen participation structure of the City of Reno for issues relating to land use, environment, physical development budget, traffic and other programs, activities, and uses in which citizen participation is desirable to improve the quality of life of the residents o the City of Reno. The goal of the NABs are to enhance the livability of the Boards' areas by establishing and maintaining an open line of communication among citizens and other city government entities; to provide an open process by which all members of the public may involve themselves in the affairs of the Boards; and to engage in and perform such activities as duly authorized by the Reno City Council.

With this in mind, the following instructions will ensure that your project is placed on the upcoming NAB agenda for your project area. If your project is in one of the map areas (see attached NAB boundary maps) it is strongly recommended by the City Council, but not required, that you present your project before the appropriate Neighborhood Advisory Board. Presenting your project before the NAB will save your project time in the planning application process.

To have an item placed on the NAB agenda:

1. Contact the City of Reno Community Relations/Neighborhood Services program at 775-321-8318 to request a NAB Agenda Reservation Form, a current list of NAB board members, and a NAB meeting schedule.
2. Complete the NAB Agenda Reservation Form and return the form to Community Relations staff no later that 1:00 p.m., ten (10) working days prior to the NAB meeting date. Please make sure your contact information is included, i.e., telephone, fax number and e-mail/mailing address.
3. Prepare a one page project description (include the City of Reno Planning department case number, description, planner name and the specific location/address of your project). Provide a clear site plan and vicinity zoning map demonstrating a minimum radius of 750 feet. Deliver or mail one packet to each of the appointed members of the appropriate Neighborhood Advisory Board at least one week prior to the meeting.

Once the Agenda Reservation Form is received in Community Relations/Neighborhood Services (either hand delivered or faxed to 775-334-3124) with all requested information, your project will be added to the upcoming agenda for the appropriate NAB.

(NAB meetings are subject to the posting requirements of the Open Meeting Law and thus the reason for the stringent time line.)

Date and time received in CRD:_____
(This portion to be filled out by NAB Coordinator

City of Reno Neighborhood Advisory Board
AGENDA RESERVATION FORM

Meeting Date: _____ E-mail Address: _____

NAB/Ward #:_____ Submitted By: _____

Chair Person:_____ Work Phone: _____

Staff Person: _____ Fax Number: _____

Item Title: ***Exactly*** as it is to read on the agenda; please type or print; Item should read as it appears on information submitted. (*Developers, please include City of Reno Planning Dept., Case Number and Description.)*

_____

_____

_____

_____

_____

Action Item _____ **Information Only Item** _____

Recommended Action/Motion _____

_____

_____

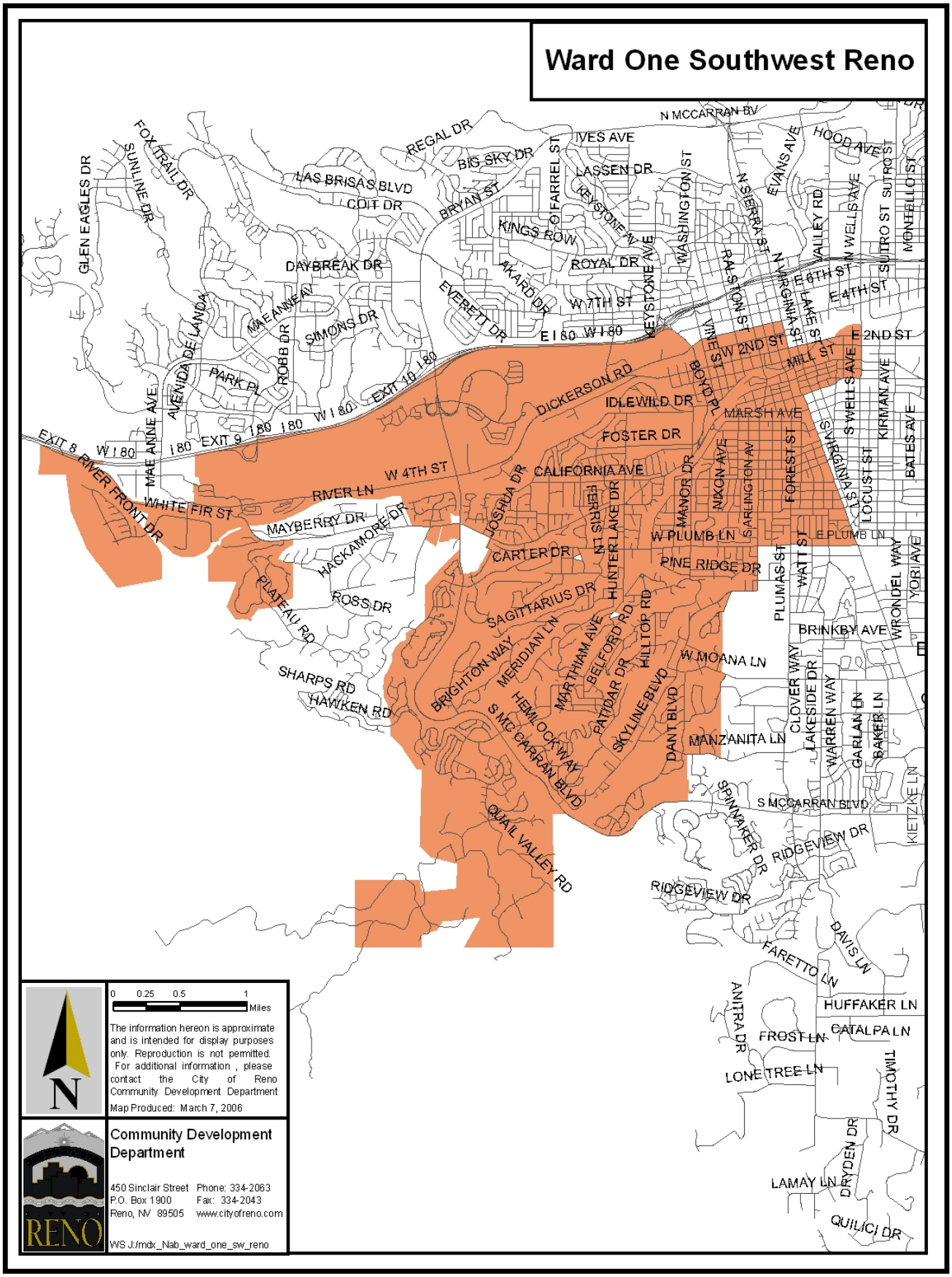
Required Information

Materials Submitted:

NAB member packages	_____ Yes _____ No
Planning Commission Meeting Date	_____
Board of Adjustment Meeting Date	_____
Reno City Council Meeting Date	_____

(Complete All Applicable Dates)

To be placed on a Neighborhood Advisory Board Agenda the "Agenda Reservation Form" is due to Community Relations staff no later than ten (10) working days at 1:00 p.m., prior to the NAB meeting date. Please fax to (775) 334-3124 or hand deliver to 1 E. First Street, 5th Floor, Reno. For additional information please call (775) 321-8318.


Ward One Southwest Reno
N MCCARRAN BV
IVES AVE
REGAL DR
BIG SKY DR
LAS BRISAS BLVD
COIT DR
BRYAN ST
FARREL ST
LASSEN DR
KEYSTONE AV
KINGS ROW
DAYBREAK DR
ROYAL DR
AKARD DR
EVERETT DR
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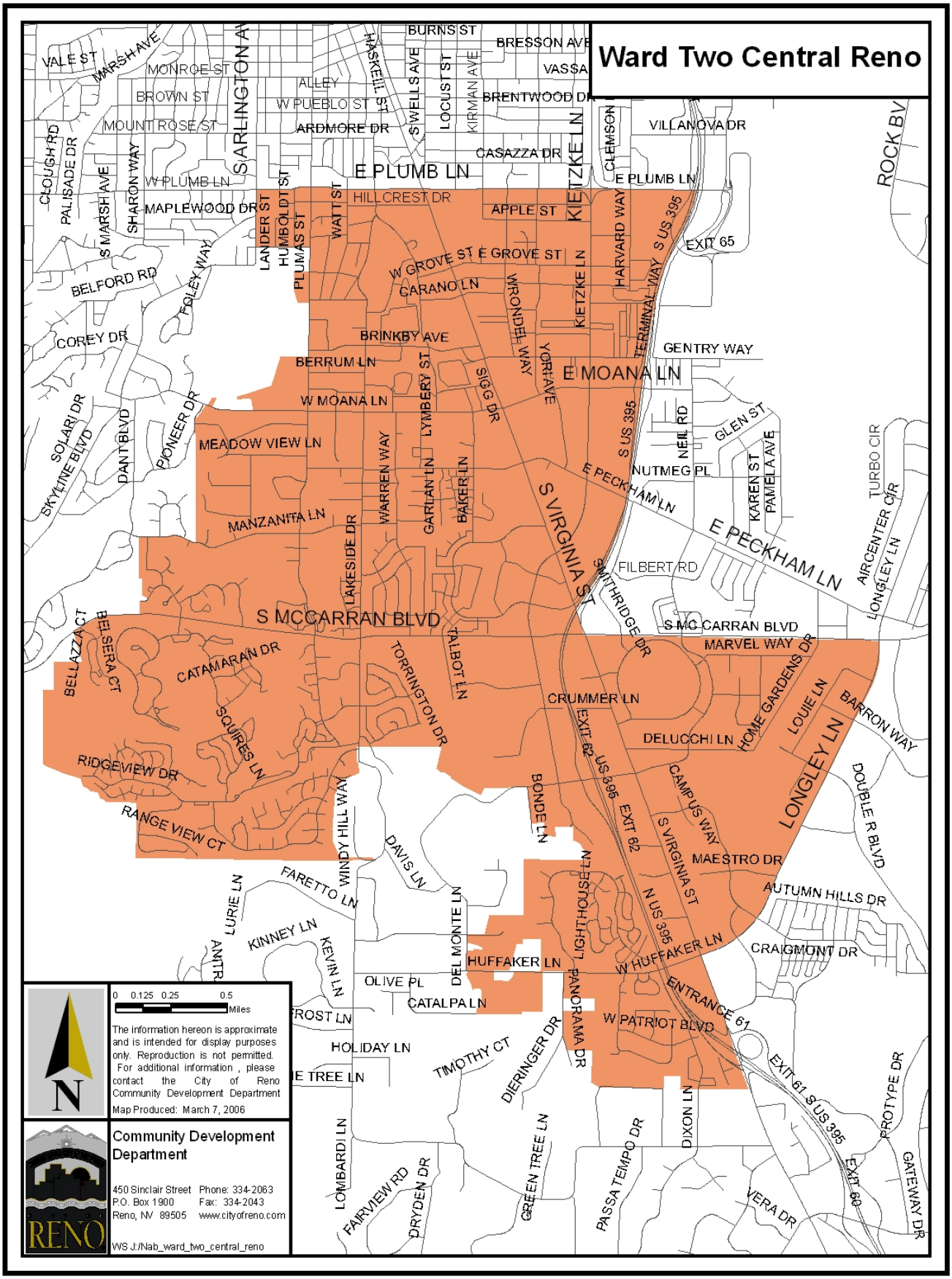
KEYSTONE AVE
WASHINGTON ST
N SIERRA ST
RALSTON ST
N VIRGINIA ST
EVANS AVE
HOOD AVE
SUTRO ST
VALLEY RD
N WELLS AVE
MONTELLO ST
E 4TH ST
LAKE ST
E 2ND ST
W 2ND ST
VINE ST
MILL ST
BOYD PL
S WELLS AVE
KIRMAN AVE
BATES AVE
GLEN EAGLES DR
SUNLINE DR
FOX TRAIL DR
MAE ANNE AVE
AVENIDA DE LANDA
PARK PL
ROBB DR
MEANNEAL
SIMONS DR
EXIT 10 I 80
W I 80
EXIT 9 I 80 I 80
EXIT 8 RIVER FRONT DR
DICKERSON RD
IDLEWILD DR
MARSH AVE
FOSTER DR
CALIFORNIA AVE
W 4TH ST
RIVER LN
WHITE FIR ST
MAYBERRY DR
HACKAMORE DR
PLATEAU RD
ROSS DR
JOSHUA DR
HUNTER LAKE DR
FERRIS LN
MANOR DR
NIXON AVE
ARLINGTON AV
FOREST ST
CALIFORNIA ST
LOCUST ST
W PLUMB LN
E PLUMB LN
CARTER DR
PINE RIDGE DR
PLUMAS ST
WATT ST
YORI AVE
WRONDEL WAY
BRINKBY AVE
SAGITTARIUS DR
MERIDIAN LN
BRIGHTON WAY
MARTHAM AVE
BELFORD RD
HILLTOP RD
W MOANA LN
CLOVER WAY
LAKESIDE DR
WARREN WAY
GARLAN LN
BAKER LN
SHARPS RD
HAWKEN RD
HEMLOCK WAY
PATIDAR DR
SKYLINE BLVD
DANT BLVD
MANZANITA LN
S MC CARRAN BLVD
SPINNAKER DR
KIETZKE LN
QUAIL VALLEY RD
RIDGEVIEW DR
DAVIS LN
FARETTO LN
HUFFAKER LN
ANITRA DR
FROST LN
CATALPA LN
LONE TREE LN
TIMOTHY DR
DRYDEN DR
LAMAY LN
QUILICI DR
0 0.25 0.5 1
Miles
The information hereon is approximate and is intended for display purposes only. Reproduction is not permitted. For additional information , please contact the City of Reno Community Development Department
Map Produced: March 7, 2006
N
RENO
Community Development Department
450 Sinclair Street Phone: 334-2063
P.O. Box 1900 Fax: 334-2043
Reno, NV 89505 www.cityofreno.com
WS J:/mdx_Nab_ward_one_sw_reno


Ward Two Central Reno
E PLUMB LN
E MOANA LN
W MOANA LN
S MCCARRAN BLVD
E PECKHAM LN
S VIRGINIA ST
KIETZKE LN
LONGLEY LN
HUFFAKER LN
W HUFFAKER LN
W PATRIOT BLVD
MAESTRO DR
CRUMMER LN
DELUCCHI LN
MARVEL WAY
FILBERT RD
NUTMEG PL
GENTRY WAY
BRINKBY AVE
BERRUM LN
MEADOW VIEW LN
MANZANITA LN
CATAMARAN DR
RIDGEVIEW DR
RANGE VIEW CT
WINDY HILL WAY
DAVIS LN
FARETTO LN
KINNEY LN
LURIE LN
OLIVE PL
CATALPA LN
HOLIDAY LN
TIMOTHY CT
DIERINGER DR
GREEN TREE LN
PASSA TEMPO DR
DIXON LN
VERA DR
GATEWAY DR
PROTOTYPE DR
AUTUMN HILLS DR
CRAIGMONT DR
DOUBLE R BLVD
BARRON WAY
LOUIE LN
HOME GARDENS DR
TORRINGTON DR
TALBOT LN
BONDE LN
CAMPUS WAY
ENTRANCE 61
EXIT 61 S US 395
EXIT 60
EXIT 62 US 395
EXIT 65
N US 395
S US 395
ROCK BV
VILLANOVA DR
CASAZZA DR
APPLE ST
HILLCREST DR
W GROVE ST
E GROVE ST
CARANO LN
WRONDEL WAY
YORI AVE
SIGG DR
LYMBERY ST
WARREN WAY
GARLAN LN
BAKER LN
LAKESIDE DR
SMITHRIDGE DR
HARVARD WAY
TERMINAL WAY
CLEMSON
NEIL RD
GLEN ST
KAREN ST
PAMELA AVE
AIRCENTER CIR
TURBO CIR
LONGLEY LN
BELFORD RD
COREY DR
FOLEY WAY
PIONEER DR
SOLARI DR
SKYLINE BLVD
DANT BLVD
PALISADE DR
CLOUGH RD
S MARSH AVE
SHARON WAY
W PLUMB LN
MAPLEWOOD DR
LANDER ST
HUMBOLDT ST
PLUMAS ST
WATT ST
HASKELL ST
S WELLS AVE
LOCUST ST
KIRMAN AVE
BRENTWOOD DR
ARDMORE DR
ALLEY
W PUEBLO ST
MOUNT ROSE ST
BROWN ST
MONROE ST
MARSH AVE
VALE ST
ARLINGTON AV
BURNS ST
BRESSON AVE
VASSA
BELLAZZA CT
BELSERA CT
SQUIRES LN
ANTR
ROST LN
E TREE LN
LOMBARDI LN
FAIRVIEW RD
DRYDEN DR
0 0.125 0.25 0.5 Miles
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N
Community Development Department
450 Sinclair Street Phone: 334-2063
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Reno, NV 89505 www.cityofreno.com
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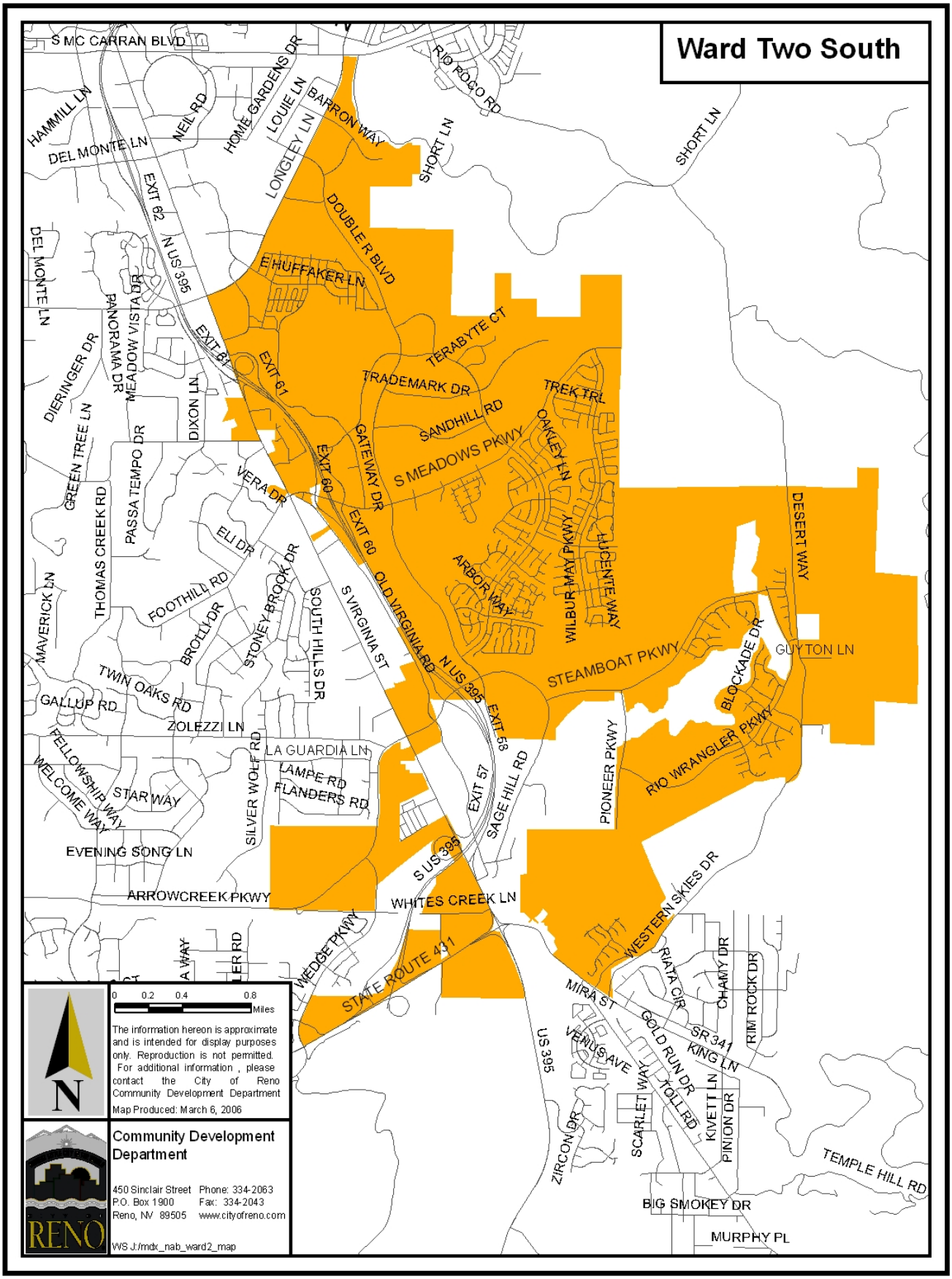
RENO


Ward Two South
S MC CARRAN BLVD
HAMMILL LN
DEL MONTE LN
NEIL RD
HOME GARDENS DR
LOUIE LN
LONGLEY LN
BARRON WAY
RIO ROJO RD
SHORT LN
SHORT LN
DOUBLE R BLVD
E HUFFAKER LN
EXIT 62
N US 395
DEL MONTE LN
PANORAMA DR
MEADOW VISTA DR
DIERINGER DR
DIXON LN
EXIT 61
EXIT 61
TERABYTE CT
TRADEMARK DR
TREK TRL
SANDHILL RD
OAKLEY LN
S MEADOWS PKWY
GATEWAY DR
EXIT 60
GREEN TREE LN
PASSA TEMPO DR
VERA DR
ELI DR
THOMAS CREEK RD
EXIT 60
OLD VIRGINIA RD
ARBOR WAY
WILBUR MAY PKWY
LUCENTE WAY
DESERT WAY
MAVERICK LN
FOOTHILL RD
BROLLY DR
STONEY BROOK DR
SOUTH HILLS DR
S VIRGINIA ST
STEAMBOAT PKWY
GUYTON LN
BLOCKADE DR
TWIN OAKS RD
GALLUP RD
ZOLEZZI LN
N US 395
EXIT 58
RIO WRANGLER PKWY
PIONEER PKWY
FELLOWSHIP WAY
WELCOME WAY
STAR WAY
LA GUARDIA LN
LAMPE RD
FLANDERS RD
SILVER WOLF RD
EXIT 57
SAGE HILL RD
EVENING SONG LN
S US 395
ARROWCREEK PKWY
WHITES CREEK LN
WESTERN SKIES DR
WEDGE PKWY
STATE ROUTE 431
MIRA ST
RIATA CIR
CHAMY DR
RIM ROCK DR
SR 341
KING LN
GOLD RUN DR
VENUS AVE
US 395
SCARLET WAY
TOLL RD
KIVETT LN
PINION DR
ZIRCON DR
TEMPLE HILL RD
BIG SMOKEY DR
MURPHY PL
0 0.2 0.4 0.8 Miles
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N
Community Development Department
450 Sinclair Street Phone: 334-2063
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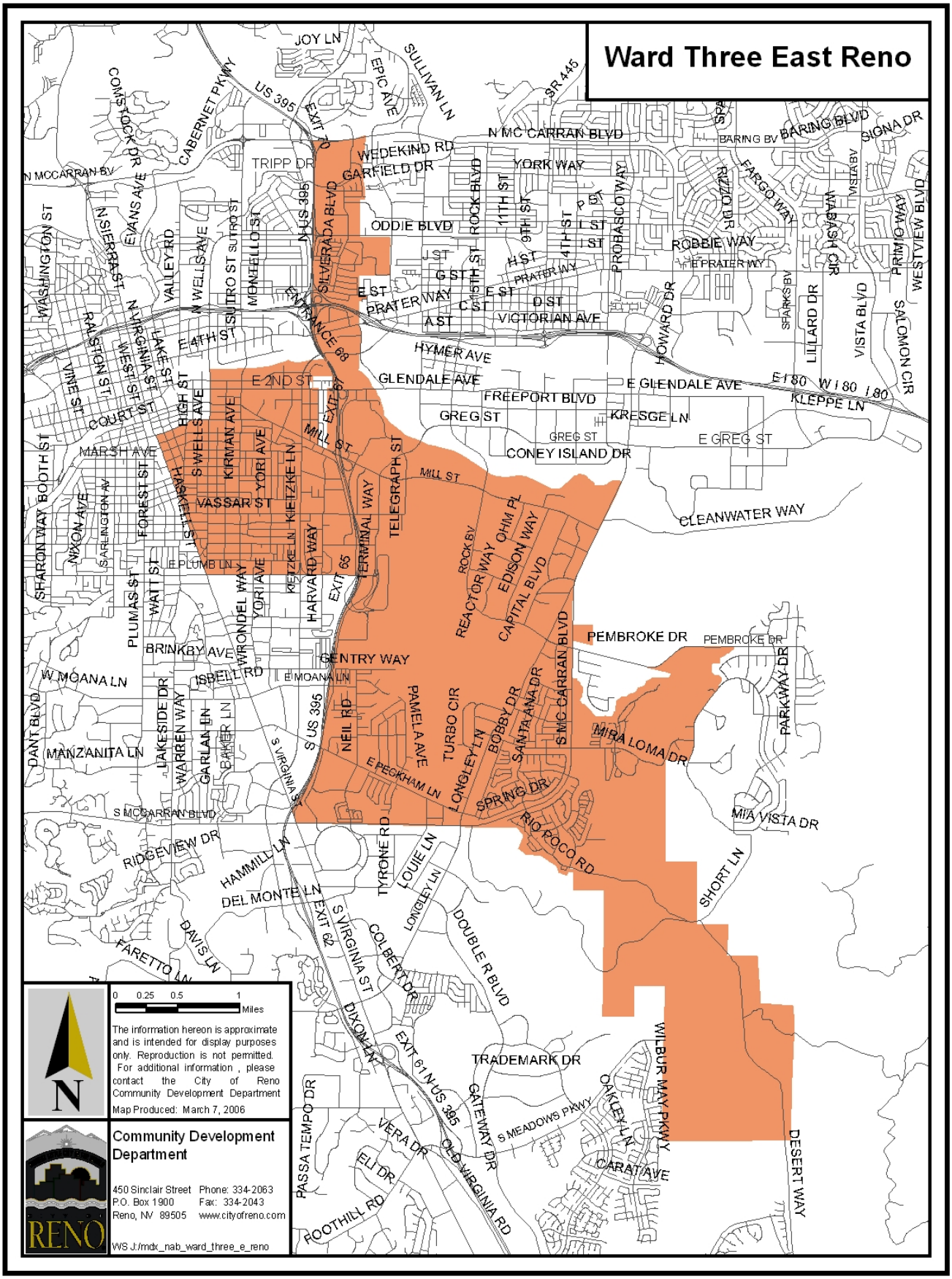
Reno, NV 89505 www.cityofreno.com
WS J:/mdk_nab_ward2_map


Ward Three East Reno
JOY LN
SULLIVAN LN
EPIC AVE
COMSTOCK DR
CABERNET PKWY
US 395
EXIT 70
SR 445
N MC CARRAN BLVD
BARING BV
BARING BLVD
SIGNA DR
N MCCARRAN BV
TRIPP DR
WEDEKIND RD
GARFIELD DR
YORK WAY
EVANS AVE
N SIERRA ST
WASHINGTON ST
VALLEY RD
N WELLS AVE
SUTRO ST
MONTELLO ST
N US 395
SILVERADA BLVD
ROCK BLVD
11TH ST
9TH ST
4TH ST
ODDIE BLVD
I ST
J ST
H ST
G ST
F ST
E ST
D ST
C ST
A ST
PROBASCO WAY
RIZZO DR
FARGO WAY
MEDA BV
WASHOE DR
PRIMM WAY
WESTVIEW BLVD
ROBBIE WAY
E PRATER WY
PRATER WY
PRATER WAY
VICTORIAN AVE
HOWARD DR
SPARKS BV
LILLARD DR
VISTA BLVD
SALOMON CIR
RALSTON ST
VINE ST
COURT ST
HIGH ST
LAKE ST
WEST ST
NEVADA ST
E 4TH ST
E 2ND ST
HYMER AVE
GLENDALE AVE
E GLENDALE AVE
I 80
W I 80
KLEPPE LN
FREEPORT BLVD
GREG ST
KRESGE LN
E GREG ST
CONEY ISLAND DR
MARSH AVE
S WELLS AVE
KIRMAN AVE
YORI AVE
KIETZKE LN
VASSAR ST
MILL ST
TELEGRAPH ST
TERMINAL WAY
CLEANWATER WAY
SHARON WAY
BOOTH ST
NIXON AVE
ARLINGTON AV
FOREST ST
E PLUMB LN
PLUMAS ST
WATT ST
HARVARD WAY
EXIT 65
ROCK BV
QHM PL
EDISON WAY
REACTOR WAY
CAPITAL BLVD
PEMBROKE DR
PARKWAY DR
BRINKBY AVE
GENTRY WAY
W MOANA LN
ISBELL RD
E MOANA LN
S US 395
NEIL RD
PAMELA AVE
TURBO CIR
BOBBY DR
SANTA ANA DR
S MC CARRAN BLVD
MIRA LOMA DR
DANT BLVD
MANZANITA LN
LAKESIDE DR
WARREN WAY
GARLAN LN
BAKER LN
S VIRGINIA ST
E PECKHAM LN
LONGLEY LN
SPRING DR
RIO ROCO RD
MIA VISTA DR
S MCCARRAN BLVD
RIDGEVIEW DR
HAMMILL LN
DEL MONTE LN
TYRONE RD
LOUIE LN
LONGLEY LN
SHORT LN
DAVIS LN
FARETTO LN
EXIT 62
S VIRGINIA ST
COLBERT DR
DOUBLE R BLVD
DIXON LN
EXIT 61
N US 395
TRADEMARK DR
WILBUR MAY PKWY
GATEWAY DR
S MEADOWS PKWY
OAKLEY LN
CARAT AVE
DESERT WAY
PASSA TEMPO DR
VERA DR
ELI DR
OLD VIRGINIA RD
FOOTHILL RD
0 0.25 0.5 1
Miles
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N
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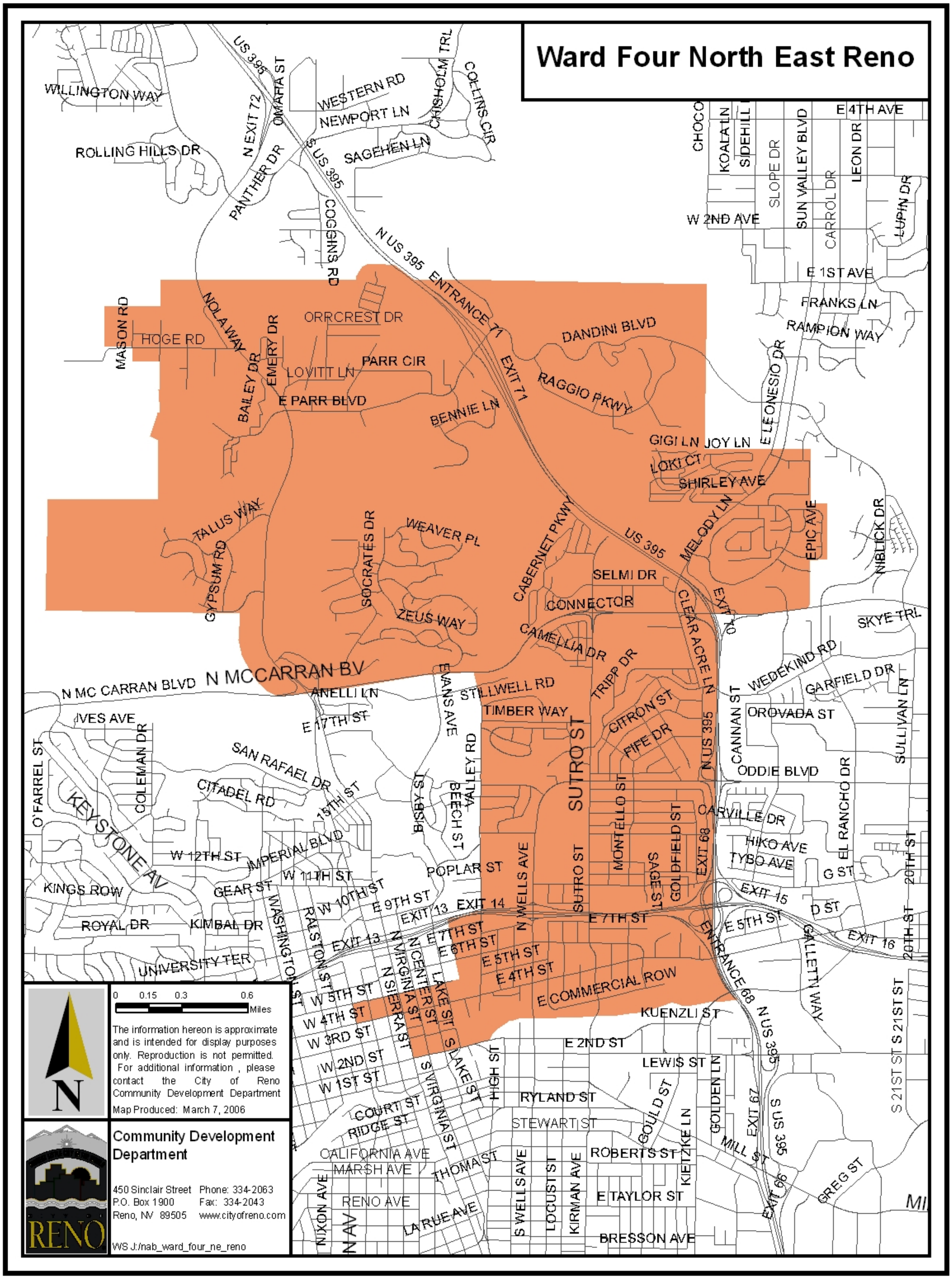
WS J:/mdk_nab_ward_three_e_reno
RENO


Ward Four North East Reno
0
0.15
0.3
0.6
Miles
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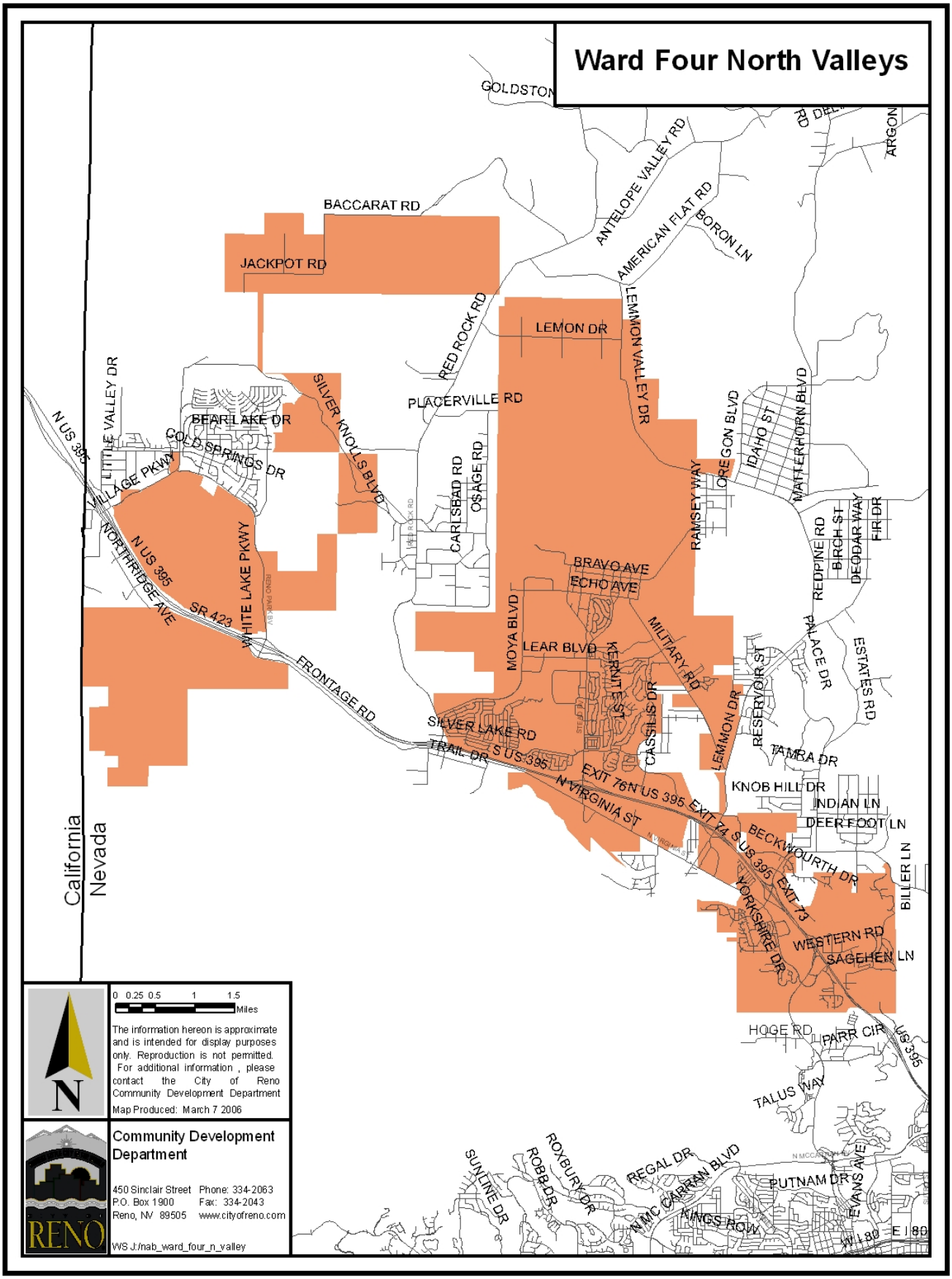
Reno, NV 89505 www.cityofreno.com
WS J:/nab_ward_four_ne_reno
RENO
N
WILLINGTON WAY
ROLLING HILLS DR
US 395
OMAHA ST
N EXIT 72
PANTHER DR
WESTERN RD
NEWPORT LN
CHISHOLM TRL
COLLINS CIR
SAGEHEN LN
S US 395
COGGINS RD
N US 395
ENTRANCE 71
EXIT 71
MASON RD
HOGE RD
NOLA WAY
ORRCREST DR
EMERY DR
BAILEY DR
LOVITT LN
PARR CIR
E PARR BLVD
DANDINI BLVD
RAGGIO PKWY
BENNIE LN
TALUS WAY
GYPSUM RD
SOCRATES DR
WEAVER PL
ZEUS WAY
CABERNET PKWY
SELMI DR
CONNECTOR
CAMELLIA DR
US 395
MELODY LN
EPIC AVE
CLEAR ACRE LN
EXIT 70
GIGI LN
JOY LN
LOKI CT
SHIRLEY AVE
E LEONESIO DR
CHOCO
KOALA LN
SIDEHILL
E 4TH AVE
SLOPE DR
SUN VALLEY BLVD
CARROL DR
LEON DR
LUPIN DR
W 2ND AVE
E 1ST AVE
FRANKS LN
RAMPION WAY
NIBLICK DR
SKYE TRL
WEDEKIND RD
GARFIELD DR
OROVADA ST
SULLIVAN LN
CANNAN ST
N MC CARRAN BLVD
N MCCARRAN BV
ANELLI LN
STILLWELL RD
TIMBER WAY
TRIPP DR
CITRON ST
FIFE DR
N US 395
ODDIE BLVD
EL RANCHO DR
SUTRO ST
MONTELLO ST
SAGE ST
GOLDFIELD ST
EXIT 68
CARVILLE DR
HIKO AVE
TYBO AVE
G ST
20TH ST
EXIT 15
D ST
E 5TH ST
EXIT 16
GALLETTI WAY
ENTRANCE 68
IVES AVE
E 17TH ST
EVANS AVE
VALLEY RD
BEECH ST
BISBY ST
O'FARRELL ST
COLEMAN DR
SAN RAFAEL DR
CITADEL RD
15TH ST
KEYSTONE AV
W 12TH ST
IMPERIAL BLVD
W 11TH ST
POPLAR ST
N WELLS AVE
KINGS ROW
GEAR ST
W 10TH ST
E 9TH ST
EXIT 14
E 7TH ST
ROYAL DR
KIMBAL DR
WASHINGTON ST
RALSTON ST
EXIT 13
N VIRGINIA ST
N CENTER ST
LAKE ST
E 6TH ST
E 5TH ST
E 4TH ST
E COMMERCIAL ROW
UNIVERSITY TER
W 5TH ST
W 4TH ST
W 3RD ST
W 2ND ST
W 1ST ST
N SIERRA ST
S LAKE ST
KUENZLI ST
E 2ND ST
HIGH ST
LEWIS ST
N US 395
S 21ST ST
S VIRGINIA ST
RYLAND ST
STEWART ST
COURT ST
RIDGE ST
GOULD ST
GOLDEN LN
KIETZKE LN
EXIT 67
MILL ST
S US 395
CALIFORNIA AVE
MARSH AVE
THOMA ST
ROBERTS ST
NIXON AVE
RENO AVE
LA RUE AVE
S WELLS AVE
LOCUST ST
KIRMAN AVE
E TAYLOR ST
EXIT 66
GREG ST
BRESSON AVE
N AV


Ward Four North Valleys
GOLDSTON
BACCARAT RD
JACKPOT RD
ANTELOPE VALLEY RD
AMERICAN FLAT RD
BORON LN
ARGON
RED ROCK RD
LEMON DR
LEMMON VALLEY DR
PLACERVILLE RD
SILVER KNOLLS BLVD
LITTLE VALLEY DR
N US 395
BEAR LAKE DR
COLD SPRINGS DR
VILLAGE PKWY
NORTHRIDGE AVE
N US 395
SR 423
WHITE LAKE PKWY
CARLSBAD RD
OSAGE RD
OREGON BLVD
IDAHO ST
MATTERHORN BLVD
RAMSEY WAY
REDPINE RD
BIRCH ST
DEODAR WAY
FIR DR
BRAVO AVE
ECHO AVE
MOYA BLVD
LEAR BLVD
KERNITE CT
MILITARY RD
PALACE DR
ESTATES RD
RESERVOIR ST
CASTLE DR
LEMMON DR
FRONTAGE RD
SILVER LAKE RD
TRAIL DR
S US 395
N VIRGINIA ST
EXIT 76 N US 395
EXIT 74 S US 395
EXIT 73
TAMRA DR
KNOB HILL DR
INDIAN LN
DEER FOOT LN
BECKWOURTH DR
YORKSHIRE DR
WESTERN RD
SAGEHEN LN
BILLER LN
HOGE RD
PARR CIR
US 395
TALUS WAY
SUNLINE DR
ROBB DR
ROXBURY DR
REGAL DR
N MC CARRAN BLVD
KINGS ROW
PUTNAM DR
EVANS AVE
I 80
California
Nevada
0 0.25 0.5 1 1.5
Miles
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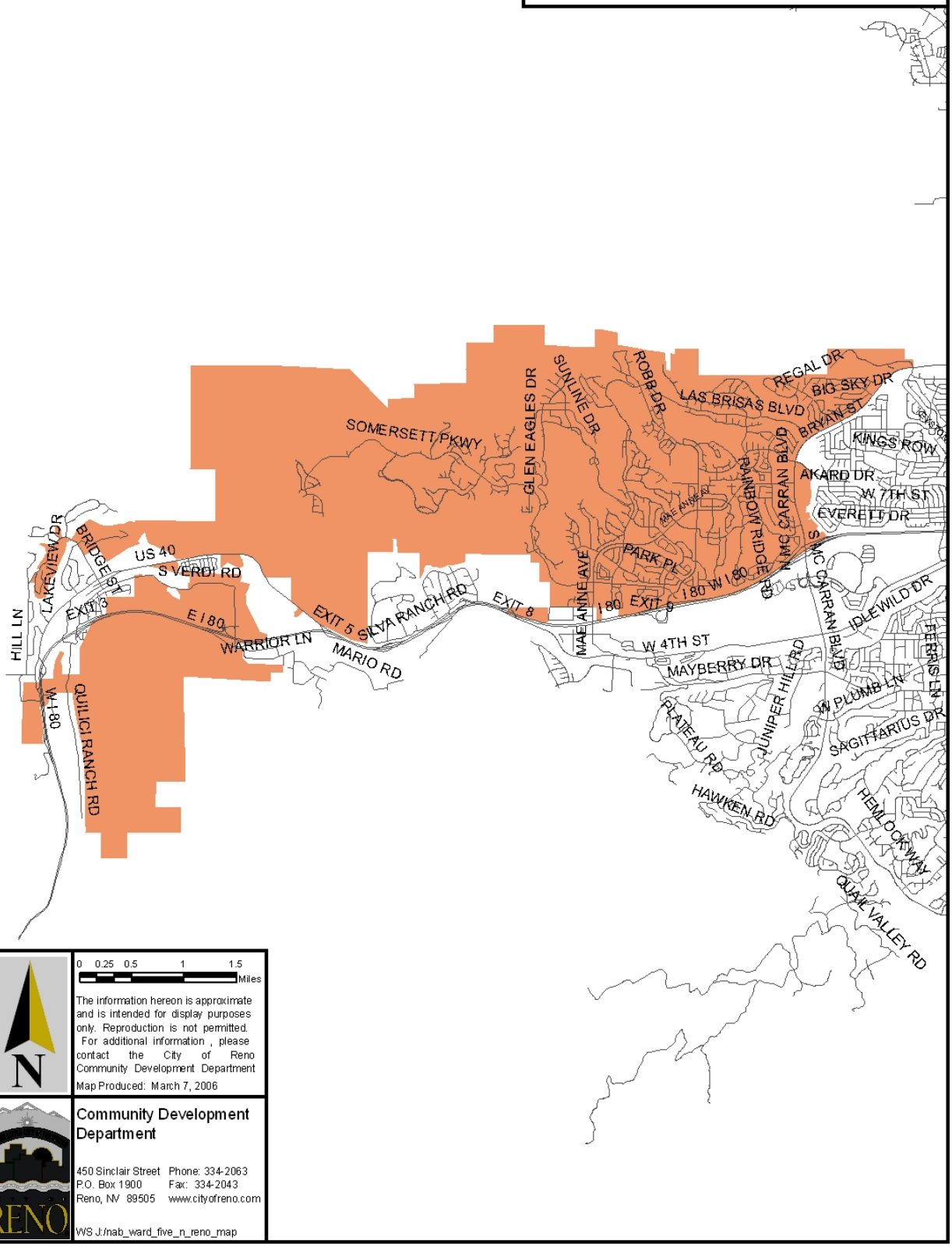
WS J:/nab_ward_four_n_valley

Ward Five Northwest Reno



0 0.25 0.5 1 1.5 Miles

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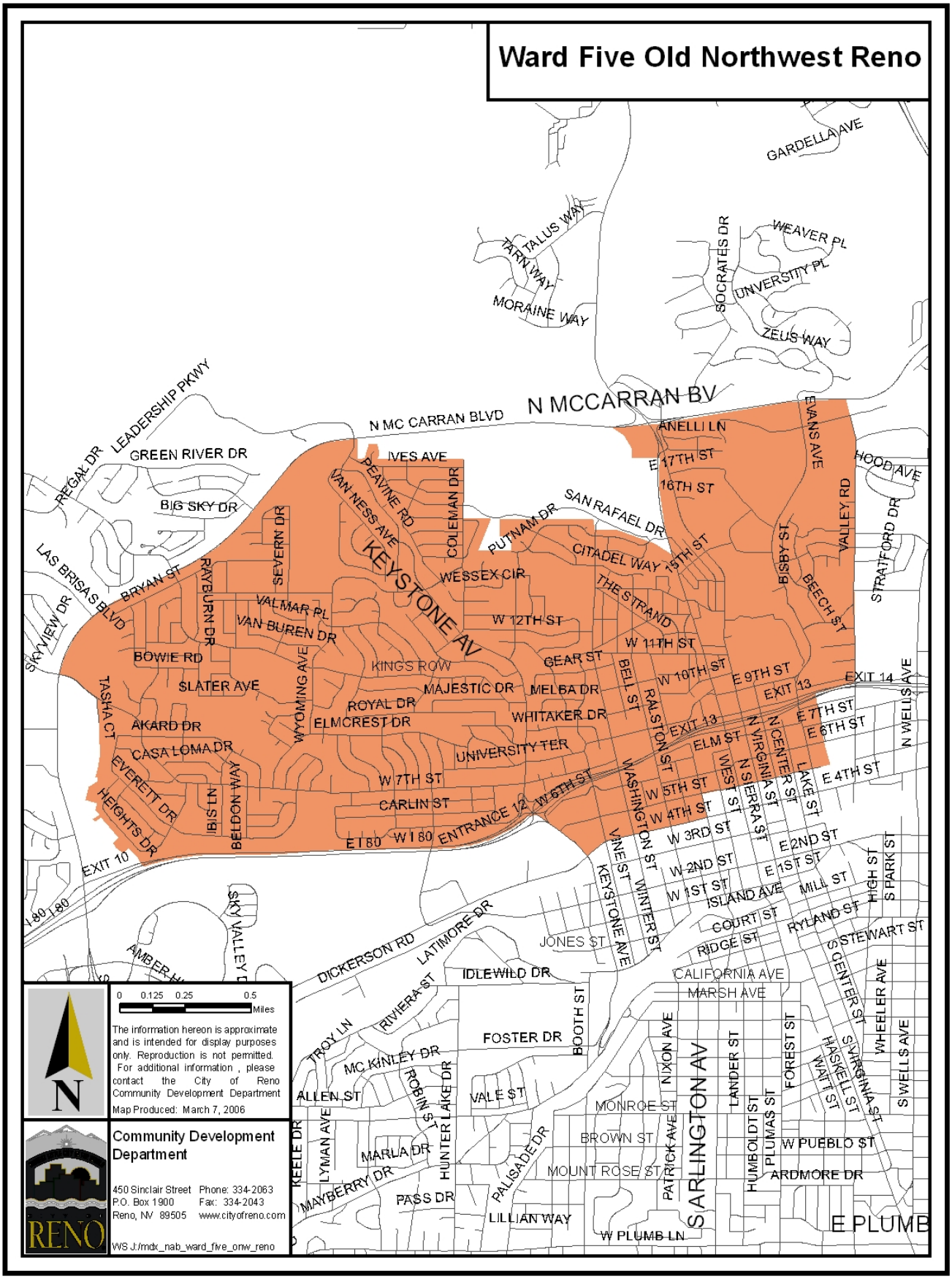
WS J:/nab_ward_five_n_reno_map


Ward Five Old Northwest Reno
N MCCARRAN BV
N MC CARRAN BLVD
KEYSTONE AV
SARLINGTON AV
GARDELLA AVE
TARN TALUS WAY
TARN WAY
MORAINE WAY
SOCRATES DR
WEAVER PL
UNIVERSITY PL
ZEUS WAY
LEADERSHIP PKWY
REGAL DR
GREEN RIVER DR
BIG SKY DR
LAS BRISAS BLVD
SKYVIEW DR
BRYAN ST
RAYBURN DR
SEVERN DR
VALMAR PL
VAN BUREN DR
BOWIE RD
SLATER AVE
TASHA CT
AKARD DR
CASA LOMA DR
EVERETT DR
HEIGHTS DR
WYOMING AVE
BELDON WAY
N STATE
IVES AVE
PEAVINE RD
VAN NESS AVE
COLEMAN DR
WESSEX CIR
PUTNAM DR
SAN RAFAEL DR
CITADEL WAY
15TH ST
16TH ST
E 17TH ST
ANELLI LN
EVANS AVE
HOOD AVE
VALLEY RD
BISBY ST
BEECH ST
STRATFORD DR
W 12TH ST
THE STRAND
W 11TH ST
GEAR ST
KINGS ROW
ROYAL DR
ELMCREST DR
MAJESTIC DR
MELBA DR
WHITAKER DR
UNIVERSITY TER
BELL ST
RALSTON ST
W 10TH ST
E 9TH ST
EXIT 13
EXIT 14
E 7TH ST
E 6TH ST
N WELLS AVE
ELM ST
N VIRGINIA ST
N SIERRA ST
N CENTER ST
LAKE ST
W 7TH ST
CARLIN ST
W 6TH ST
W 5TH ST
W 4TH ST
W 3RD ST
E 4TH ST
E 2ND ST
E 1ST ST
W 2ND ST
W 1ST ST
ISLAND AVE
MILL ST
HIGH ST
S PARK ST
COURT ST
RYLAND ST
RIDGE ST
S STEWART ST
S CENTER ST
WHEELER AVE
S WELLS AVE
S VIRGINIA ST
HASKELL ST
WATT ST
FOREST ST
LANDER ST
NIXON AVE
BOOTH ST
CALIFORNIA AVE
MARSH AVE
IDLEWILD DR
JONES ST
VINE ST
KEYSTONE AVE
WINTER ST
WASHINGTON ST
EXIT 10
I 80
W I 80
E I 80
ENTRANCE 1/2
SKY VALLEY DR
AMBER H
DICKERSON RD
LATIMORE DR
RIVIERA ST
TROY LN
FOSTER DR
MC KINLEY DR
ALLEN ST
ROBIN ST
HUNTER LAKE DR
VALE ST
KEELE DR
LYMAN AVE
MAYBERRY DR
MARLA DR
PASS DR
PALISADE DR
LILLIAN WAY
MONROE ST
BROWN ST
MOUNT ROSE ST
PATRICK AVE
W PLUMB LN
HUMBOLDT ST
PLUMAS ST
W PUEBLO ST
ARDMORE DR
E PLUMB
0 0.125 0.25 0.5 Miles
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CITY OF SPARKS
PERMIT APPLICATIONS

City of Sparks

SITE PLAN REVIEW APPLICATION INFORMATION

GENERAL: Certain uses of land and buildings in certain zoning districts in Sparks are allowed only by site plan review. Those uses are regulated by Title 20 (Zoning and Land Use) of the Sparks Municipal Code, in accordance with Sections **278.315** and **278.317** of the Nevada Revised Statutes. A Site Plan Review may be required for some uses of existing buildings, as well as for construction of certain new projects. The purpose of the Site Plan Review is to control the location and conduct of uses which have the potential to conflict with other uses allowed in the same zoning district. A Site Plan Review is an administrative review and may be subject to conditions as necessary to protect adjacent properties and the public health, safety and general welfare. The outcome of the staff review is appeal able to the City Council.

PRE-APPLICATION CONFERENCE: It is always advisable for the applicant to discuss a site plan review request with the Community Development Department before submitting an application. In some cases, an informal discussion may suffice. However, if the site plan review is for a potentially controversial use or complicated issue, a formal pre-application conference is helpful to both the applicant and the reviewing agencies. Information on scheduling a pre-application conference is available from the Community Development Department.

APPLICATION PROCEDURE: A schedule of application dates is available from the Planning and Community Development Department. Applications will only be accepted on an application deadline date. Please refer to the attached schedule for those dates. Applications will be reviewed by Staff for completeness and significant issues will be identified. Staff will notify applicants by mail regarding the status of the applications. **Statutory time limits on the review of Site Plan Review applications do not allow for extensive revisions during processing. The Community Development Department will not recommend approval of any Site Plan Review which requires major changes to comply with the recommendations of reviewing agencies.** A Site Plan Review is not a public hearing unless appealed to the within 10 days of receipts of letter regarding the project.

APPLICANT: Pursuant to Chapter 20.31 of the Sparks Municipal Code, the property owner is responsible for compliance with and maintenance of the conditions of approval of a site plan review. If the owner is a corporation, trust, or partnership or other such entity, a list of the principals and board of directors must be provided. *A Site Plan review runs with the land and is subject to termination in accordance with the procedures set forth in that chapter.*

SITE VISITATION: On the back side of the Development Application form is a statement giving permission for site visitation by City Staff. It must be signed by the owner of the property and the lessee of record. The lessee of record is that person or persons who are renting or using the property other than the owner. Documentation of the lease must be provided.

FEES AND REFUNDS: ***The Washoe County District Health Department fee is due on the day the application is submitted.*** *Fees paid to the Washoe County District Health Department cannot be refunded by the City. City of Sparks application fees in the amount indicated on the Application Fee Schedule must be paid at the time you attend the Plan Review meeting for the application* ***(see fee schedule)****. Fees paid to the City of Sparks will not be refunded if the application is withdrawn after processing begins.*

REVIEW PROCEDURE: Following the application deadline, copies of the application are reviewed by the Community Development Department and circulated to the other City departments and reviewing agencies for comments. Once deemed complete, a Plan Review Meeting will be scheduled. At that meeting, representatives of the reviewing departments and agencies discuss the application and recommendation. Applicants or their representatives must attend that meeting and will be notified of the time and place. Due to the short time frame, staff will review the application for completeness and significant issues after the site plan and supporting material are distributed. After the application is complete, it will be scheduled for a specific plan review date. When the review process is complete, the Planning and Community Development Department prepares a letter identifying all concerns and conditions.

For additional information contact:

COMMUNITY DEVELOPMENT DEPARTMENT
1675 E. Prater Way, Suite 107, Sparks, NV 89434
(775)353-2340

SITE PLAN REVIEW APPLICATION CHECKLIST

The following must all be submitted as part of the application for approval of a site plan review.
INCOMPLETE APPLICATIONS WILL NOT BE PROCESSED.

❒ 1. **Application Fee:** A check or money order payable to "City of Sparks" for the application fee. ***This fee is due at the time you are scheduled for a Plan Review meeting*.** See **FEE SCHEDULE** for correct amount.

❒ 2. **Health Department Application Fee:** An additional fee is assessed by the District Health Department for review of your application. Please include a check or money order payable to the "District Health Department" with your application. See **FEE SCHEDULE** for correct amount. *This fee is due on the day the application is submitted.*

❒ 3. **Legal Description and Boundary Map**: If the property is not part of a recorded subdivision or parcel map, the application must include a legal description and a boundary map showing property lines labeled with bearings, distances and curve data.

❒ 4. **Proof of Ownership**: If the person signing the owner's affidavit is not listed as the property owner in the most recent records of the Washoe County Assessor, proof of ownership acceptable to the administrator must be submitted with the application. If the signer is an agent of the owner, documentation of that fact must be submitted. If the owner is not the applicant, the applicant shall complete the applicant affidavit.

❒ 5. **Provide documentation of conformance to the Design Standards Manual.**

❒ 6. **Traffic Study**: Six copies of a complete traffic engineering study for any project which will generate more than 80 peak hour trips.

* 7. **Is this project within the area designated as the "Cooperative Planning Area?"** (See attached Map.)
- □ No (Proceed to #7)
- □ Yes -if "yes," Please contact the City of Sparks Planning Department for the supplemental "Cooperative Planning Area" application.
- □ Attach supplemental "Cooperative Planning Area" application.

❒ 8. **Review Packets**: Twenty (20) packets, each containing the following:

a. One copy each of the completed Development Application Form and Residential or Non-Residential Project Data Sheet.

b. Dimensioned site plan, floor plans and (except for existing building) exterior elevations of existing or proposed buildings subject to the requested site plan review. All plans must be drawn to standard architectural or engineering scales with scale and North arrow shown. **(Drawings, maps or other sheets larger than 8 ½ x 14" x 12" must be folded.)** The site plan must include the following:

(1) Property lines, easements, streets and alleys.
(2) Location and use of all existing and proposed structures with building separations and setbacks from property lines clearly dimensioned.
(3) Parking areas with spaces numbered, and landscape plans showing plant materials and square footage of each area.
(4) Any other information necessary to illustrate the nature and extent of the proposed use.
(5) Location of trash enclosure (if any).

c. Staff report materials: If drawings larger than 8 ½" x 11" are included with the application, one 8½" x 11" sized colored reproduction of each must be provided. **These materials must be readable**. Labeling on these reproductions should be no smaller than 8 point on the 8 ½" x 11" display.

d. Vicinity map depicting major streets and project site.

Note: One packet containing the original signed application forms and affidavits must be labeled "Planning & Community Development Department Copy."

OWNER AFFIDAVIT

STATE OF NEVADA)
) SS.
COUNTY OF WASHOE)

I,

_____being duly sworn, depose and say that I am an owner of property/authorized agent involved in this petition and that I authorize

_____to request development related applications on my property. I also give permission for site visitation by the Planning Commission, City Council and City Staff.

Name:_____

Title:_____

Signed_____

Subscribed and sworn to before me this _____ Day of _____, 20_____.

_____
Notary Public in and for said County and State

My commission expires: _____

APPLICANT AFFIDAVIT

STATE OF NEVADA)
) SS.
COUNTY OF WASHOE)

I,_____being duly sworn, depose and say that I am the applicant involved in this petition and that the foregoing statements and answers herein contained and the information herewith submitted are in all respects complete, true and correct to the best of my knowledge and belief. I also give permission for site visitation by the Planning Commission, City Council and City Staff.

Name:_____

Title:_____

Signed:_____

Subscribed and sworn to before me this _____ Day of _____, 20_____.

_____
Notary Public in and for said County and State

My commission expires: _____

Dear Applicant:

Our application process requires that the property owner must be the applicant. Development approvals remain with the land; therefore, the property owner/applicant is always responsible for any activity on the property. If an authorized agent signs for a property owner, then a notarized letter from the property owner must be submitted with the application giving the agent permission to do so.

Sincerely,

City of Sparks Community Development

DEVELOPMENT APPLICATION

ACTION REQUESTED:

____ Administrative Review
____ Annexation
____ Planned Development
____ Rezoning
____ Special Use Permit
____ Tentative Subdivision Map
____ Master Plan Amendment
____ Site Plan Review

CASE NUMBER: **FEE:**

_____ $_____

Noticing Fee _____ $_____

TOTAL FEE: $_____

Rec'd by: _____ Date: _____

(For Planning Department Use Only)

DATE: _____

PROJECT NAME:

_____

PROJECT DESCRIPTION:

_____

LEGAL DESCRIPTION OF PROPERTY: Lot _____ Block _____ Subdivision _____

(If property is not in a recorded subdivision, attach legal description and map)

☐ **PROPERTY OWNER / APPLICANT***

Name: _____

Address: _____

Phone: _____

Fax: _____

☐ **DEVELOPER / LEESSEE***

Name: _____

Address: _____

Phone: _____ Fax: _____

Contact Person: _____

E-mail Address: _____

☐ **PERSON / FIRM PREPARING PLANS**

Name: _____

Address: _____

Phone: _____ Fax: _____

Contact Person:_____

E-mail Address: _____

(Mark one box to indicate responsible party and mailing address)
If a corporation please attach a list of corporate officers.

PROJECT ADDRESS:_____

PARCEL NO. (APN): _____

PROPERTY SIZE: _____

EXISTING ZONING**:** _____

PROPOSED ZONING**:** _____

MASTER PLANNED USE: _____

EXISTING USE: _____

SURROUNDING USES:

North _____

East _____

South _____

West _____

NOTE: Affidavits on reverse side must be signed and notarized before the application is submitted.

If a partnership please list all general partners.

City of Sparks Planning Department
RESIDENTIAL PROJECT DATA SHEET

A. NUMBER OF DWELLING UNITS

Single Family Detached	_____
Duplexes and Townhouses	_____
Apartments and Condos	_____
TOTAL	_____

B. SITE AREA BREAKDOWN

Lots or Buildings	_____AC_____%
Public Street R/W	_____AC_____%
Common Area	_____AC_____%
TOTAL	_____AC 100%

C. GROSS DENSITY

_____ / _____ = _____

Total Dwelling Units | Total Gross Area (Acres) | Density (DU/AC)

D. SCHOOLS

List schools serving project:

Elementary School _____

Middle School _____

High School _____

E. WATER SUPPLY (Attach Calculations)

Estimated water demand:

Domestic _____AFY

Irrigation _____AFY

TOTAL _____AFY

Source of water supply:

_____

(If commitment has been issued, attach TMWA "will-serve" letter.)

Water Rights appurtenant to property on which this project is proposed:

Amount _____AFY Current Use _____

F. SEWER SERVICE (Attach Calculations)

Estimated sewage to be generated by this project _____GPD

G. TRAFFIC (Attach Calculations)

Average Daily Traffic_____TRIPS

Peak Hour Traffic _____TRIPS

H. AIRCRAFT NOISE

Is this project within the 65 Ldn noise impact area? YES___ NO___

I. FLOOD HAZARD

Portion of site subject to inundation by 100 yr. flood: _____AC _____%

J. SLOPE DATA

Portion of site with slopes from 0 to 10% _____AC _____%

Portion of site with slopes from 10 to 15% _____AC _____%*

Portion of site with slopes exceeding 15% _____AC _____%*

*If slopes on 25% of the site exceed 10%, a special use permit is required.

(Abbreviations: AC=Acres, AFY=Acre Feet per Year, BR =Bedrooms, DU=Dwelling Units, FT=Feet, GPD=Gallons per Day, SF=Square Feet, SP=Parking Spaces)

K, SINGLE FAMILY DWELLINGS
(Complete for portion of project consisting of Single Family Dwellings)

Lot sizes:

_____SF Min. (Corner)
_____SF Min. (Interior)
_____SF Maximum
_____SF Average

Unit sizes:

_____SF Min. _____BR
_____SF Max. _____BR

Max. building height:

_____FT _____Stories

Minimum building setbacks:

_____FT Front Yard (To Dwelling)
_____FT Front Yard (To Garage
_____FT Exterior Side Yard
_____FT Interior Side Yard (To Dwelling)
_____FT Interior Side Yard (To Garage)
_____FT Rear Yard

Parking provided:

Garage_____SP/Unit
Carport_____SP/Unit
Open _____SP/Unit
TOTAL _____SP/Unit

Lot coverage:

Maximum ____%

L. DUPLEXES AND TOWNHOUSES
(Complete for portion of project consisting of Duplexes and Townhouses)

Lot sizes:

_____SF Min. (Corner)
_____SF Min. (Interior)
_____SF Maximum
_____SF Average

Unit sizes:

_____SF Min. _____BR
_____SF Max. _____BR

Max. building height:

_____FT _____Stories

Minimum building setbacks:

_____FT Front Yard (To Dwelling)
_____FT Front Yard (To Garage)
_____FT Exterior Side Yard
_____FT Interior Side Yard (To Dwelling)
_____FT Interior Side Yard (To Garage)
_____FT Rear Yard

Parking provided:

Garage _____SP/Unit
Carport _____SP/Unit
Open _____SP/Unit
TOTAL_____SP/Unit

Lot coverage:

Maximum ____%

M. APARTMENT AND CONDOMINIUMS
(Complete for portion of project consisting of Apartments and Condos)

Site area breakdown:

Building Coverage	_____AC	_____%
Private Streets and Parking	_____AC	_____%
Landscaping and Recreation	_____AC	_____%
TOTAL	_____AC	100%

Net density:

_____ / _____=_____

Dwelling Units	Net Area* (Acres)	Net Density (DU/AC)

*Area excluding public streets

Minimum building setbacks:

_____FT From Public Street R/W
_____FT From Private Street
_____FT From Adjacent R1 Lots
_____FT From Other Project Boundaries

Required parkings:

No. Studios___ X 1.5 =____SP
No. 1BR ___ X 1.5 =____SP
No. 2BR ___ X 2.0 =____SP
No. 3BR ___ X 3.0 =____SP
TOTAL = ___ SP

Parking provided: _____SP

City of Sparks Planning Department
NON-RESIDENTIAL PROJECT DATA SHEET

CASE NUMBERS
(By Planning Dept)

Date _____

_____
_____

Project Name _____ _____

A. SITE AREA BREAKDOWN

Building Coverage	_____AC	_____%
Landscaped Area	_____AC	_____%
Paved Area	_____AC	_____%
Undeveloped Area	_____AC	_____%
Public Street R/W	_____AC	_____%
TOTAL	_____AC	100%

B. FLOOR AREA RATIO

_____ / _____ = _____

Total Floor Area (SF)	Net Site Area (SF)	Floor Area Ratio

C. BUILDING TYPES

Description	Floor Area	Height	Type Construction
_____	_____ ____FT	_____Stories	_____
_____	_____ ____FT	_____Stories	_____
_____	_____ ____FT	_____Stories	_____

D. BUILDING AREA BREAKDOWN AND PARKING CALCULATION

Type of Use	Area	Parking Factor	Required Parking	Parking Provided
Warehse/Distr	_____SF	/ 3000* =	_____SP	_____SP
Mfg/Processing	_____SF	/ 1000* =	_____SP	_____SP
Retail Sales	_____SF	/ 250 =	_____SP	_____SP
Office/Financial	_____SF	/ 200 =	_____SP	_____SP
Medical Office	_____SF	/ 150 =	_____SP	_____SP
Casino/Gaming	_____SF	/ 100 =	_____SP	_____SP
Bar/Restaurant	_____SF	/ 100 =	_____SP	_____SP
_____	_____SF	/_____ =	_____SP	_____SP
_____	_____SF	_____ =	_____SP	_____SP
Hotel/Motel**	_____SF	___X Rooms =	_____SP	_____SP
Stor/Mech/Etc	_____SF			
TOTAL	_____SF	TOTAL _____SF	TOTAL_____SP	

*Parking requirements for warehousing, distribution, manufacturing, and processing vary depending on actual parking demand. Factors shown are minimums.

**Parking spaces required for hotel or motel having more than 50 rooms is 0.8 times the number of rooms. For hotel of motel having fewer than 50 rooms the requirement is 1.0 times the number of rooms.

(Abbreviations: AC=Acres, AFY=Acre Feet per Year, BR =Bedrooms, DU=Dwelling Units, FT=Feet, GPD=Gallons per Day, SF=Square Feet, SP=Parking Spaces)

E. DESCRIPTION OF USES

Describe the types of business operations to be accommodated in this project:

F. SIGNS

Describe the type, size, and location of signs proposed for this project:

G. OUTDOOR USES

Will this project involve any outdoor manufacturing or processing?
____YES ____NO
(If yes, a special use permit is required.)

H. HAZARDOUS MATERIALS

Will the operation of any business in this project involve the use of hazardous materials? ____YES ____NO
(If yes, a special use permit may be required. See Planning Dept.)

I. TRAFFIC (Attach Calculations)

Average Daily Traffic _____TRIPS
Peak Hour Traffic _____TRIPS

J. TRUCKING OPERATIONS

Will the operation of any business in this project involve staging, loading, or storage of trucks?
____YES ____NO

K. SEWER SERVICE (Attach Calculations)

Estimated sewage to be generated by this project _____GPD___

L. FLOOD HAZARD

Portion of site subject to inundation by 100 yr. flood: _____AC _____%

M. WATER SUPPLY (Attach Calculations)

Estimated water demand:
Domestic _____AFY
Irrigation _____AFY
TOTAL _____AFY

Source of water supply:
_____
(If commitment has been issued, attach TMWA "will-serve" letter.)

Water rights appurtenant to property on which this project is proposed:

Amount_____AFY

Current use:_____

N. SLOPE DATA

Portion of site with slopes from 0 to 10% _____AC _____%
Portion of site with slopes from 10 to 15% _____AC _____%*
Portion of site with slopes exceeding 15% _____AC _____%*
*If slopes on 25% of the site exceed 10%, a special use permit is required.

Requirements for Grading Permits

CITYWORKS
QUALITY FROM THE GROUND UP

City of Sparks
Building Division
1675 E Prater Way, Ste 107
Sparks, NV 89434
775.353.7872 phone 775.353.2470 fax
PermitServices@cityofsparks.us

Effective Date August 1, 2003
Revised Date July 1, 2006

DOES YOUR PROJECT REQUIRE A GRADING PERMIT?

The City of Sparks Municipal Code (Chapters 15, 17, and 20) regulates grading and establishes permit requirements for all projects within the City of Sparks or within the City of Sparks Sphere of Influence.

A grading permit *is required* ***if any*** of the following criteria apply to your project:

1. Grading (cut or fill) consisting of 50 cubic yards or more.
2. Grading (including excavation and re-compaction) that is intended to support a surcharge or structure.
3. Grading that obstructs or diverts a drainage course
4. Excavation more than 2 ft at grade.*
5. Excavation that creates a cut slope greater than 5 feet in height and steeper than 1.5 horizontal to 1 vertical (66.7% slope).
6. Fill (of any volume) greater than 1 foot in depth and placed on existing terrain with slopes greater than 5 horizontal to 1 vertical (20% slope).

** Excavation below finished grade for basements, pools, footings retaining structure or other structure authorized by a valid building permit are exempt from the grading permit requirements.*

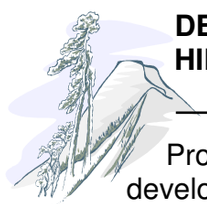
PLAN CHECK FEES

VOLUME (Cubic Yards)	FEE ($)
0-50	No fee
51-100	23.50
101-1,000	37.00
1,001-10,000	49.25
10,001-100,000	49.25 + 24.50/10,000
100,001-200,00	269.75 + 13.25/10,000
>200,00	402.25 + 7.25/10,000

PERMIT FEES

VOLUME (Cubic Yards)	FEE ($)
0-50	23.50
51-100	37.00
101-1,000	37.00 + 17.50/100
1,001-10,000	194.50 + 14.50/1,000
10,001-100,000	198.00 + 40.50/10,000
100,001-200,00	919.00 + 36.50/10,000

BEFORE YOU APPLY, YOU MUST DETERMINE IF YOUR PROJECT IS SUBJECT TO ANY OF THE FOLLOWING SPECIAL CONDITIONS:



DEVELOPMENT ON SLOPES, HILLTOPS, AND RIDGES

Projects that are to be developed on slopes, hilltops and ridges located with the City of Sparks or the City of Sparks Sphere of Influence are regulated under Chapter 20.99 (hillside ordinance) of the City of Sparks Municipal Code.

Per the Code, project sites having slope gradients of ten percent (10%) or greater over 25 percent (25%) or more of the site require a ***special use permit*** prior to issuance of a grading permit.

If your project site meets the above criteria, contact the Current Planning Division of the Community Development Department for information regarding the special use permit process.

RECLAMATION AND REGRADING BOND REQUIREMENTS

You will be required to post a bond for reclamation and re-grading of the site if your project is subject to the hillside ordinance or if the total proposed site disturbance is 5 acres or more.

STORMWATER DISCHARGE PERMIT REQUIREMENTS

If your project will disturb 1 acre or more, you are required to obtain permit coverage under the State of Nevada Division of Environmental Protection's (NDEP) General Permit for Stormwater Discharges Associated with Construction Activity (NVR 100000).

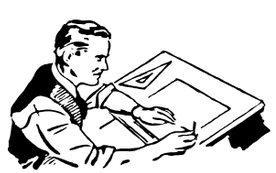
The City of Sparks will ***not*** issue a grading permit for any project that will disturb 1 acre or more without first receiving a copy of the *Letter of Authorization* issued by the NDEP indicating that your project is covered under the NDEP General Permit.

Additionally, if your project will disturb 1 acre or more, you will be required to submit an ***erosion control plan*** with your grading plan. Erosion control plans must indicate the stormwater best management practices (BMP's) that will be utilized during and after construction of your project. Selection of BMP's for your project must be in accordance with the guidelines presented in the ***Truckee Meadows Construction Site Best Management Practices Handbook***, latest edition.

WHO MAY PREPARE GRADING PLANS?

The following professionals may prepare grading plans for projects in the City of Sparks:

- A Professional Civil Engineer licensed in the State of Nevada
- A Professional Land Surveyor licensed in the State of Nevada may prepare grading plans for residential subdivisions containing four lots or less.
- A Professional Residential Designer licensed in the State of Nevada may prepare grading plans for single family dwelling units and multifamily dwelling structures not exceeding two stories in height, composed of not more than four units in each structure.
- A Professional Architect licensed in the State of Nevada.
- A Professional Landscape Architect licensed in the State of Nevada.
- A Contractor licensed in the State of Nevada subject to the conditions set forth in the "Blue Book".



GRADING PLAN REQUIREMENTS

Grading plans must be on 24" x 36" medium, wet stamped, signed, dated and include the following:

- Vicinity Map
- North Arrow
- Drawing Scale (Engineering Units)
- Street Address, Lot Number and Assessor's Parcel Number
- Subject property lines, bearings and distances
- All easements and restricted land uses
- All existing and proposed structures and improvements on the property
- All existing and proposed utilities
- Existing ground contours shown as dashed lines
- Proposed finished ground contours shown a solid lines
- All existing and finished grade contours must extend a minimum of 50 feet beyond the property line
- Top and bottom elevations of any proposed retaining structure
- All existing and all proposed drainage structures shall be shown with slopes indicated
- Spot elevations shall be indicated (finished floor, finished grade at foundation, high points, grade breaks, property corners, top of curb, etc
- FEMA bench mark if your project is in a flood plain
- If rockeries are proposed, indicate by location and include completed Prescriptive Standards for Design, Installation, and Inspection of Rockeries Form

STEPS FOR OBTAINING A GRADING PERMIT

Prior to Making a Formal Submittal

1. Determine if a grading permit is required for your project.
2. Determine if your site is subject to any of the special conditions presented in this document.
3. If your project meets the criteria set forth under Sparks Municipal Code Chapter 20.99, ***Development on Slopes, Hilltops, and Ridges,*** you must procure a Special Use Permit **prior** to applying for a grading permit.
4. Have a geotechnical study prepared for your project.
5. *You may request a pre-application prior to formal submittal.*

Formal Submittal

Submit the following items to the Building Division of the Community Development Department:

- A completed permit application.
- Two (2) completed ***Prescriptive Standards for Design, Installation, and Inspection of Rockery Walls*** form.
- Five (5) sets of grading plans wet-stamped by a professional listed in this document. If your project is will disturb one or more acres, an erosion control plan must be included as a separate sheet with the grading plan.
- Two (2) copies of the project geotechnical report wet-stamped by a professional engineer licensed in the state of Nevada.
- If your project requires a bond for reclamation and regarding, as described in this document, you must include an Engineer's estimate for the bond.

Plan check, Approval and Permit Issuance Process

When deemed as complete, your application will be routed to the Current Planning, Engineering, Industrial Waste , Fire, and District Health Divisions/Department for approval

Upon obtainment of final approval, payment of all fees and posting of any bonds required, a Grading Permit will be issued through the Building Division of the Community Development Department.

City of Sparks-CityWorks Division
1675 East Prater Way Suite 107
Sparks, NV 89434
(Phone) 775 353-2306
(Fax) 775 353-2470
www.cityofsparks.us

GRADING AND SITEWORK PERMIT APPLICATION

Engineer Information	Job Information
Name:	Project Name:
	Location/Address:
Address:	Cubic Yards: #Acres:
City, State, Zip:	Valuation:
Office Phone:	**Owner Information**
Fax:	Name:
Cell Phone:	Address:
Email Address:	Phone:
Contact Person:	Email Address:
Contractor Information	
Name:	Office Phone:
Address:	Email:
City, State, Zip	Cell Phone:
Nevada License #:	Fax:
Sparks License #:	Primary Contact:
Complete Description of Work Indicate whether this application is for earth movement only *(grading permit)*or if it includes utilities, curb and gutter, paving, walls, etc. *(sitework permit)*	
Will this project utilize Reclaimed Water? Yes No If yes, clearly mark on plans	
Will food establishments be built on this site?	

I certify that the information provided is true and correct to the best of my knowledge and I am authorized by the owner to submit this application for review. I have reviewed the application submittal requirements, including reclamation and regrading, bonding and stormwater permit requirements and have included all necessary information.

Print Applicant Name **Applicant Signature** **Date**

Document Revised July 23, 2008

CITY OF SPARKS
PUBLIC WORKS DEPARTMENT

ENCROACHMENT/EXCAVATION PERMIT PACKAGE

Section 12.12 of the Sparks Municipal Code states: *" No person shall excavate, tunnel under, or fill in, any sidewalk, curb, gutter, public street, highway, avenue, alley, public right-of-way, or easement within the City limits, without first obtaining a written permit to do so from the City Engineer".*

ENCROACHMENT/EXCAVATION PERMIT APPLICATION

"Application Notes Page"

(A) This permit shall expire and become null and void if the excavation is not commenced within fourteen (14) days from the date of this permit. Permits shall be valid for a period not to exceed forty (40) days.

(B) Size of permanent patch: for the purpose of computing the area of the excavation for permanent patch on paved surfaces, field measurements shall be made by the Public Works Department. The area shall be computed from the linear measurement of the length and width of the temporary patch, each such measurement increased a minimum of **2.0 feet** provided however, if excessive sluffing of trench banks or if breakage of pavement occurs, the measurements shall be adjusted to cover the area of street to be restored.
(An additional charge, or refund, will be made to the applicant if the permanent patch constructed by the City of Sparks is larger or smaller than the estimated size).

(C) Notification of the Police and Fire Departments is necessary before the start of any work, if a road closure is involved.

(D) Based upon factors such as site, age, percentage of area, existing roadway or locations of work etc. The Contractor may be required to increase quantities up to and including those required for a grind and overlay of a full travel lane width or slurry seal, as part of the permanent patch work performed by others at a later date, as directed by the City Engineer.

(E) The Contractor shall be ultimately responsible for all costs associated with the permanent patch work to be performed by others at a later date relating to this permit, which may result in either a debit or credit to the original amount paid for the permit. Therefore, it is important that the Contractor make every effort to identify all initial costs in an effort to minimize the cost variance after the permanent patch work is completed.

(F) City of Sparks Right-of-way Inspectors normal working hours are Monday - Friday, 7:30 a.m. to 4:00 p.m. Any Contractors working outside these limits or on week-ends or holidays will be responsible for overtime charges.

(G) Each permit includes and initial inspection and **one (1) follow-up inspection**. Any additional inspections will be charged ***"Additional Inspection Fees"***

ENCROACHMENT & EXCAVATION PERMIT REQUIREMENTS IN PUBLIC RIGHT-OF-WAY EASEMENTS

1. The encroachment and excavation permits issued by the Public Works Department **MUST** be at the job site **AT ALL TIMES** during construction and encroachment in the public right-of-way.

2. An excavation permit, encroachment permit and traffic control plan must be approved prior to starting work within the public right-of-way.

3. A 24 hour notice will be required prior to the start of any work in the right-of-way. (Exceptions may be made in the case of emergencies.) All work shall conform to "**Standard Specifications for Public Works Construction**", 1996.

4. Contact Kevin Davidson at 353-2388, Public Works Engineering Department, prior to the start of any work.

5. The Contractor will be responsible for maintaining the temporary patch to the satisfaction of the City up to 90 days after completion of work.

6. If any excavation is located on an **ARTERIAL OR COLLECTOR STREET**, all temporary patches shall be hot-mix asphalt a minimum of 2 inches thick.

7. All concrete must be repaired within seven calendar days from removal. The City has the right, and will, repair the removed concrete on the eighth day at the expense of the permittee if replacement of the concrete has not taken place.

8. Any construction work beneath existing concrete structures such as, but not limited to sidewalks, curb, gutters, driveway aprons, wall, etc. that are within the public right-of-way shall require the removal and replacement of the affected concrete structure. Construction operations such as, but not limited to tunneling, directional drilling, boring, etc. **SHALL NOT** be allowed under any of the above-stated concrete structures, unless specifically authorized in writing by the City Engineer

9. Concrete that has to be replaced by the City will be charged at the current City Contract cost, plus an additional 30%. These additional charges will be billed back to the permit holder.

10. Any concrete structure such as, but not limited to sidewalk, curb, gutter, driveway aprons, etc. damaged or removed, shall be replaced to the **NEAREST** construction joint on either side of the curb cut.

11. **TRAFFIC INTERFERENCE:**

Contractor is responsible for providing and maintaining barriers, barricades, lights, warning flags, danger signs, and certified flaggers as necessary for the protection of both vehicular and pedestrian traffic as prescribed by **Part VI of the M.U.T.C.D.** (latest edition).

CONTRACTOR INFORMATION

Encroachment/Excavation Permits
City of Sparks - Public Works Department

2007/08 Permit Fee Schedule

1. **ENCROACHMENT/PUBLIC RIGHT-OF-WAY EASEMENT PERMIT**

   Permit Fee — $145.00 each

2. **EXCAVATION PERMIT (Sidewalk, curb and gutter, driveway, streets, alleys**

   Permit Fee — $170.00 each

3. **SANITARY SEWER TAP/TIE-IN PERMIT**
   (Plus excavation permit if applicable)

   Permit Fee — $170.00 each

4. **STORM DRAIN TAP/TIE-IN PERMIT**
   (Plus excavation permit if applicable)

   Permit Fee — $170.00each

5. **PERMANENT PATCH FEES:**

   a. 500 Sq. Ft. or less — $22.40 per Sq. Ft. (4" depth)

   b. greater than 500 Sq. Ft. — $7.15 per Sq. Ft. (4" depth)

   This permit will not be issued without written approval from the City Engineer.
   NO EXCEPTIONS (except emergency situations)

   c. Extra depth A.C. — $0.45 per each inch (1") over 4"

6. **PENALTY FEES:**
(In addition to the total fees)

A penalty fee is assessed when an opening is made in **any** street or alley on which the permanent surfacing is less than (5) years old. The patch fee combined with the permit fee constitutes the **total permit fee**.

Permanent Patch Penalty Fee

a. 500 Sq. Ft. or Less	$27.40 per Sq. Ft.
b. greater that 500 Sq. Ft.	$12.15 per Sq. Ft.

7. **WORKING WITHOUT A PERMIT**

"**The total permit fee and applicable penalty fee** as provided herein shall be **double the amount** for the first offense in the event that any excavation, filling and/or replacement work begins prior to obtaining an excavation permit. For the second offense the penalty fee will triple. Further violations may result in civil prosecution."

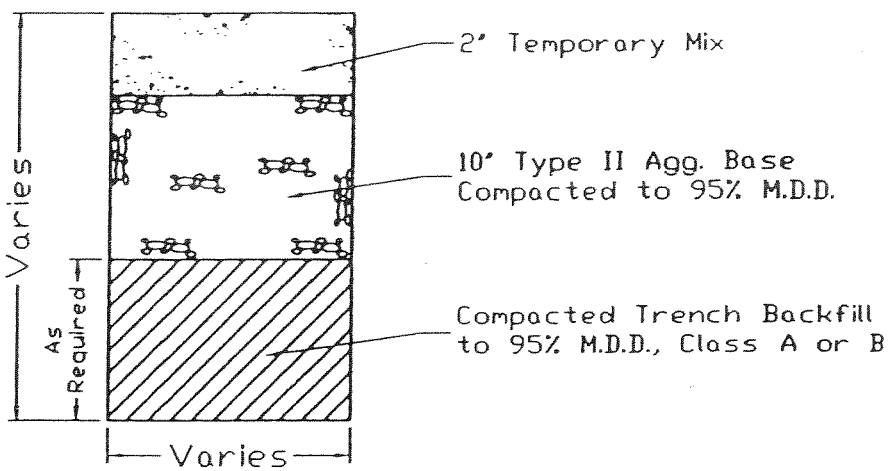
8. **CONCRETE COLLAR/ADJUSTMENT**

Water/Gas Valves	$350.00 each
Survey Monument	$350.00 each
Manhole	$600.00 each

9. **ADDITIONAL INSPECTION FEE:** $75.00 per hr
$112.50 per hr (Overtime)
$187.50 per hr (Holiday)

Note: Final quantities and fees will be field-determined and assessed as required.

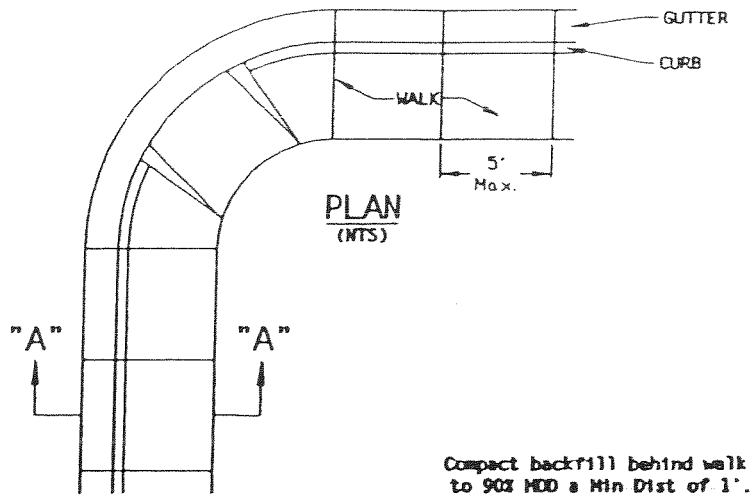
TEMPORARY PATCH



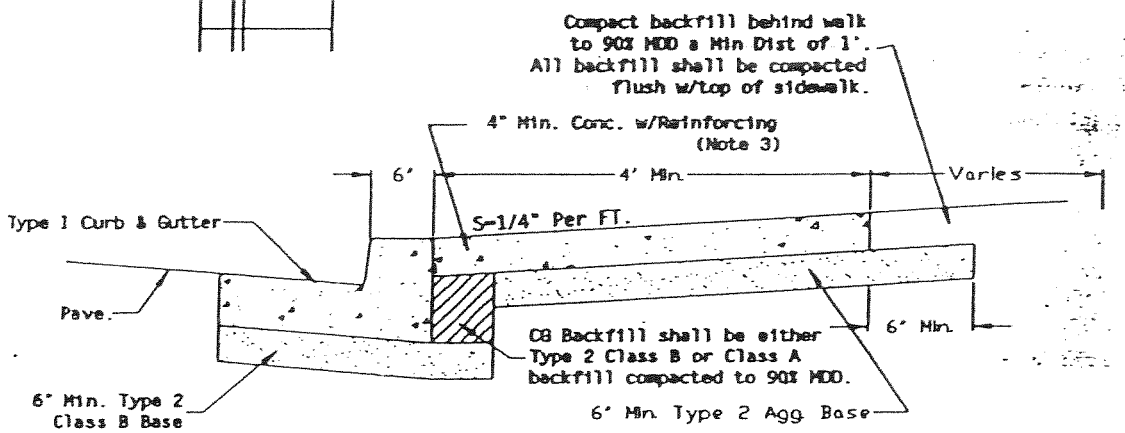
NOTES:

1. Temporary patch must be completed immediately after completion of underground work or at the end of the workday
2. Any work done within 2' of P.C.C. will be removed and replaced during permanent patch.
3. Final quantities and subsequent fees will reflect this.
4. The contractor is responsible for maintenance of the temporary patch for a period of 120 days after installation.

NO.	REVISION	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION
			City of Sparks	SPARKS
			TEMPORARY PATCH	DRAWING NO. S-12
				DATE 01/06/98
				PAGE 12



PLAN
(NTS)



SEC "A"
(NTS)

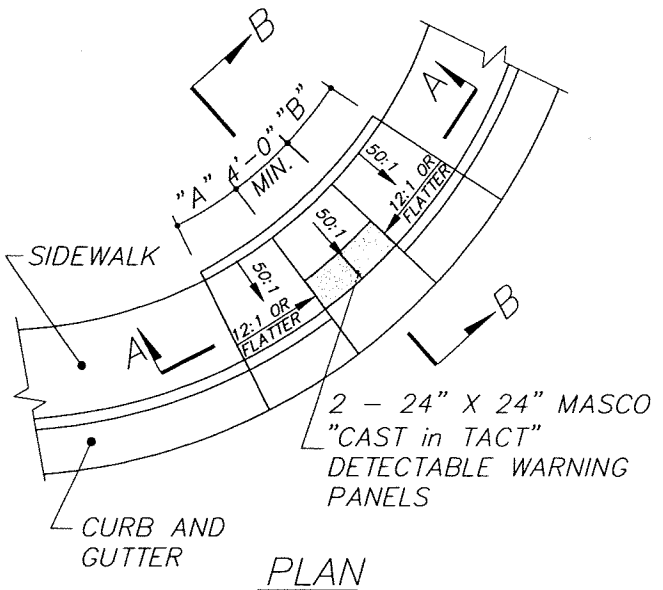
NOTES:

1. CONC. SHALL BE MIN. 6.25sack-4000PSI W/4.5-7.5% AIR & MAX. SLUMP OF 4". IF COLORED CONC. IS USED, MIN. CEMENT CONTENT SHALL BE 6.75 SACKS. WATER/CEMENT RATIO NOT TO EXCEED 0.45.

2. SIDEWALK SUBGRADE SHALL BE COMPACTED TO 90% MDD. IF EXPANXIVE OR UNSTABLE SOILS ARE ENCOUNTERED AT SIDEWALK SUBGRADE ELEV., THE SOILS SHALL BE OVEREXCAVATED TO CONFORM WITH THE SOILS REPORT OR REQUIREMENTS OF THE CITY.

3. REINFORCING SHALL CONSIST OF COLLATED, FIBRILLATED, POLYPROPYLENE FIBER AS MFD. BY FIBERMESH OF APPROVED EQUAL ADD 11/2 LBS. PER CU. YD. OF CONCRETE.

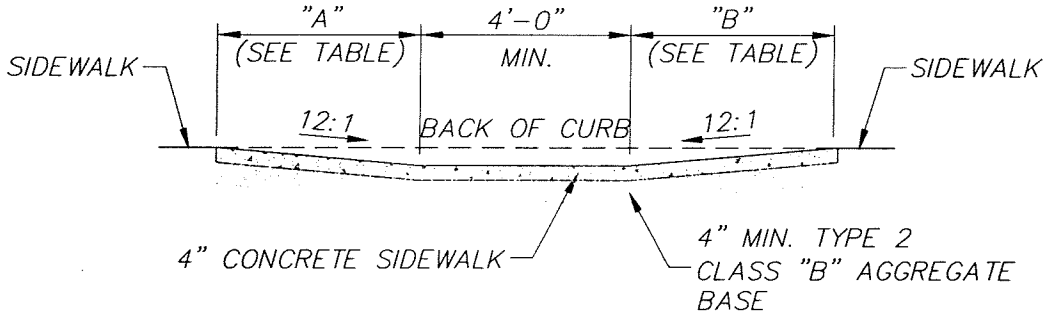
NO.	REVISION	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION SPARKS	
			City of Sparks	DRAWING NO. S-11	
			P.C.C. Sidewalk	DATE 5/97	PAGE 11



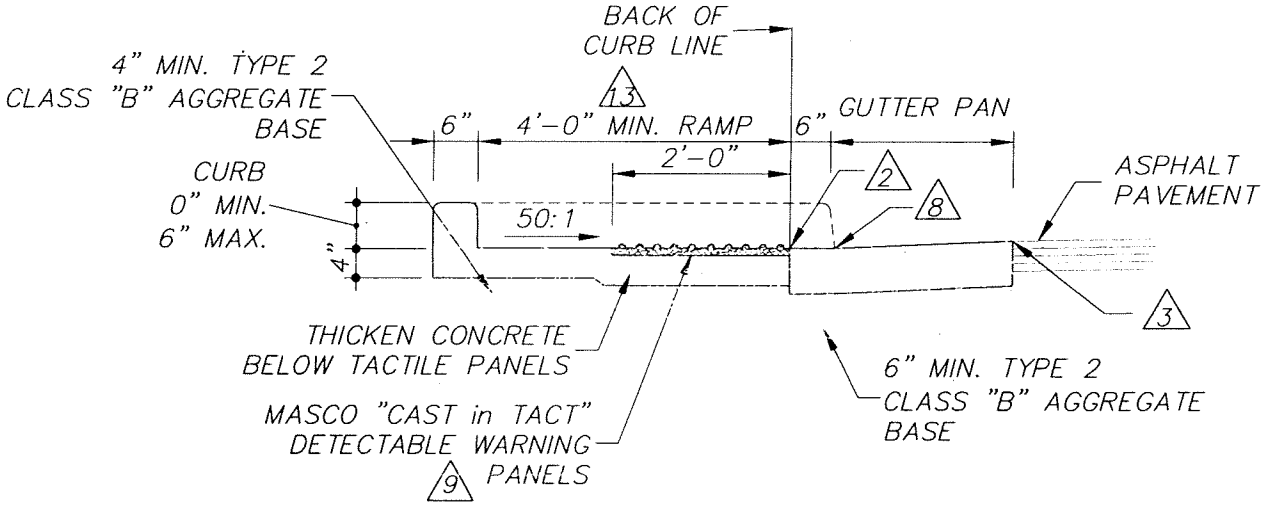
PLAN

GRADE % "B" TO "A"	"A" MINIMUM	"B" MINIMUM
-6 TO -5.01	4'-0"	12'-6"
-5 TO -4.01	4'-0"	10'-0"
-4 TO -3.01	4'-0"	8'-6"
-3 TO -2.01	4'-0"	7'-6"
-2 TO -1.01	4'-6"	6'-6"
-1 TO 1	5'-6"	5'-6"
1.01 TO 2	6'-6"	4'-6"
2.01 TO 3	7'-6"	4'-0"
3.01 TO 4	8'-6"	4'-0"
4.01 TO 5	10'-0"	4'-0"
5.01 TO 6	12'-6"	4'-0"

TRANSITION LENGTH TABLE FOR 12:1 SIDE SLOPE



SECTION A-A



SECTION B-B

NO.	REVISION	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION SPARKS	
1	ADA REQ'T.	01/04	PEDESTRIAN RAMP	DRAWING NO. R-106A (312)	
				DATE 08/00	PAGE 118
APPROVED BY: G.S.		01/04			

1. GRATINGS OR SIMILAR ACCESSES SHALL NOT BE LOCATED IN THE AREA AT THE BASE OF THE CURB RAMP OR LANDING AREA. IF OBSTRUCTIONS SUCH AS GRATINGS, INLETS, UTILITY POLES, PULL BOXES, FIRE HYDRANTS, ETC. ARE ENCOUNTERED, THE LOCATION AND DIMENSIONS MAY BE ADJUSTED UPON APPROVAL OF THE CITY ENGINEER.

2. NO LIP SHALL BE PERMITTED AT THE CURB RAMP SLOPE TO GUTTER PAN.

3. PLANTMIX BITUMINOUS SURFACE SHALL BE FLUSH WITH THE EDGE OF THE GUTTER PAN IN THE AREA OF THE CURB RAMP.

4. ROUGH BROOM TEXTURE ON CURB RAMPS AND WINGS, TRANSVERSE TO AXIS OF RAMP. TEXTURE SHALL PROVIDE A VISUAL CONTRAST TO THE SIDEWALK.

5. CURB RAMP WINGS DO NOT HAVE TO BE WITHIN CROSSWALK. HOWEVER, THE RAMP ITSELF HAS TO BE INSIDE CROSSWALK, UNLESS OTHERWISE DIRECTED BY THE CITY ENGINEER.

6. ALL RAMPS SHALL BE 12:1 OR FLATTER.

7. ALL SLOPE RATES ARE RELATIVE TO LEVEL.

8. RAISE GUTTER FLOW LINE 2" MAX WHEN REQUIRED TO PREVENT PONDING AT THE RAMP AND MAINTAIN POSITIVE DRAINAGE.

9. DETECTABLE WARNING PANELS SHALL BE INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.

10. ALL CONCRETE TO BE REMOVED TO SAW CUT OR EXPANSION JOINTS.

11. THE GUTTER PAN – SIDEWALK TRANSITION SECTION WILL BE SMOOTH WITH NO LIP AT GUTTER FLOWLINE. THIS TRANSITION SECTION SHALL BE A MONOLITHIC POUR.

12. FIBER-REINFORCED PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH @ 28 DAYS, MIN. OF 6 SACKS OF CEMENT PER CUBIC YARD WITH A MAXIMUM WATER/CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6
4 INCHES. ALL MATERIALS SHALL CONFORM TO SSPWC SECTION 202. POLYPROYLENE FIBERS SHALL BE ADDED TO THE P.C.C. PER THE MANUFACTURER'S RECOMMENDATIONS. % ±1.5%, SLUMP AT 1 TO

13. WHERE PHYSICAL LIMITATIONS EXIST TO PRECLUDE FULL DEPTH PEDESTRIAN RAMP CONSTRUCTION, A MINIMUM CLEARANCE OF 36" IS REQUIRED PER A.D.A. STANDARDS. ANY DEVIATION FROM MINIMUM A.D.A. STANDARDS MUST BE APPROVED BY THE CITY ENGINEER AND THE NEVADA UNIVERSITY CENTER FOR EXCELLENCE IN DEVELOPMENTAL DISABILITIES PRIOR TO CONSTRUCTION.

14. CONTRACTORS SHALL MAKE EVERY EFFORT TO CORRECT ANY CONFLICT WITH EXISTING PULL BOXES AND INSTALLATION OF NEW PEDESTRIAN RAMPS. THE CITY ENGINEER SHALL MAKE THE FINAL DETERMINATION REGARDING THE DEGREE OF MODIFICATIONS REQUIRED BY THE CONTRACTOR FOR CONFLICTS BETWEEN EXISTING PULL BOXES AND NEW PEDESTRIAN RAMPS.

NO.	REVISION	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION SPARKS	
			NOTES–PEDESTRIAN RAMP	DRAWING NO. R-106F (312)	
				DATE 01/04	PAGE 123
APPROVED BY: G.S.		01/04			

15. SLOPES TO MEET CITY STANDARDS.

16. SIDEWALK AT BOTH SIDES OF RAMP MAY BE DROPPED TO MINIMIZE THE GRADE AT A HORIZONTAL DISTANCE TO BE DETERMINED IN THE FIELD, UPON APPROVAL OF THE CITY ENGINEER, SUBJECT TO ADAAG REQUIREMENTS. CURB AT THE BACK OF WALK MAY BE NEEDED.

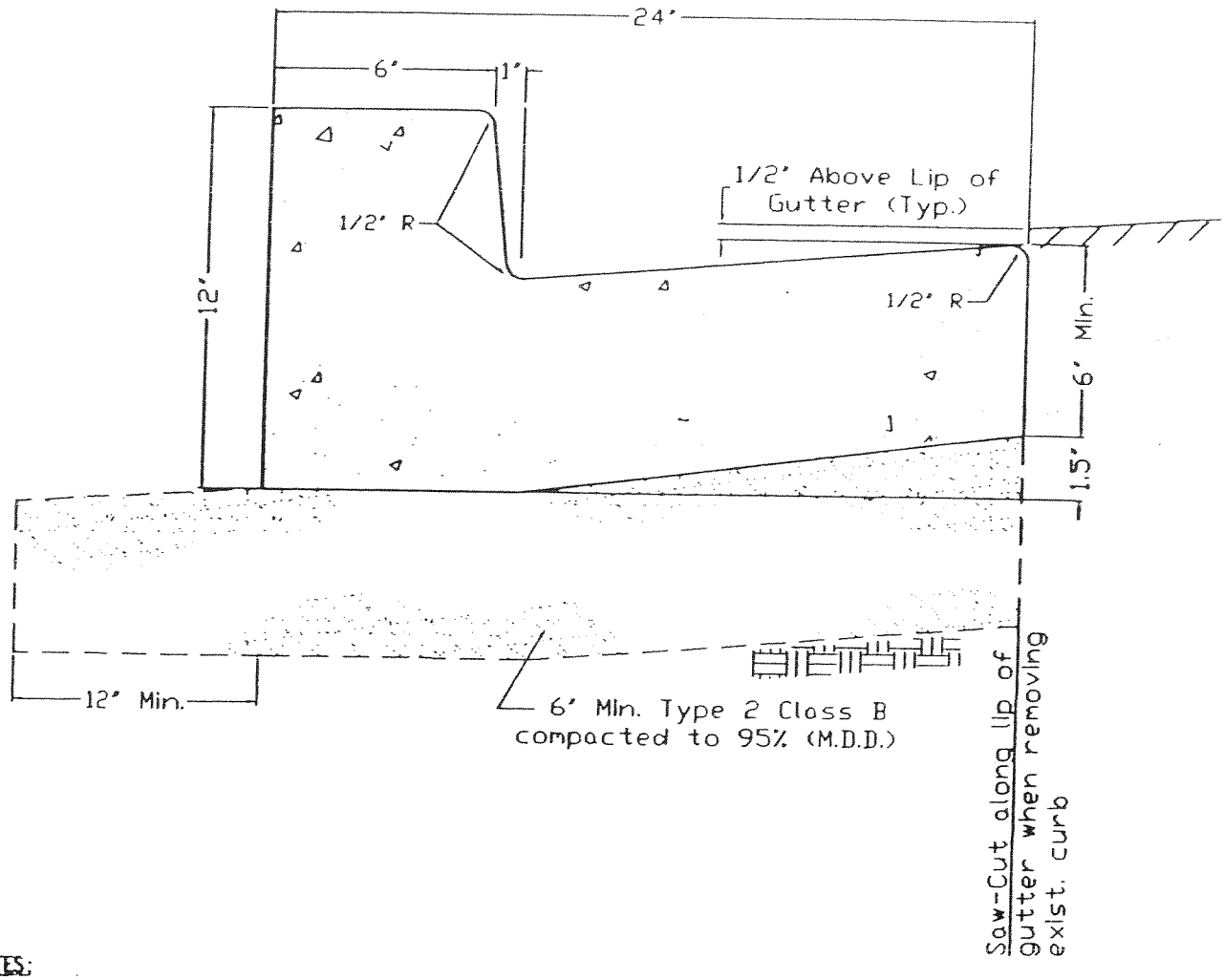
17. ALL PERPENDICULAR PEDESTRIAN RAMPS SHALL BE PROVIDED WITH 4 FOOT SQUARE CONCRETE LANDING ON THE TOP OF RAMP, AS DIRECTED BY THE CITY ENGINEER. ACQUISITION OF RIGHT OF WAY MAY BE NEEDED.

18. LATERAL OBSTRUCTION MAY REQUIRE ADDITIONAL RIGHT OF WAY AS DIRECTED BY THE ENGINEER.

19. WHERE PARKWAYS EXIST THAT ARE LESS THAN FOUR FEET (4') IN WIDTH, THE PEDESTRIAN RAMP CONFIGURATION IDENTIFIED IN DRAWING NO. R-106A SHALL BE UTILIZED AT EITHER CORNER OR MIDBLOCK LOCATIONS, WITH THE RAMP DEPTH EXTENDING TO THE BACK OF THE SIDEWALK.

20. WHERE PARKWAYS EXIST THAT ARE GREATER THAN FOUR FEET (4') IN WIDTH, THE PEDESTRIAN RAMP CONFIGURATION IDENTIFIED IN DRAWING NO. R-106D, "WIDE SIDEWALK" SHALL BE UTILIZED AT EITHER CORNER OR MIDBLOCK LOCATIONS, WITH A MINIMUM SIDEWALK WIDTH OF FOUR FEET (4') AT THE TOP OF THE RAMP.

NO.	REVISION	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION SPARKS	
			NOTES-PEDESTRIAN RAMP	DRAWING NO. R-106G (312)	
				DATE 01/04	PAGE 124
APPROVED BY: G.S.		01/04			



NOTES:

1. Portland Cement Conc. (P.C.C) shall have the following characteristics: 4000psi Min. compressive strength @ 28 days w/Min. of 6.25 sacks of cement per cu. yd. of conc., air entrainment shall be 4-7%, slump shall range from 1" Min. to 4" Max. All materials conform to SSPWC. Sec. 202.

2. Curb & Gutter shall have 1/2" expansion joints at all curb returns (unless approved otherwise by city engineer) and weakened plane joints on 10' centers (Max.).

3. Aggregate Base shall be Type 2 Class B Aggregate Base compacted to a Min. 95% (M.D.D.).

4. Evaporation reduces (such as confilm) shall be applied immediately after intial finishing

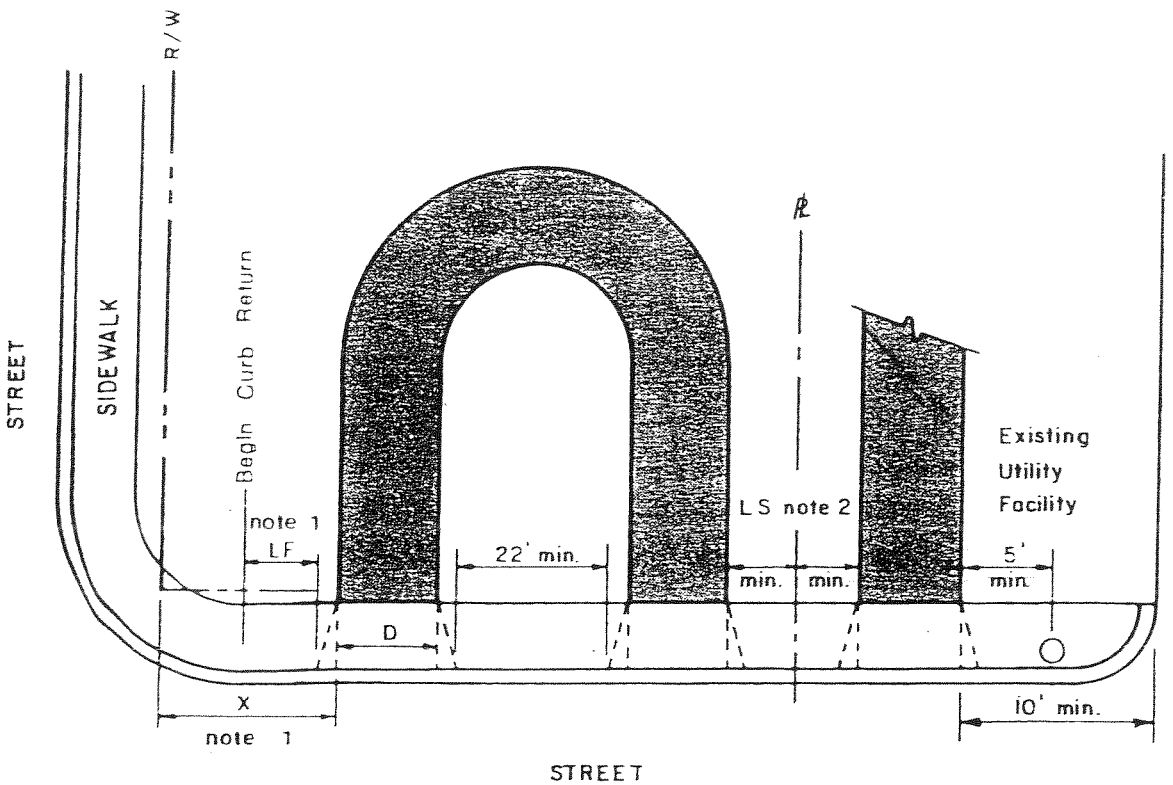
5. Curing agents shall be applied per section 202.11.02 immediately after final finishing.

6. Curb removal shall be done to neat saw cut lines.

7. One set of test cylinders (set of 4 Min.) shall be taken for each 50 yds. of Conc. placed including slump, air, air temp., and Conc. Temperature or a Min. of 1 set of 4 cyl. for each days pour.

8. No equipment shall be permitted adjacent to or across the curb until the fourth day following placement of the Conc. or until the Concrete has reached a Min. compressive strength of 3000psi.

NO.	REVISION	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION	
			City of Sparks	SPARKS	
				STANDARD NO.	
			Type I P.C.C. Curb & Gutter	S-7	
				DATE 5/97	PAGE 7



	RESIDENTIAL	LIGHT * COMMERCIAL	HEAVY COMMERCIAL ** AND INDUSTRIAL
D (Driveway Width) See note 3	12' min. 36' max.	14' min. (one-way) 24' min. (two-way) 36' max. See note 3	14' min. (one-way) 30' min. (two-way) 60' max. (heavy truck) See note 3

NOTES:

1. LF (front-sideyard setback) Carson City, Yerington and Nye Co. = 20' min. Lyon Co. = 30' min. Elsewhere = 10' min. DOES NOT APPLY TO ELKO (See note 3).
2. LS (sideyard setback) Carson City = 10', Elsewhere = 5'

* Light Commercial includes office buildings and other commercial buildings 2 stories in height. Motel driveways shall not exceed 30', DOES NOT APPLY TO ELKO.

** Heavy Commercial includes drive-in establishments, factories, service stations and warehouses, DOES NOT APPLY TO ELKO.

3. Elko only, X = 40' (Measured from the intersection of the R/W line) on arterial streets, 25' elsewhere. Maximum driveway width at curb = 30'. Maximum driveway width at back of walk = 24'.

ANY DEVIATION FROM THESE DIMENSIONS MUST BE SUBMITTED AND APPROVED BY THE AGENCY ENGINEER.

NO.	REVISION	DATE
1	LF Dim.	3-83
2	NOTE 3	2-84

STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION

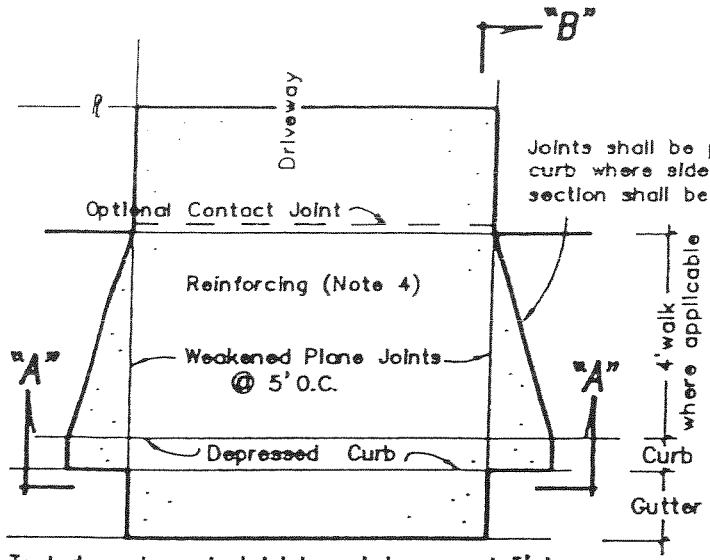
DRIVEWAY GEOMETRICS

SECTION 1

DRAWING NO. 1-9 (312)

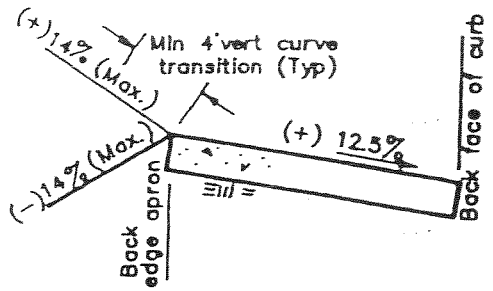
DATE 7-81

PAGE 11



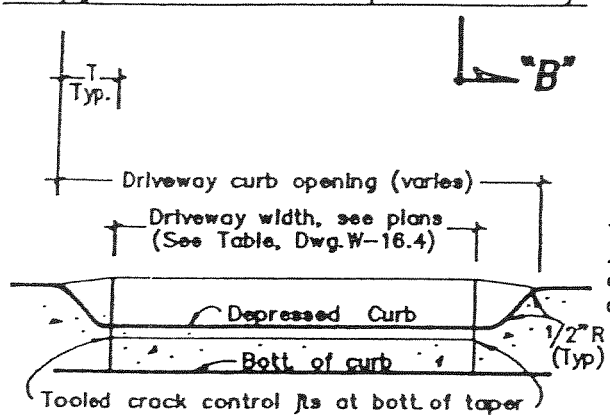
Joints shall be perpendicular to curb where sidewalk exists, taper section shall be 8.0 inches thick (typ).

TAPER LENGTH	
T (ft.)	Curb Hgt.
4.25'	≤ 5"
5.00'	6"
5.75'	7"
6.75'	8"
7.50'	≥ 9"

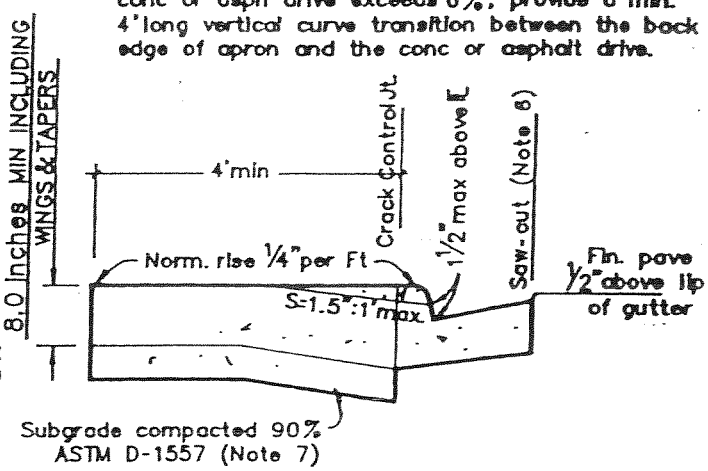


When grade differential between driveway apron & conc or asph drive exceeds 6%, provide a min. 4' long vertical curve transition between the back edge of apron and the conc or asphalt drive.

Tooled crack control joints not to exceed 5' in curb/gutter within limits of depressed curb only.



SEC. "A–A"

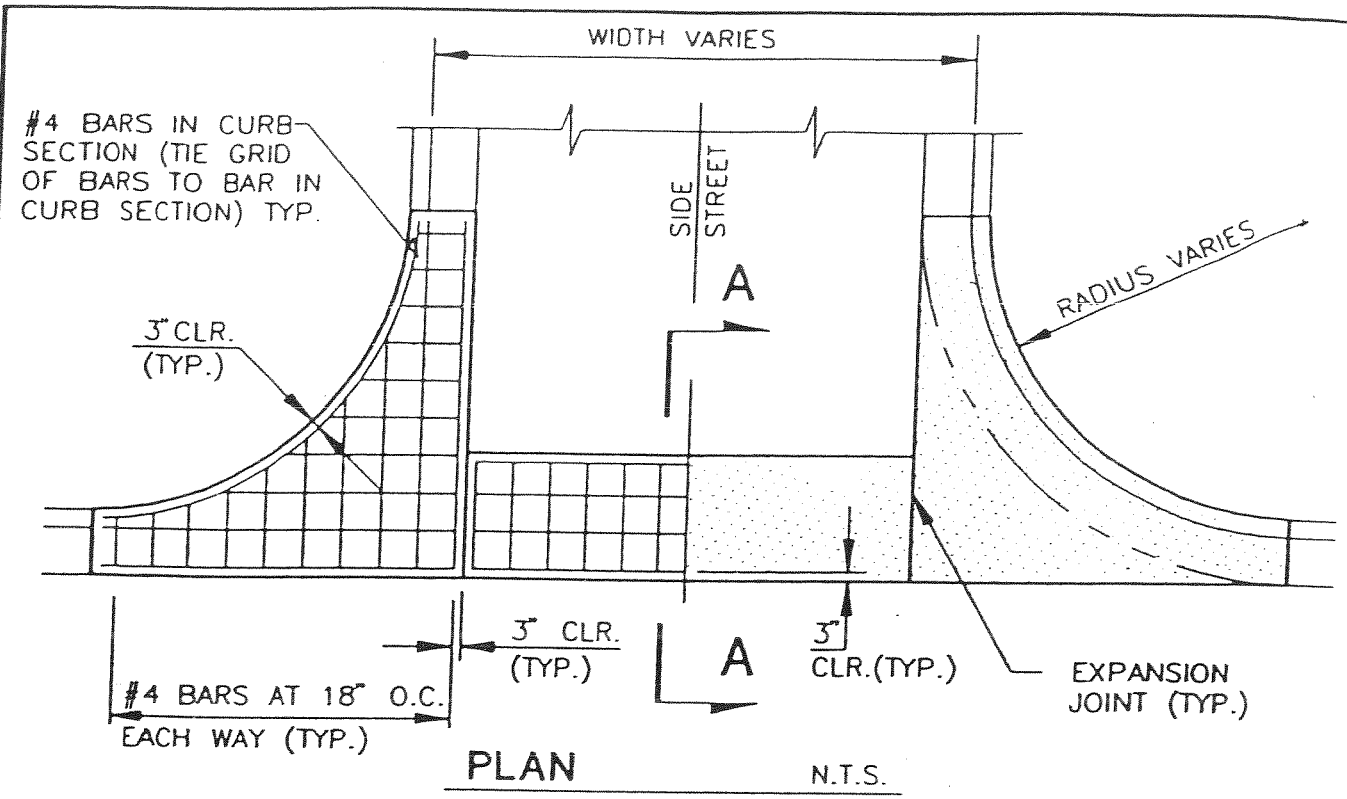


SEC. "B–B"

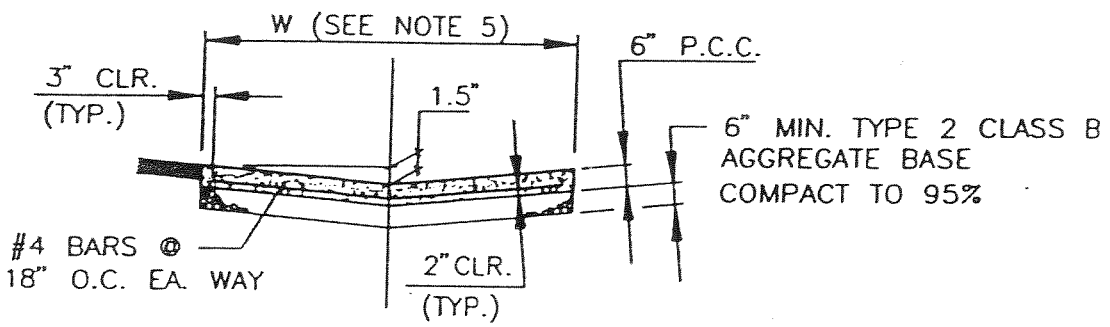
NOTES

1. Commercial driveways to use 10" P.C.C. valley gutter w/extended conc apron (Dwg. R-5)
2. This detail shall be used for all types of conc curb, gutter & asphalt berm.
3. Conc shall be min 6.25sack, min comp. strength of 4000psi, 4.5-7.5% air & cured in accordance w/methods found in latest edition of the standard specifications for Public Works construction.
5. Concrete for driveway apron shall receive a medium broom finish.
6. Remove conc when constructing driveway where curb, gutter &/or sidewalk exists. Curb removal shall be to neat saw-cut lines & along lip of gutter. All unused depressed curb shall be removed & replaced w/full-height-curb. Curb & apron may be poured monolithic.
7. Subgrade shall be over excavated in areas of unstable or expansive soils to conform w/the soils report or Washoe County requirements.
8. Max. slope on driveways shall be 14%.

NO.	REVISION	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION
1			P.C.C. DRIVEWAY APRON	DRAWING NO.
2				
3				DATE / PAGE
4				



PLAN N.T.S.



SECTION A-A

NOTES:

1.) PORTLAND CEMENT CONCRETE (P.C.C.) SHALL HAVE THE FOLLOWING CHARACTERISTICS: 4000 PSI MIN. COMPRESSIVE STRENGTH @ 28 DAYS, 6-8 SACKS OF CEMENT PER CUBIC YARD WITH A MAX. WATER/CEMENT RATIO OF 0.45, AIR ENTRAINMENT 6.5% ± 1.5%, SLUMP AT 1 TO 4 INCHES. ALL MATERIALS SHALL CONFORM TO SSPWC SECTION 202.

2.) FOR INDUSTRIAL AREAS, AN ENGINEERED DESIGN IS REQUIRED.

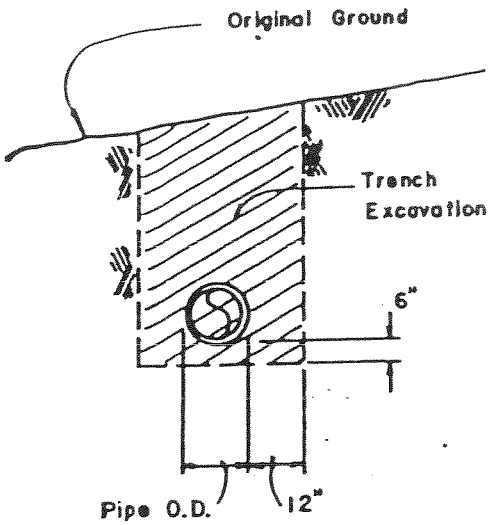
3.) AGGREGATE BASE SHALL BE ENGINEERED TYPE 2, CLASS B WITH 95% COMPACTION.

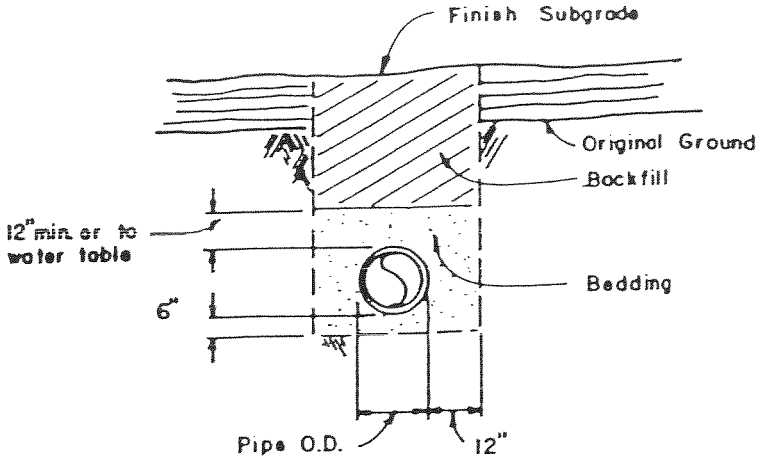
4.) VALLEY GUTTER SHALL HAVE WEAKENED PLANE JOINTS EVERY 10 FEET.

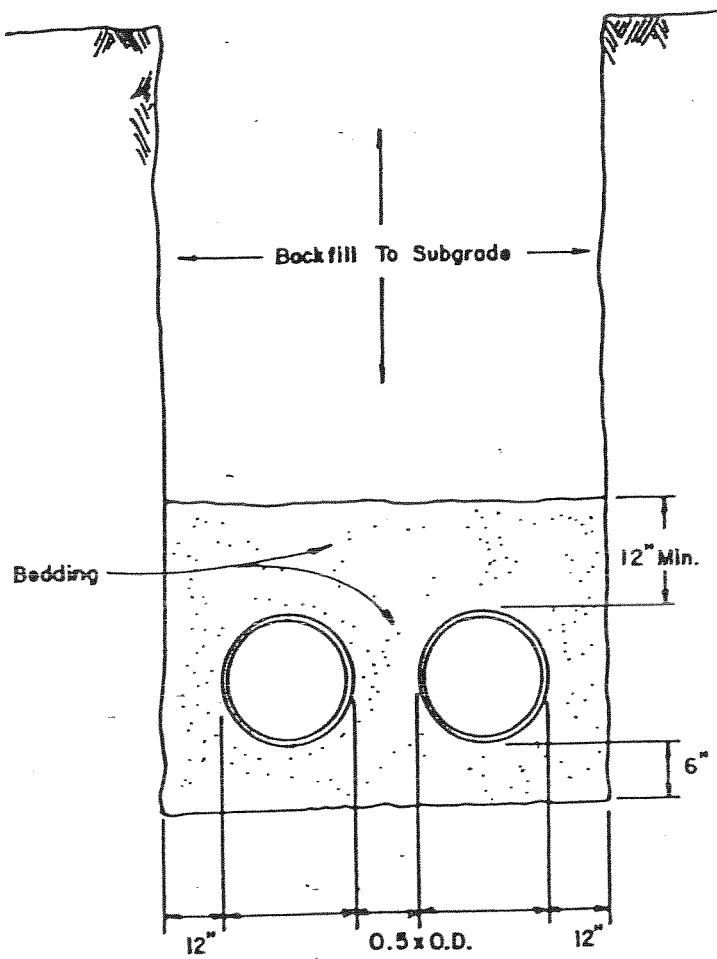
5.) LOCAL AND COLLECTOR STREETS W=6'
ARTERIAL STREETS (DRIVEWAYS ONLY) W=10 FEET.

6.) VALLEY GUTTER SECTIONS ALONG CURB & GUTTER MAY BE A MONOLITHIC POUR AS SHOWN.

NO.	REVISION	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION
1	REDRAWN	2-92	P.C.C. VALLEY GUTTER	DRAWING NO. R-5 (312)
3	ADDED NOTE 6	12-92		DATE 2-92 PAGE 5
APPROVED BY		12-92		







GENERAL NOTES:

1.) Water densified backfill and tunneling shall be by special provision only.

2.) Backfill shall meet the requirements for Class "E" backfill with no rocks over 4" compacted in 6" (max.) lifts to min. 90% of max. dry density.

3.) Bedding Material shall meet requirements for Class "A" Backfill as shown in subsection 200.03.02 of Standard Specifications or as specified by the Agency and shall be compacted to at least 95% of max. dry density.

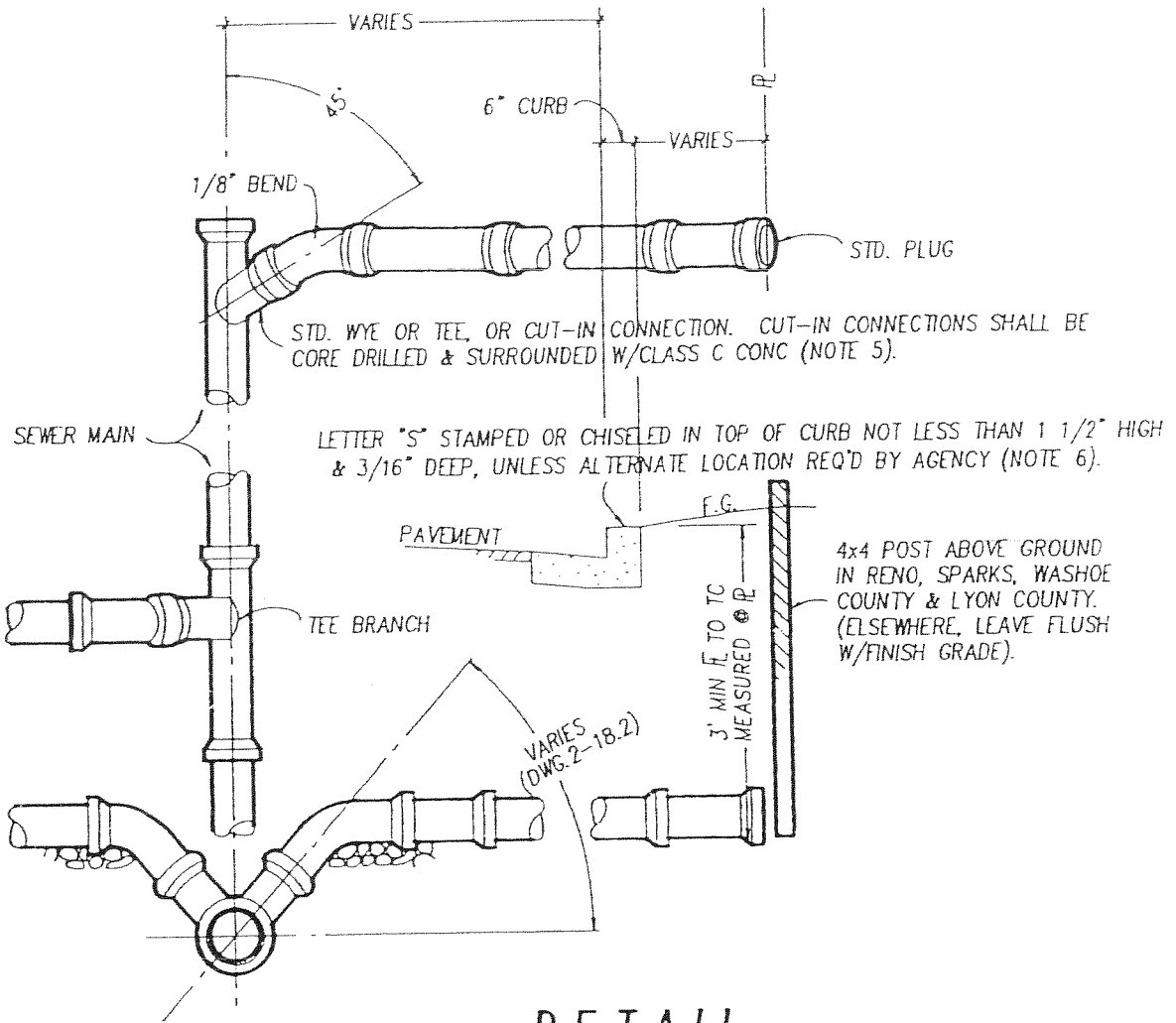
4.) For trenches in roadway section, see trench patch details (See Dwg. No. 1-16)

5.) For the purpose of payment, excavation and backfill quantities are based on these standard drawings, and no additional compensation will be made. Shoring or sloped cut slopes may be necessary, but there will be no additional payment. All excavations shall conform to the latest O.S.H.A. - requirements.

6.) Reno- Bedding Material may be Class "C" backfill.

7.) Place metallic location tape 1 ft. above water pipe, Carson City.

NO.	REVISION	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION 2
			TRENCH EXCAVATION AND BACKFILL	DRAWING NO. 2-1 (305)
				DATE 7-81 / PAGE 1



DETAIL

N.T.S.

NOTES

1. IN NO CASE SHALL A LATERAL CONNECT TO THE SEWER MAIN DIRECTLY ON TOP OF THE PIPE.
2. SEWER LATERALS SHALL HAVE A MIN SLOPE OF 2%.
3. ALL JOINTS ON SEWER LATERAL PIPE SHALL BE COMPRESSION TYPE OR APPROVED SOLVENT WELD.
4. LATERAL SHALL EXTEND TO PROPERTY LINE UNLESS OTHERWISE SHOWN ON PLANS.
5. CITY OF RENO: SEWER LATERAL "CUT-IN" CONNECTION WILL BE SHOWN ON DWG.2-20.
6. THE LETTER "S" SHALL BE RESTAMPED INTO THE CURB WHEN CURB REMOVAL IS REQ'D.

NO.	REVISION	DATE
1	REDRAWN	1/95vp

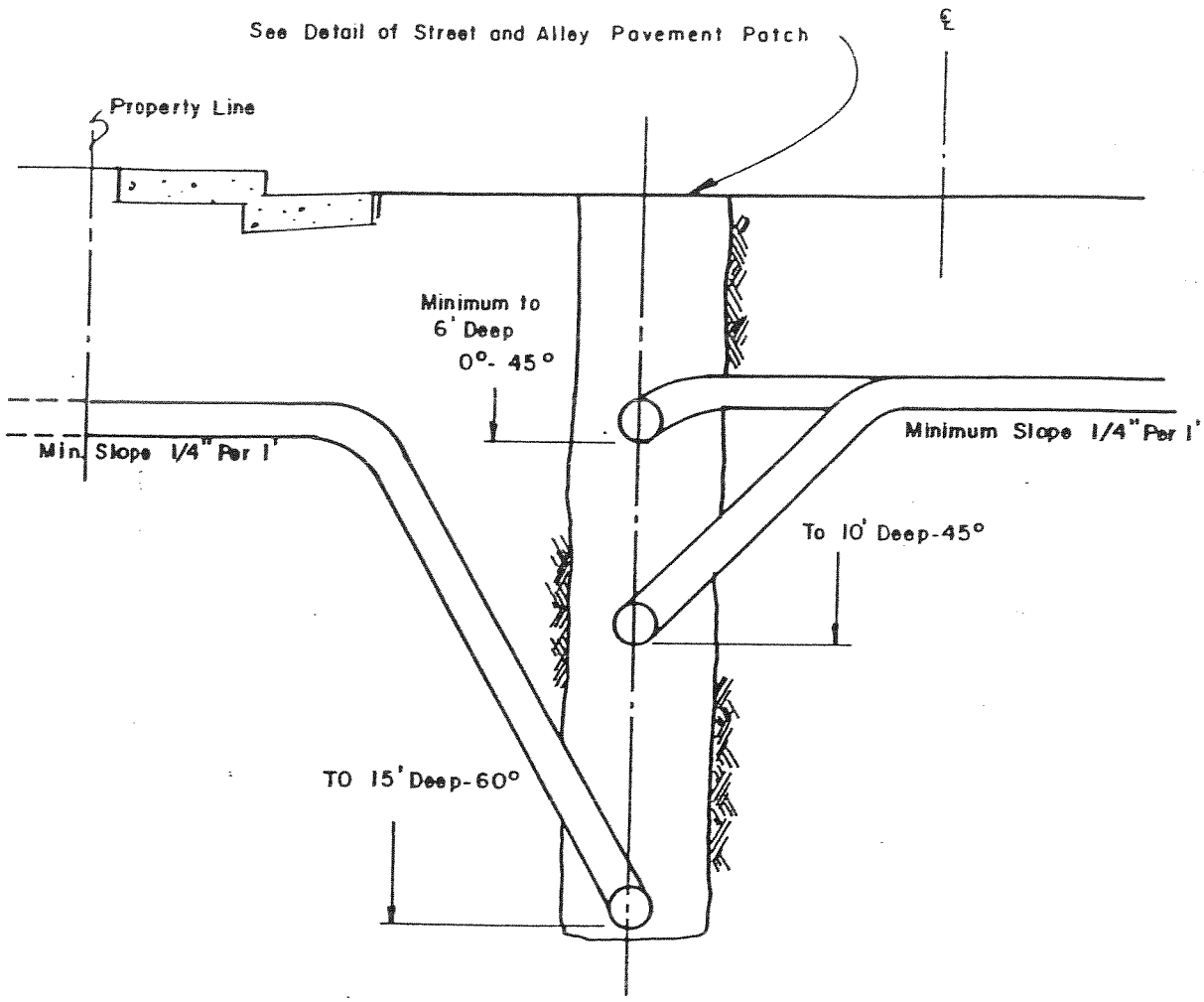
STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION

SEWER LATERAL CONNECTION

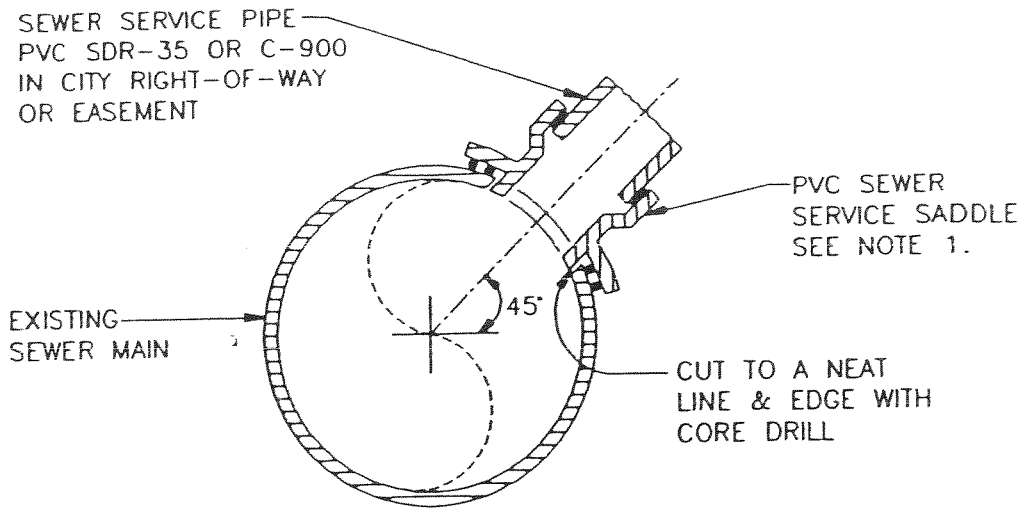
SECTIONS 2

DRAWING NO. 2-18.1 (306)

DATE 1/95vp | PAGE 27



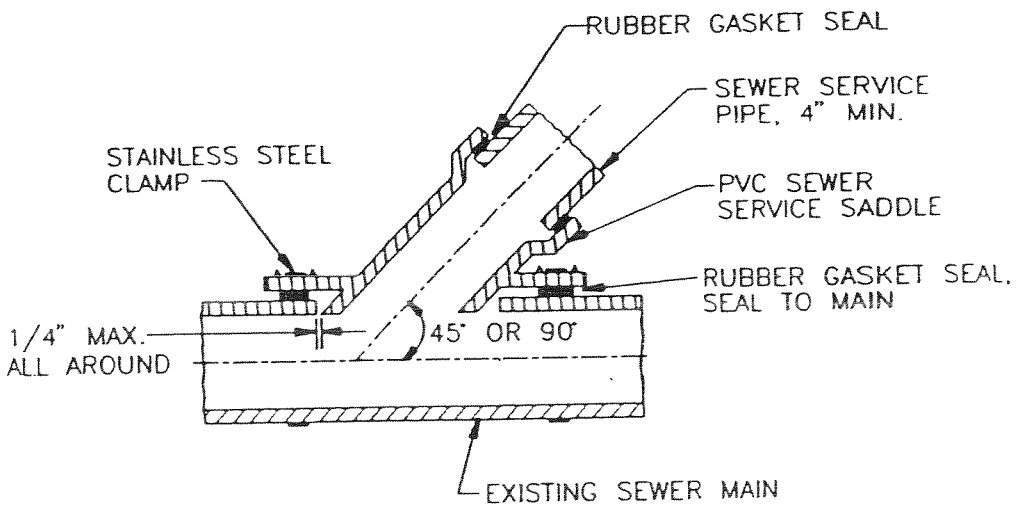
NO.	REVISION	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION 2
			SEWER LATERAL CONNECTION	DRAWING NO. 2-18.2 (306)
				DATE 7-81 / PAGE 28



NOTE:

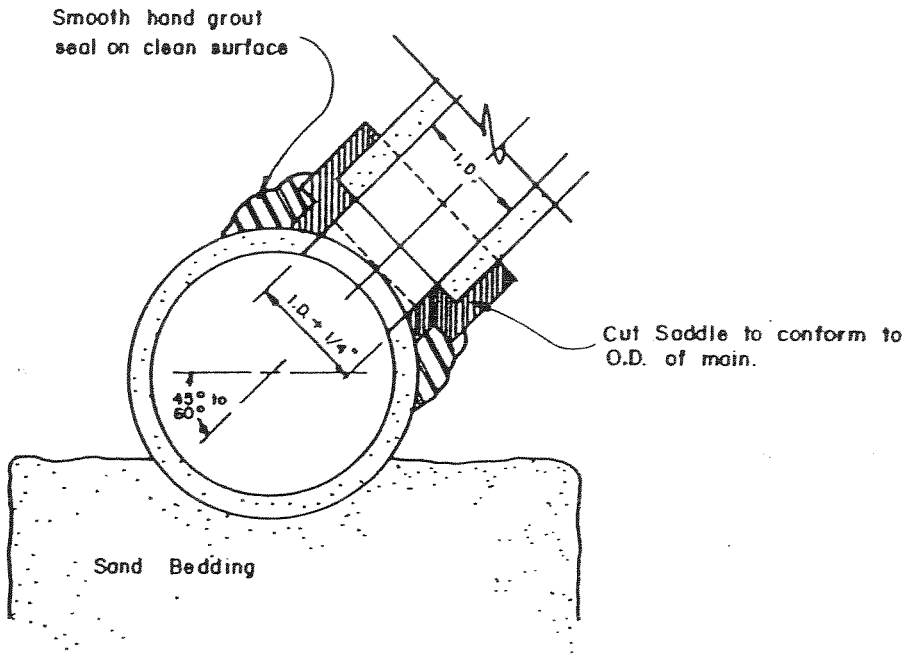
1. ROMAC "CB" SEWER SADDLES OR EQUAL MAY BE USED ON SEWER MAINS OTHER THAN PVC.

FRONT VIEW



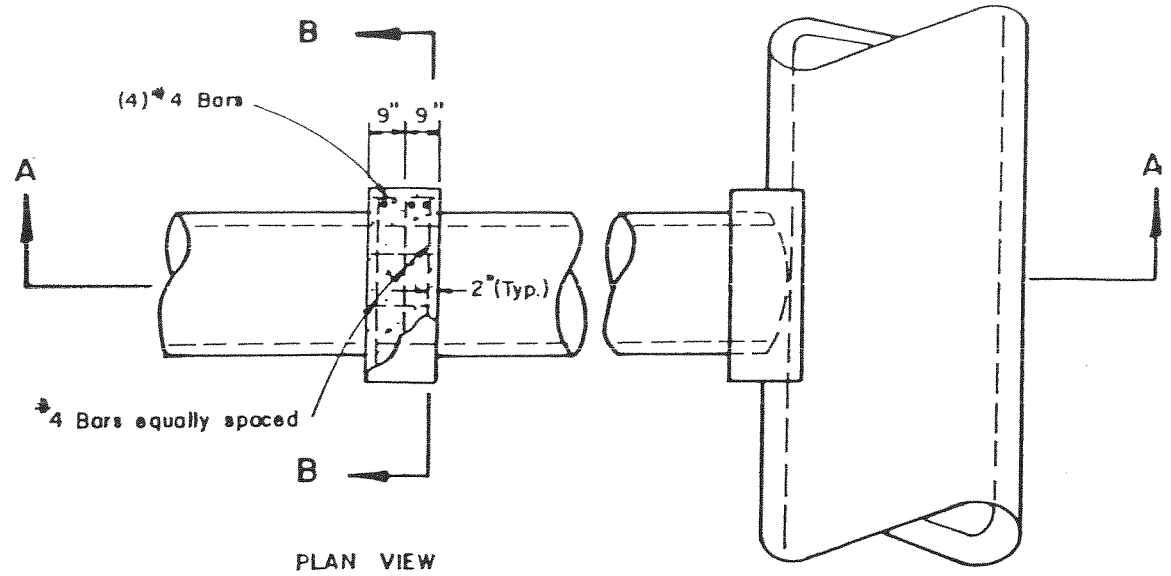
SIDE VIEW

NO.	REVISION	DATE	STANDARD DETAIL FOR PUBLIC WORKS CONSTRUCTION	SECTION CARSON CITY
			SEWER SERVICE SADDLE	DRAWING NO. C-6.3
				DATE 10/94 / PAGE 15

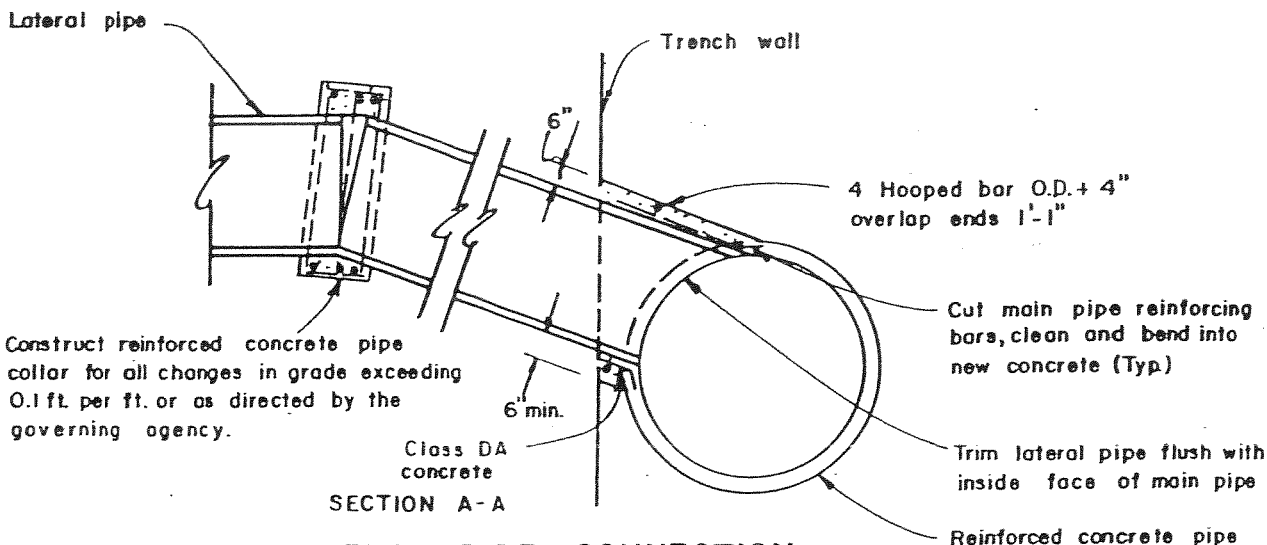


SADDLE DETAIL

NO.	REVISION	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION 2
			SEWER LATERAL "CUT-IN"	DRAWING NO. 2-20 (306)
				DATE 7-81 / PAGE 31

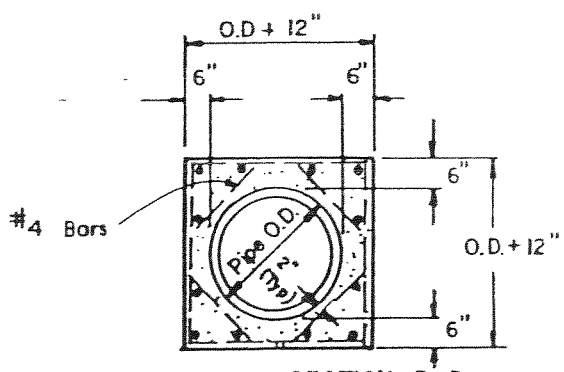


PLAN VIEW



SECTION A-A

TYPICAL LATERAL PIPE CONNECTION TO R.C.P.



SECTION B-B

TYPICAL REINFORCED CONCRETE PIPE COLLAR

NO.	REVISION	DATE	STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION	SECTION 2	
			STORM DRAIN LATERAL	DRAWING NO. 2-12 (306)	
				DATE 7-81	PAGE 15

CITY OF SPARKS – PUBLIC WORKS DEPARTMENT

ENCROACHMENT / EXCAVATION PERMIT APPLICATION

1675 E. Prater Way, Suite 107
Sparks, NV 89434
(Phone) 775-353-2306 *(Fax) 775-353-2470*

To All Applicants:

Section 12.12 of the Sparks Municipal Code requires any person performing work within The City of Sparks right-of-way must first obtain an encroachment and/or excavation permit. **All permit applications received will be ready for issuance within 72 hours after approval.** Timely processing of any permit is predicated upon the completeness of the information required on the application.

Date of Application: _____ Time: _____
Date Work to Start: _____
Contractor: _____ Contractor's Rep: _____
Address: _____ Phone #: _____ Fax # _____
_____ Contractor's License No. _____
Work to be done for: _____ Phone #: _____
Address: _____
LOCATION OF WORK (exact address and/or street being worked on and distance from nearest cross street.
Include streets on both sides of cut) _____
DESCRIPTION OF WORK – (include whether work involves excavation or simply occupying the right of way)
_____
_____
Lineal feet of curb and gutter being removed? _____
Lineal feet of sidewalk being removed? _____
Dimensions of asphalt being removed? _____ Asphalt Depth? _____
Longitudinal Cut? _____ Transverse Cut? _____ Arterial/Collector? _____
Is work in a travel lane? _____
Is work within 400' of a signalized intersection? _____ Traffic Loops affected? _____
Are there any manholes, valves, vaults, or survey monuments that will need to be readjusted after patching? _____
If so, how many of each? _____
Are there any pavement markings that will need to be redone? _____ If so, how many linear feet of each? _____
Does the work involve installing, removing, or repairing a sanitary sewer lateral? _____
Will the work be completed within fourteen (14) calendar days from start date? _____ If not, how many? _____

Contractor _____ Location of Work _____

TRAFFIC CONTROL

Are any traffic lanes being closed:_____ If so, how many?_____ How long?_____

Encroachment permit applications for full lane closures on arterial or collector streets shall be submitted 48 hours prior to said lanes being closed.

Provide a detailed sketch of the work area, identifying street names and/or addresses as well as cross streets. **(MANDATORY).** Traffic control shall conform to current M.U.T.C.D. Standards.

DOLLAR VALUE OF WORK BEING PERFORMED IN R/W $_____

AUTHORIZED SIGNATURE (Applicant) - _____

PRINTED NAME - _____

(for official use only) Permit No._____

Encroachment Base Fee $_____

Excavation Base Fee $_____

Permanent Patch Fee (includes asphalt patch, overlays, cold milling, manholes, valves, vaults, loops, monuments, pavement markings, etc. $_____

Penalty Fees $_____

Total Estimated Fee $_____ Calculated By: _____

Admin Section

Is the contractor bonded? _____ Is the contractor's liability insurance current? _____ Expiration date_____

Inspector Section

Is the patch in a penalty area? _____ If so, what's the age of the street? _____ What is the penalty %? _____

Notes:

_____

Inspectors Signature: _____ Date & Time: _____

STOREY COUNTY
PERMIT APPLICATIONS

Storey County
BUSINESS LICENSE FEE WORKSHEET
CONTRACTOR / PROFESSIONAL – In County

Business Name: _____

Account Number _____ License Dates: _____ to _____

Annual License Type: ***CONTRACTOR** / In County* Fee $ ***100.00***

Annual License Type: _____ Fee $ _____

** ***In County ONLY***: If **NOT** Exempt Calculate Employees & Footage

** ***Square Feet***: _____ *Fee* $ _____

** *Number of* ***Employees***: _____ *Fee* $ _____

** *Commercial* ***Units***: _____ *Fee* $ _____

ANNUAL TOTAL: **$** _____

Initial Quarters to Pay _____: $ _____

One-Time APPLICATION Fee: $ ***100.00***

TOTAL DUE with APPLICATION: $ _____

ANNUAL FEE

$ 75.00 - General - (Located in Storey County requires Building + Fire & Life Safety Inspections)

$ 100.00 - Home Business (Exempt from Calculations) (Located in Storey County / Home Occupation Sheet)

$ 100.00 - Contractors (Independent), Professional (Requires copy of NV License. If NOT, Professional License)

$ 700.00 - Fortunetelling, Palmistry

$ 135.00 - Massage/Theraputic Services (Need proof-schooling)

$ 475.00 - Mining, Excavation, Earth-Moving/Processing

$ .00 - Non-Profit - Proof of 501.c(x) Status (*hand type license*)

$ 75.00 - Out of County (Except Contractor)

$ 250.00 - Pawn - (+100.00 if accept Motor Vehicle)

$ 475.00 - Subdivision - Sales (Commercial)

$ 100.00 - Transportation - Companies

For: Liquor, Gaming, Child Care, Prostitution, Escort, Alarms, Utilities and Solicitation (Door to Door)
Make application with the Sheriffs Business Office.

*****Square Feet*** *(Building or Site)*

$ 15.00	1 to 1,999
$ 31.00	2,000 to 2,999
$ 63.00	3,000 to 4,999
$ 94.00	5,000 to 7,499
$ 125.00	7,500 to 9,999
$ 188.00	10,000 to 24,999
$ 250.00	25,000 to 99,999
$ 500.00	100,000 to 499,999
$ 1,000.00	500,000 +

EXEMPT - Brothels, Cabaret, Fortunetelling, Special Events, Independent Contractors, Home Occupation, Out-of County.

*****Employees*** - (includes persons engaged in the business i.e., Partners or Co-Owners, etc.)

1 to 5	$ 25.00
5 to 10	$ 40.00
11 to 25	$ 75.00
26 to 50	$ 125.00

Over 50 - $ 125.00 + $ 2.00 *for each additional employee*

EXEMPT - Brothels, Cabaret, Fortunetelling, Special Events, Independent Contractors, Home Occupation, Out-of County.

*****Units - Commercial***

$ 2.00 Per unit fee for apartments, storage units, RV and MH spaces, pay-parking lot spaces. Must also have a General License.

EXEMPT - the rental of three (3) or less Residential Units

Handing out **FLYERS** on the street is **prohibited** by Storey County Code - Must go to County Commissioners.

HANDYMAN: Must charge hourly rate; Shall Not Bid Jobs without a Contractor's License or Charge for Materials; NO Structural Framing; NO Electrical; NO Plumbing; NO Mechanical and NO Commercial Construction. NO work can be done that is a violation of NRS Chapter 624.

Storey County

BUSINESS LICENSE APPLICATION

Office Use Only:
DATE: _____ ACCOUNT NUMBER: _____ LICENSE DATES: _____ to _____
FEES SUBMITTED: **$** _____ LIC CLASS: _____ SQ. FT: _____EMP: _____
HOME OCCUPATION: ☐ YES ☐ No NV Contr # _____ Exp _____ Limit _____
INSPECTION Required: ☐ YES ☐ No Other Requirements: _____

1. ☐ New Business ☐ Change in Ownership ☐ Change in Location ☐ Adding Name to Business
2. Corporation Name: _____ 3. NV Tax ID: _____
NV Business License: _____
4. Corporate Address: _____ Business Ph: (_____) _____ Fax (_____) _____
5. **Doing Business in Nevada as:** _____
6. Mailing Address: _____
7. Location of Business Operations: _____
8. Location of Business Records: Phone # ( )
9. Location Business License is Displayed:

10. Name of Owners(s), Partners, Corporate Officers, Etc. (If individual Ownership, list only one Owner.)

Name: (Last, First, MI) _____ Residence: (Address, City, State Zip) _____
Title: _____ Residence Telephone # (_____) _____

Name: (Last, First, MI) _____ Residence: (Address, City, State Zip) _____
Title: _____ Residence Telephone # (_____) _____

Name: (Last, First, MI) _____ Residence: (Address, City, State Zip) _____
Title: _____ Residence Telephone # (_____) _____

11. Name of Local Contact: (Last, First, MI) _____ Residence Address: (Street, City, State Zip) _____
Title: _____ Residence Telephone # (_____) _____

12. Date Business Started in Nevada _____ **In-County ONLY**: Commercial Building **Sq Ft** _____ Number of **Units** _____ Number of **Employees** _____

13. Describe the Nature Your Business: _____

14. If you have acquired a Nevada Business or Changed ownership, please complete this section:
Date Acquired: Name(s) of Previous Owner(s):

NOTE: You are not authorized to conduct any business in Storey County until all requirements for this Business License are fulfilled.

I CERTIFY THE INFORMATION PROVIDED IN THIS REGISTRATION FORM IS TRUE, CORRECT AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Print Name: *Signature*: Date:

Official Use Only: TEMPORARY Business License Issued: ☐ Yes ☐ No DATE _____
INSPECTION Required: ☐ Yes ☐ No Date Inspection Turned in: _____
DATES: Building Dept Approval: _____ Fire Dept Approval: _____ Health Dept. Approval: _____ Other: _____
Commissioner Meeting: **1st** READING Date: _____ APPROVAL Date: _____
NOTES: _____

Rev 07-01-06 (10-6-06)

Storey County
BUSINESS LICENSE INSPECTION SHEET

DATE APPLIED:_____ ACCOUNT NUMBER: _____

BUSINESS NAME: _____

RESPONSIBLE PARTY NAME: _____

BUSINESS PHYSICAL STREET ADDRESS: _____

The following departments must be contacted for an appointment for on-site inspections and, if applicable, plans must be submitted for review before your inspection.

BUILDING DEPARTMENT:
110 Toll Road, Gold Hill Divide
(775) 847-0966

Inspection Required?
☐ YES ☐ NO

** **Conditional** Approval: ☐ **YES** ☐ **NO**
Estimated Completion Date: _____
(**Inspector please ATTACH copy of your inspection sheet noting **Conditions**)
Inspector Signature: _____
Signature Date: _____

Final Approval Date: _____
Inspector Signature: _____

NOTES: _____

_____

FIRE & LIFE SAFETY INSPECTION:
Completed by Fire Marshal
(775) 691-5332

Inspection Required?
☐ YES ☐ NO

** **Conditional** Approval: ☐ **YES** ☐ **NO**
Estimated Completion Date: _____
(**Inspector please ATTACH copy of your inspection sheet noting **Conditions)**
Inspector Signature: _____
Signature Date: _____

Final Approval Date: _____
Inspector Signature: _____

NOTES: _____

_____

NEVADA STATE HEALTH DEPT:
1179 Fairview Drive, Carson City
Phone No. (775) 687-3787 Ext 260 or261

Inspection Required?
☐ YES ☐ NO

** **Conditional** Approval: ☐ **YES** ☐ **NO**
Estimated Completion Date: _____
(**Inspector please ATTACH copy of your inspection sheet noting **Conditions)**
Inspector Signature: _____
Signature Date: _____

Final Approval Date: _____
Inspector Signature: _____

NOTES: _____

_____

_____

**** Conditional Approval:** Copy to Sheriff Office with Conditions, for consideration of a Temporary Business License**.**
(Retain Original until ALL required inspections are final.)

Final Approval - Return White copy to Storey County Building office.

Received by **SCBD** on _____ at _____ By: _____

Rev 07-01-06

Storey County
CHILD SUPPORT INFORMATION
For **In-County** Businesses **ONLY**

Please mark the appropriate response (*failure to mark one of the three will result in denial of the application*):

_____ I am not subject to a court order for the support of a child.

_____ I am subject to a court order for the support of one or more children and am in compliance with the order or am in compliance with a plan approved by the district attorney or other public agency enforcing the order for the repayment of the amount owed pursuant to the order; or

_____ I am subject to a court order for the support of one or more children and am not in compliance with the order or a plan approved by the district attorney or other public agency enforcing the order for the repayment of the amount owed pursuant to the order.

Applicant's Social Security Number: _____

Applicant Signature: _____

Date: _____

Storey County
DISPATCH CENTER INFORMATION
For **In-County** Businesses **ONLY**

We need the following information on record at the Storey County Dispatch Center for emergency response. This information will help in getting viable and accurate response to your place of business in case of an emergency. As a safeguard to your business please keep a copy of this form on file and call Storey County Dispatch Center, as information needs to be updated.

Business name: _____

Business Phone Number: ( ) _____

Corporate main office phone number (if different than above): ( ) _____

Physical address of business: _____

Does this business produce hazardous materials? ☐ YES ☐ NO

If yes, what type? _____

What is the address at the rear of the building? _____

Is this a residence? ☐ YES ☐ NO

Name of **ALARM** Company: _____

Alarm Company phone number(s): ( ) _____

Type of ALARM: ☐ Burglary ☐ Fire ☐ Medical ☐ Panic ☐ Silent ☐ Audible

Does this alarm reset itself? ☐ YES ☐ NO

Is there a gun or dog on the premises? ☐ DOG ☐ GUN ☐ NEITHER

Emergency Contact Information:

1. Name of Responsible contact: _____
   Emergency contact phone number/s: Home ( ) _____ Cell ( ) _____
   Connection to the business: _____
   Does this person have a key to the business and is willing to respond in case of am emergency?
   ☐ KEY ☐ WILL RESPOND ☐ NEITHER

2. Name of responsible contact: _____
   Emergency contact phone number/s: Home ( ) _____ Cell ( ) _____
   Connection to the business: _____
   Does this person have a key to the business and is willing to respond in case of am emergency?
   ☐ KEY ☐ WILL RESPOND ☐ NEITHER

3. Building Owner name: _____
   Emergency contact phone number/s: Home ( ) _____ Cell ( ) _____
   Connection to the business: _____
   Does this person have a key to the business and is willing to respond in case of am emergency?
   ☐ KEY ☐ WILL RESPOND ☐ NEITHER

Does the Sheriff's Department have a key to this building? ☐ YES ☐ NO

_____ _____ _____

Signature Print Name Date

Permit No.	**Excavation Permit** **Storey County Code Enforcement Department**	Date

WORK DESCRIPTION:			
WORK LOCATION ADDRESS:			
LOT(S):	BLOCK/UNIT:	APN NO.	AREA:
OCCUPANCY or INTENDED USE:			
ESTIMATED WORK COMMENCEMENT DATE:		ESTIMATED COMPLETION DATE:	

MOBILE HOME / TRAVEL TRAILER:	MAKE	MODEL	
	YEAR	SIZE	SERIAL #

CONDITIONS: **SHOULD ANY PREHISTORIC OR HISTORIC REMAINS/ARTIFACTS BE DISCOVERED during development or excavation, work shall temporarily be halted at the specific site and the Storey County Building Department shall be notified in order to evaluate said site and, if deemed necessary, to record and photograph the site in question. The period of temporary delay shall be limited to a minimum of two working days from the date of notification, unless it is a significant find and it is deemed necessary to provide more time to evaluate and protect historical remains or artifacts. Please call 847-0966.**

CONTRACTOR:		PHONE:
ADDRESS:		STATE LICENSE #:
CONTRACTOR:	TYPE:	PHONE:
ADDRESS:		STATE LICENSE #:
OWNER / Permittee (Print):		PHONE:
ADDRESS (Mailing):		
OWNER SIGNATURE:	AUTHORIZED BUILDER/AGENT:	

: Cu Yds	GRADING FEE: $
: .	GRADING PLAN REVIEW: $
Total Valuation: $	Credit Plan Reviw: $
TOTAL PERMIT FEE: $	

CK #:	RECEIPT #:	REC'D BY:

Permission is hereby granted to do the work described in this application and ONLY in accordance with the Rules, Regulations, and Ordinances of the County of Storey**. Inspections MUST be called for within 180 days of issuance of permit or permit is void.** Permit may be renewed for 50% of the original "Permit Fee"

State 'Health Certification', if required, is the responsibility of the "Permittee".

By: _____
Storey County Building Department

ASSESSOR FIRE SHERIFF

SCBD Control #:	**Storey County Building Dept.** **P O Box 526 Virginia City NV 89440**	Received Date / Time

☐ Residential PERMIT APPLICATION ☐ Comml/Indr

WORK DESCRIPTION:			
WORK LOCATION ADDRESS:			AREA:
LOT(S):	APN(S):	ZONING:	SETBACKS:
OCCUPANCY:	CONSTRUCTION TYPE:	FLOOD ZONE:	SQ FT:

RECEIVED by BUILDING DEPT:	Grading Plan: ☐ Yes ☐ No	Topographic Underlay: ☐ Yes ☐ No	Fire & Life Safety APP: ☐ Yes ☐ No	Owner/Builder Signature Forms ☐ Yes ☐ No
Sewer/Water Will Serve: ☐ Yes ☐ No		Architectural Approval Letter: ☐ Yes ☐ No		

A Nevada Licensed CONTRACTOR and SWPP Report is Required for ALL Commercial and/or Industrial Projects

CONTRACTOR:	PHONE:
ADDRESS:	NV LIC #:
City ST Zip:	SC LIC #:
24-hr JOB Contact:	Cell:
CONTRACTOR:	PHONE:
ADDRESS:	NV LIC #:
City ST Zip:	SC LIC #:
24-hr JOB Contact:	Cell:
CONTRACTOR:	PHONE:
ADDRESS:	NV LIC #:
City ST Zip:	SC LIC #:
24-hr JOB Contact:	Cell:

If applying as Owner/Builder – MUST Complete "Owner Builder Affidavit of Exemption" per NRS 624.031(4)

OWNER / Permittee (Print):	PHONE:
ADDRESS (Mailing):	CELL:
OWNER *Signature*:	Authorized *Signature* BUILDER / AGENT:

Comments:

TOTAL VALUATION: $	☐ Est. Cost ☒ Actual Contract	
PLAN REVIEW: $	CHECK #:	RECEIPT #:

Note: **PLAN CHECK FEE:** (*Based on initial valuation*) SHALL BE PAID AT TIME OF PLAN SUBMITTAL. *Adjustment, if any, will be made during the 'Permit' Valuation.*
PERMIT FEE(s): PAID PRIOR TO 'PERMIT' ISSUANCE.

Application Completed by: _____ Date: _____

Rev. 07-06

SPECIAL USE PERMIT APPLICATION / PUBLIC HEARING
Storey County Planning Commission & Board of Commissioners
Storey County Building & Planning Departments
P.O. Box 526
Virginia City, Nevada 89440
Phone: (775) 847-0966 Fax: (775) 847-0935

****

~ OFFICIAL USE ONLY ~

Date Completed Package Received: _____

Scheduled Date on Agenda: _____

****

1. Assessor's Parcel Number(s):

2. Applicant:

Mailing Address:

Phone Number:

Email:

3. Legal Owner:

Mailing Address:

Phone Number:

Email:

4. If information is provided by other parties in support of your application, list their names, phone numbers, mailing addresses and, if applicable, their business phone number.

5. <u>Declaration of Preparer</u>
I/We declare under penalty of Perjury that the information provided herein is, to the best of my/our knowledge, true, correct, and complete.

Executed on 200 , at

Signed: _____ _____

Signed: _____ _____

6. Owner's Certificate

I, , Owner in fee of the above described property, states that this application for a SPECIAL USE PERMIT/PUBLIC HEARING, has been made with my full knowledge and consent and that the facts stated above are true to the best of my knowledge.

Owner's Signature: _____
(may be Owner's agent if corporation or company)

STATE of _____)
) SS:
COUNTY of _____)

On this _____ day of _____ in the year 200__, personally appeared before me _____ and proved to me on the basis of satisfactory evidence to be the person(s) whose names are subscribed to this instrument, and acknowledge they executed it.

Witness by my hand and official seal:

_____
Notary's Signature

My commission expires: _____

7. Applicant's Certificate

I, (Applicant) hereby states that the owner in fee of the above described property, has full knowledge of this application for a SPECIAL USE PERMIT / PUBLIC HEARING. All the facts as stated herein, are correct to the best of my knowledge and belief.

Applicant's Signature:_____

STATE of _____)
) SS:
COUNTY of _____)

On this _____ day of _____ in the year 200__, personally appeared before me _____ and proved to me on the basis of satisfactory evidence to be the person(s) whose names are subscribed to this instrument, and acknowledge they executed it.

Witness by my hand and official seal:

_____
Notary's Signature

My commission expires: _____

8. **Zone and legal description of subject property**:

9. **Street address or location of subject property**:

Lot: Block: Area:

10. **THE FOLLOWING ITEMS MUST BE SUBMITTED WITH THIS APPLICATION**:

☐ a**. PLOT PLAN**: Must show subject site, existing buildings, proposed building abutting streets and alleys, driveways, parking and property ownership within a 50 foot radius of the exterior boundaries of the property. Preferred that drawing is done to scale: must have measurements of property and setbacks clearly labeled. Large-scale drawings may be needed, however, please provide a letter or legal size drawing for mailing purposes.

☐ b**. PROPERTY OWNERS**: On attached page, list names and mailing addresses of owners of property within 300 feet from any point on the exterior boundary of the lot of parcel for which variance is sought as shown by the latest assessment roll of the County. ***(Assessor's Office)***

☐ c. **PROPERTY TAX RECEIPT**: Receipt showing taxes are paid current on subject property. ***(Clerk's Office)***

☐ d. **PERSONAL PROPERTY TAX RECEIPT**: Receipt proving assessments are paid current for Personal property; only if applicable. ***(Assessor's Office)***

☐ e. **VICINITY MAP**: An 8-1/2" X 11" vicinity map of the project showing its general relationship with existing roads serving the project site to include north arrow and scale. ***(Assessor's Office)***

11. **JUSTIFICATION STATEMENT**: Statement of justification for the Special Use/Public Hearing as required by Title 17. Any person seeking issuance of a Special Use Permit shall file a request and shall present evidence to the Planning Commission as defined by all the following:

a. That the use is necessary to the public health, convenience, safety and welfare and to the promotion of the general good of the community, and
b. That the use of the property owner for such purposes will not result in material damage or prejudice to other property in the vicinity, and
c. That all owners of real property within 300 feet of the exterior limits of the property involved, as shown of the latest Assessor's ownership maps, have been listed on page 5 of this document so that they may be notified of the intended use of such property and proposed construction of alteration of any building.

(Use additional sheet(s) if necessary.)

PROJECT DESCRIPTION: A detailed description of the project and analysis of any impacts as a result of the project and mitigation measures proposed.

(Use additional sheet(s) if necessary.)

Please print or type **NAMES and MAILING ADDRESSES of PROPERTY OWNER'S WITHIN 300 FEET of BORDERS of SUBJECT PROPERTY**. *(Use additional sheet(s) if needed).* ***(Assessor's Office – Can submit computer list from Assessor)***

	NAME(s)	ADDRESS / CITY / STATE / ZIP	APN	
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				

Please note additional entries on other side.

APPENDIX B

Appendix B

The following are representative Best Management Practices for working in or around the Truckee River, including Fact Sheets detailing their application and use. These are separated into three different types: Precautionary, Land Based, and In-river.

In-River

- Clear Water Diversions/Turbidity Curtain
- Dewatering Operations
- Temporary Stream Crossing
- Check Dams

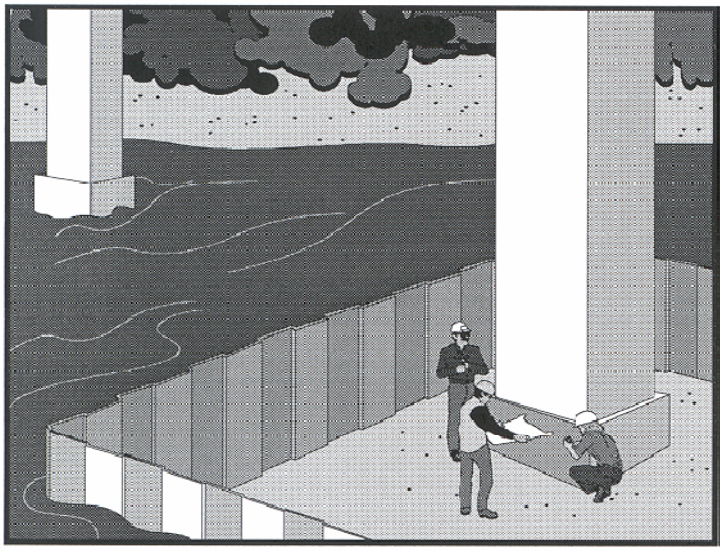
Land Based

- Silt Fence
- Fiber Rolls
- Riprap
- Temporary Diversion Berms & Ditches
- Sand and Gravel Bag Barriers
- Gravel Filter Berm
- Stockpile Management
- Wind Erosion and Dust Control
- Soil Binders
- Rolled Erosion Control Products

Precautionary

- Vehicle and Equipment Maintenance & Fueling
- Structure Demolition/Removal Over or Adjacent to Water
- Material and Equipment Use Over Water
- Stormdrain Outlet Protection
- Revegetation
- Slope Terracing and Tracking
- Preserving Existing Vegetation

Clear Water Diversions/Turbidity Curtain



Picture courtesy of January 2003 California Stormwater BMP Handbook

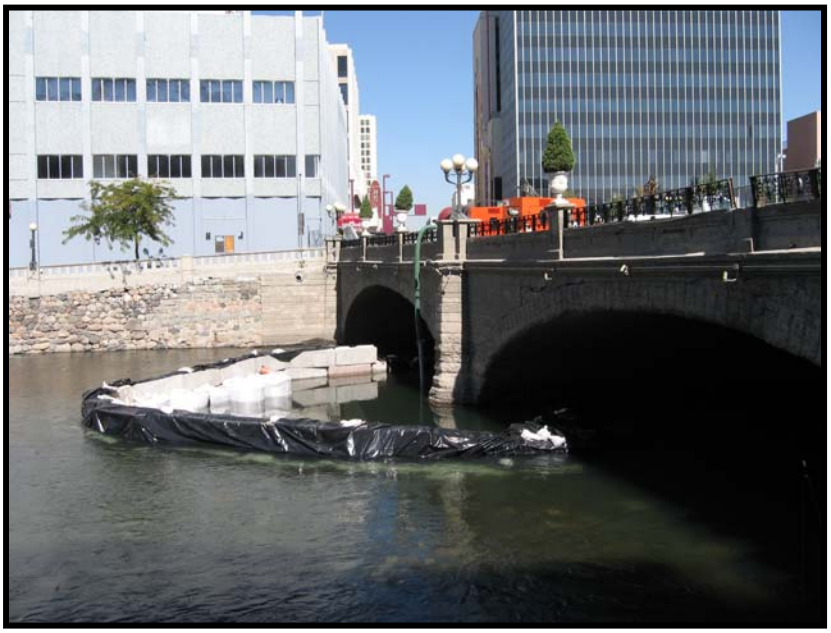
Description and Purpose

Clear water diversions are used to intercept surface water upstream of a project, transport it around the work area, and discharge it downstream with minimal water quality degradation from the construction activity. Clear water diversions are used in a waterway to enclose a construction area and reduce sediment pollution from construction work occurring in or adjacent to water. Structures commonly used as part of this system include diversion ditches, berms, dikes, slope drains, rock, gravel bags, cofferdams, filter fabric/silt/turbidity curtains, and drainage/interceptor swales.

Applications

A clear water diversion is typically implemented when a project (construction, restoration, flood control, etc.) involved working within a flowing stream or water body. Appropriate permits must always be secured prior to installation.

- Clear water diversions are appropriate for diverting flow from a stream or river around construction activities such as bank stabilization, or culvert and bridge pier and abutment installation or repair. They may also be used in combination with other methods, such as clear water bypasses and/or pumps.
- Pumped diversions can be suitable for intermittent and low flow streams.



Limitations

- Installation and removal of the materials to create the diversion will usually disturb the waterway, sending some loose sediment downstream.
- Installation may require NDEP 401 Certification, U.S. Army Corps of Engineers 404 permit and approval by Nevada Department of Wildlife and U.S. Fish and Wildlife. If numerical-based water quality standards are mentioned in any of these and other related permits, testing and sampling may be required.

Clear Water Diversions (cont.)

- Diversions may constrict the waterway, this could obstruct flood flows and lead to further flooding or washouts. Potential impacts of the diversion should be studied prior to installation.
- Diversion or isolation activities are not appropriate in channels where there is insufficient stream flow to support aquatic species in the area dewatered as a result of the diversion.

Implementation

- Diversion structures must be designed to accommodate changes in water depth or flow volume due to flooding or flash flooding.
- When diversion structures are being installed or maintained, sufficient water should, at all times, be allowed to pass downstream to maintain a healthy environment for aquatic life.
- Park equipment above the high water mark.
- Remove only the vegetation that is necessary to complete the project. Revegetation should follow a completed project area as soon as possible.
- Diversion structures should be created with materials that are free of pollutants.
- If available, utilize native materials such as large cobbles and boulders for temporary embankment and slope protection, or other temporary soil stabilization methods. This will save both time and money on erosion control efforts.

Comparison of Diversion and Isolation Techniques:

- Gravel bags are an inexpensive option to diverting flow, but can be labor intensive. It is also difficult to dewater the isolated area. Sandbags should not be used.
- Gravel Bag Berms along with an impermeable membrane are a cost effective option that can easily be dewatered.
- Cofferdams are relatively easy to install at a low cost, but have frequent dewatering needs.
- K-rail can be used as an isolation method that does not allow full dewatering, but is effective in various watercourses, and in fast-flow situations.
- Turbidity curtains should be used where sediment discharge to a stream is unavoidable. They can also be used for in-stream construction, when dewatering an area is not required.

Turbidity or Silt Curtain Isolation Technique

Definition and Purpose

A turbidity curtain is a fabric barrier designed specifically to control suspended solids and turbidity generated in the water as a result of construction activities such as flood control, restoration, bridge work, etc. The curtain floats on the water, acting as a barrier, and its main purpose is to prevent suspended sediment from getting out.

Local Truckee River Approaches to Clear Water Diversion

- Temporary installation of concrete K-rail to create a wall
    - Construct a stable wall that will hold up against high flows
    - Contractor may create a sediment plume during placement and removal of k-rail
- Extra large Gravel filled bags
    - Provides a maneuverable, yet stable wall, that will hold up against high flows

Clear Water Diversions (cont.)

- Contractor will need to take caution during removal due to sediment build up around the bags.

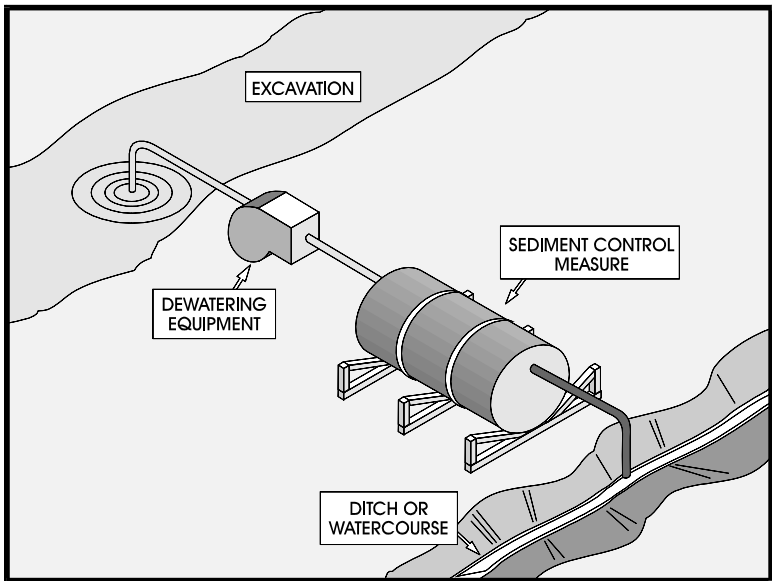
Appropriate Applications
Turbidity curtains should be used where sediment discharge to a stream is unavoidable. They are used when construction activities adjoin quiescent waters, such as lakes, ponds, and slow flowing rivers. The curtains are designed to deflect and contain sediment within a limited area and provide sufficient retention time so that the sediment particles will fall out of suspension.

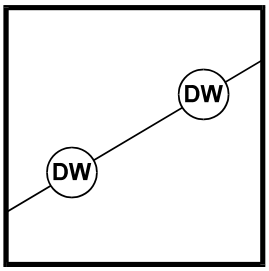
Limitations
- There are several manufacturers of turbidity curtains, each having their own design or recommendations. There are different classes of turbidity curtains for different flow situations.
- Removing sediment that has trapped and settled out by the curtain may create a discharge of that sediment. Use extreme caution when cleaning the settled sediment or removing the curtain.

Design and Installation
- Turbidity curtains should be installed parallel to the flow of water or at an angle, but should not be installed directly across the width of a channel.
- The top of the curtain usually consists of flexible flotation devices, and the bottom should is generally held down by line or load line that is incorporated into the curtain's fabric. It is best to have a bright colored impervious mesh for the curtain.
- Turbidity curtains should generally be held in place by anchors at the bottom placed according to the manufacturer's recommendations.
- After the anchors are in place, follow the manufacturer's recommendations on how to roll the fabric out and attach.
- Sediment particles should be allowed to settle for at least 6 -12 hours prior to removal or prior to removal of the turbidity curtain.

Maintenance and Inspection:
- Inspections of the curtain should be done frequently, and any damage should be reported and repaired immediately.
- Follow the manufacturer's recommendations on removal of the curtain. Move slowly to avoid stirring up too much suspended sediment.

Dewatering Operations





Map Symbol

Graphics used with permission of Caltrans

Purpose: Dewatering is often necessary to remove accumulated storm water or non-storm water from excavations or other depressions on a construction site. To prevent pollutants contained in the removed water from entering the storm drain system a variety of sediment controls may be used.

Applications:

- Applied on construction sites whenever water must be removed using a dewatering pump and the discharge is to a surface water or the storm drain system.
- May be used in conjunction with sediment traps or basins on construction sites that do not drain within 7 days from May to October.
- Applied to remove uncontaminated groundwater or waters accumulated in sumps or BMPs on the job site.

Limitations:

- Discharged water must be able to flow through the dewatering system without overflowing the structure.
- Dewatering practices should be used as a last resort control measure.
- Design and use will be determined by on-site conditions.
- When removing contaminated waters or hazardous substances, the contractor shall implement appropriate pollution controls.
- May need to obtain and comply with local permits.
- A temporary discharge permit is required from NDEP if the discharge rate exceeds 250 gpm or the dewatering period exceeds 48 hours.

Dewatering Operations (cont.)

The following suggested BMPs are primarily meant for sediment removal only. If waters present at the site are determined to be polluted or containing hazardous substances, additional controls must be implemented, and local environmental control authorities must be notified.

Standards and Specifications:

- Regional and watershed-specific discharge requirements must be followed.
- NDEP may require an additional NPDES Dewatering Permit for the discharge of accumulated non-storm water, including but not limited to groundwater, water from cofferdams, de-watering of piles, and water diversions.
- A dewatering plan shall be included in the SWPPP detailing the location of the dewatering, equipment used, and the discharge point.
- Records of dewatering activities shall be maintained for a minimum of three years.
- Do not allow discharges to cause erosion at the discharge point.

Inspection and Maintenance:

- Regular inspection is necessary to ensure that the structure is functioning efficiently.
- Do not discharge waters into the storm drain system or waters of the state when using floating suction hoses.

Implementation:

Sediment Traps - See Fact Sheet SC-6

- A sediment trap consists of a temporary basin formed by excavation or construction of an embankment across a drainage way. Water is detained in the structure and sediment is allowed to settle out. Water exits the trap via a reinforced spillway.
- Effective for removal of large and medium sized sediment.
- Requires excavation and cannot be transported to various discharge points.

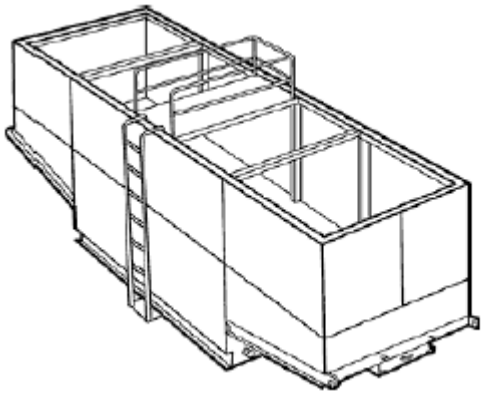
Sediment Basins – See Fact Sheet SC-7

- A sediment basin is similar to a sediment trap except that the outlet structure consists of a perforated riser pipe rather than a spillway.
- Effective for removal of trash and gravel through silt sized sediment.

Dewatering Operations (cont.)

Weir Tanks

- A weir tank is a mobile unit which separates waste by passing water through a series of weirs, maximizing the residence time within the tank and removing oil, grease and sediments.
- Tanks can be used as a component in a treatment train if desired, or set up in parallel to allow for larger discharge volumes.



- Tanks of various sizes, for different flow volumes and contaminants of concern are available from a variety of vendors. Vendors will deliver the tank to the construction site and assist with set-up and operation.
- Frequent cleaning may be required to maintain functionality. Oil and grease must be disposed of by a qualified entity.
- A Professional Engineer is required to determine the appropriate size of tank required.

Dewatering Containers

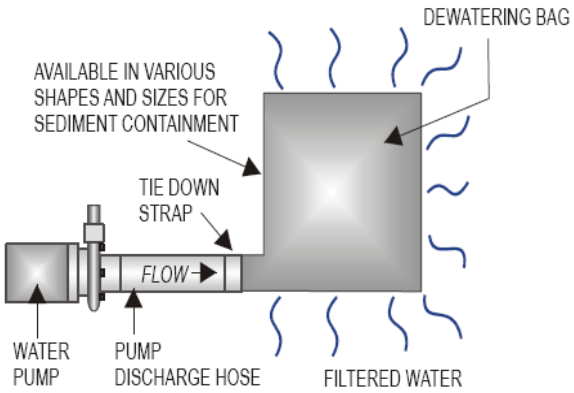
- A dewatering container is a mobile unit which removes debris and sediment by way of a filter fabric. Flow enters the tank through the top, passes through the filter, and discharges through the bottom.

Dewatering Operations (cont.)

- Dewatering tanks typically remove trash, gravel, sand, and silt, with limited effectiveness for removing oil and grease and metals.
- Tanks can be used as a component in a treatment train if desired, or set up in parallel to allow for larger discharge volumes.
- Tanks of various sizes, for different flow volumes and contaminants of concerns are available from a variety of vendors. Vendors will deliver the tank to the construction site and assist with set-up and operation.
- Frequent cleaning may be required to maintain functionality. Oil and grease must be disposed of by a qualified entity.
- A Professional Engineer is required to determine the appropriate size of tank required.

Gravity Bag Filters

Photo source: U.S. Filter Bags



Graphics Source: CASQA

- A gravity bag (or “dewatering bag”) is a rectangular bag made of geotextile fabric designed to remove sand, silt, and fines from discharged water.
- Water is pumped into the bag and seeps through the material composing the body of the bag.
- The gravity bag filter is used in conjunction with a secondary containment device such as a rock filter bed barrier to capture sediments escaping the bag.
- The bag must be inspected at regular intervals and replaced when it fails to remove sediment.
- The gravity bag filter is only applicable for small-scale dewatering projects.
-

Dewatering Operations (cont.)

Sand Media Particulate Filter

- Water is pumped through canisters filled with sand filtration media.
- These can be used for stand-alone treatment or as a secondary treatment method following a sediment trap or basin.
- Effective for removal of trash, gravel, sand, and silt, and reduction of metals, BOD and turbidity.
- Vendors are available to deliver sand filter units to construction sites and assist with set-up and operation.
- Service units at least monthly to ensure proper function.

Pressurized Bag Filter.

- Discharged water is forced through pressurized polyester filter bags.
- Such units can be set up in a variety of configurations, depending upon site requirements. Configuration often includes cartridge filters for enhanced treatment.
- Effective for removal of trash, gravel, sand, and silt, and reduction of metals, BOD and turbidity. Oil absorbent bags are available for oil and grease removal.

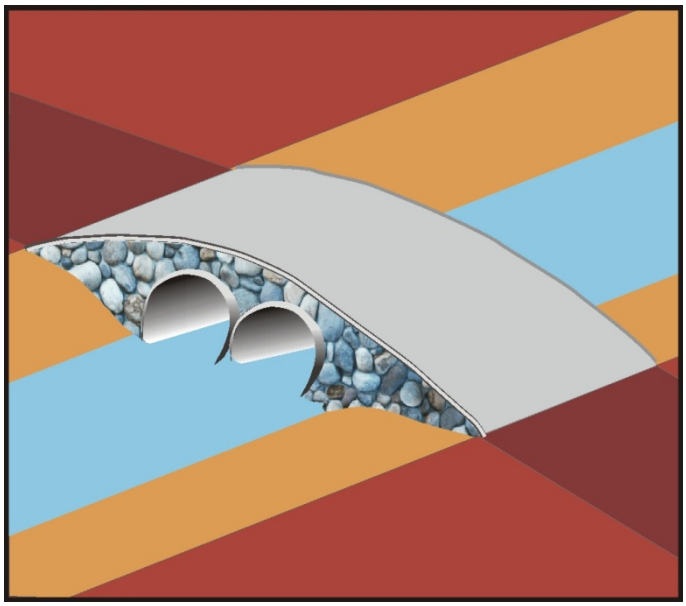
Dewatering Operations (cont.)

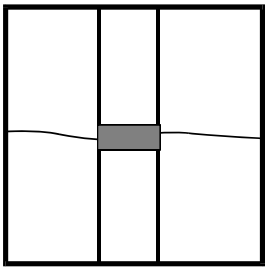
- These can be used for stand-alone treatment or as a secondary treatment method following a sediment trap or basin.
- Vendors are available to deliver bag filter units to construction sites and assist with set-up and operation.
- Service units regularly to ensure proper function.

Cartridge Filter

- Cartridge filters combine a number of individual filters for an enhanced level of water treatment.
- Effective for removal of trash, gravel, sand, and silt, and reduction of metals, BOD and turbidity. Resin cartridges are available for oil and grease removal.
- Often used in series with sediment traps or basins for pre-treatment.
- Vendors are available to deliver bag filter units to construction sites and assist with set-up and operation.

Temporary Stream Crossing





Map Symbol

Graphics produced by Kennedy/Jenks Consultants

Purpose: A temporary stream crossing is a culvert, bridge, or ford placed across a waterway for use by construction traffic. This structure stabilizes and minimizes erosion of the streambanks and channel.

Applications:

- At sites where construction vehicles will frequently cross a stream or waterway.
- At sites where duration of construction activities will not exceed one year.

Limitations:

- May require a U.S. Army Corps of Engineers 404 Permit, a 401 Water Quality Certification from NDEP, a State Lands authorization or other permits.
- Disturbance of the waterway will occur during the installation and removal of temporary stream crossings. Therefore, sediment control measures may need to be installed in the waterway during construction.
- Stabilize disturbed areas both during construction and after removal of the structure.
- Structures may obstruct flow in the waterway during prolonged storm events causing flooding and/or washouts.
- Diversion or dewatering of the channel may be required during the installation of the stream crossing structure.

Temporary Stream Crossing (cont.)

Standards and Specifications:

General Considerations

- A Nevada registered civil or structural engineer shall design temporary stream crossing structures.
- Install sediment traps immediately downstream of crossings to capture sediments.

Temporary Bridge

- Must not restrict waterway area.
- Must span waterway with no intermediate supports
- Must be designed by a registered engineer and constructed to carry design traffic loads.

Temporary Culverts

- Typically used on perennial and intermittent streams.
- Install on a stabilized bed.
- Stabilize inlets and outlets.
- Stream channel banks and bed must be restored following culvert removal.
- Appropriate for streams with high flow velocities, steep gradients, or where temporary constrictions in the channel are not allowed.
- Must be engineered and constructed to carry design traffic loads.
- Must be designed with a capacity in accordance with local drainage design manual.

Temporary Ford

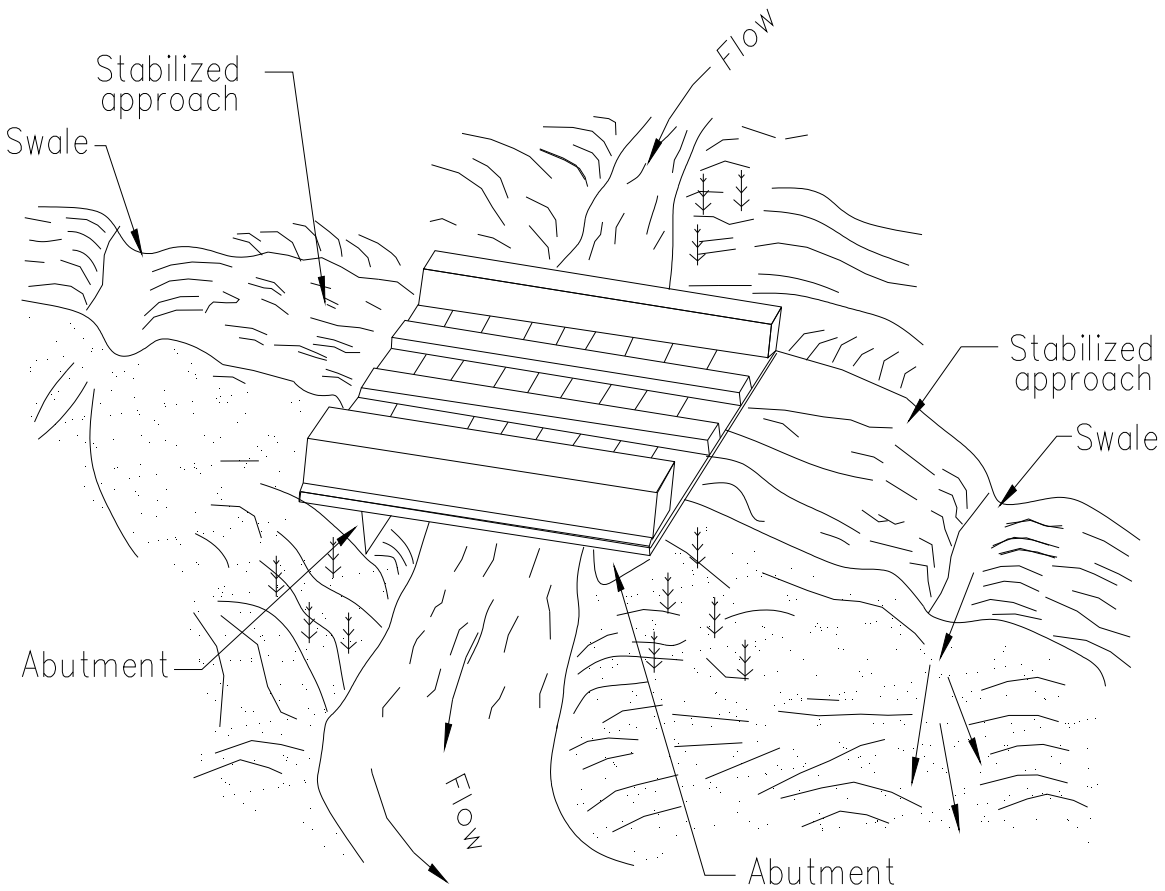
- Used in arid areas during the dry season for dry washes and ephemeral streams.
- Do not use on perennial streams.
- Design approach roads with a maximum slope of 7H:1V.
- Stabilize banks and roadbed to above design high water level.
- Use filter fabric and compacted aggregate to stabilize road surface.
- Do not apply oil or hazardous materials to the roadway.

Temporary Stream Crossing (cont.)

Inspection and Maintenance:

- Inspect weekly as well as before and after significant rainfall events.
- Inspect for sediment buildup in the culverts or blockage of the channel.
- Inspect for structural weakening of the temporary crossing.
- Inspect for channel scour, erosion of the abutments, riprap displacement, or piping in the soil.
- Remove silt behind fords, in culverts, and under bridges.
- Replace aggregate that has been lost from culvert inlets and outlets.
- Repair streambank erosion.
- Promptly remove temporary stream crossings when no longer needed.

Temporary Stream Crossing (cont.)

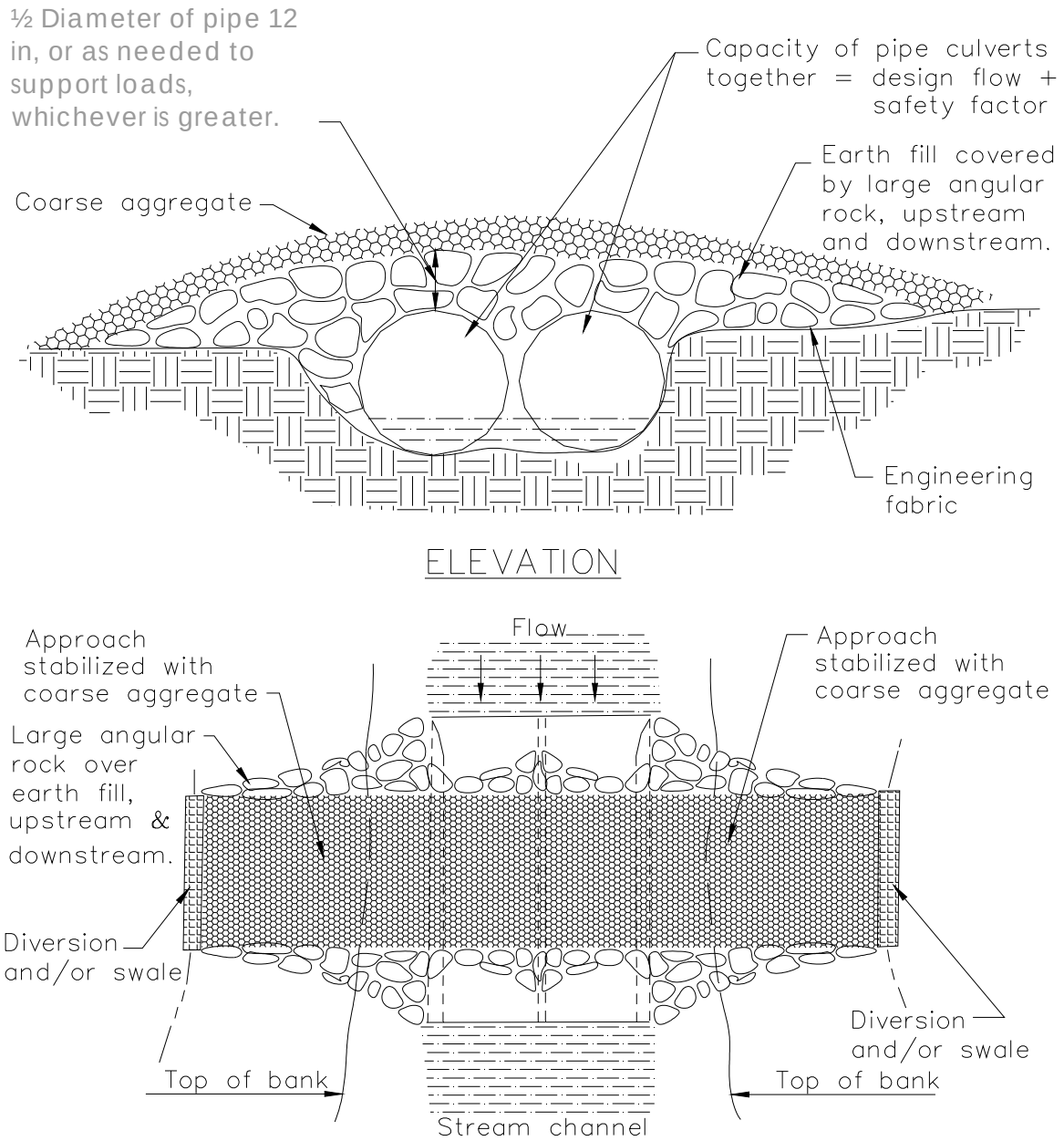


NOTE:
Surface flow of road diverted by swale and/or dike.

TYPICAL BRIDGE CROSSING
NOT TO SCALE

Graphic used with permission of Caltrans.

Temporary Stream Crossing (cont.)



TYPICAL CULVERT CROSSING
NOT TO SCALE

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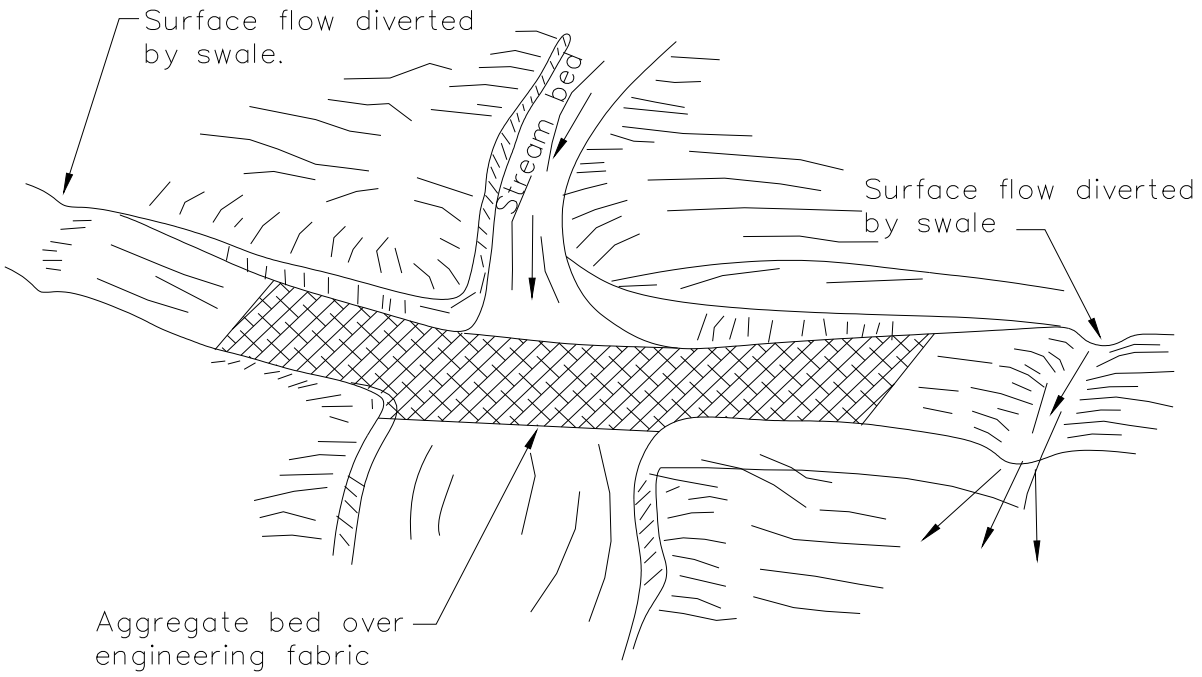
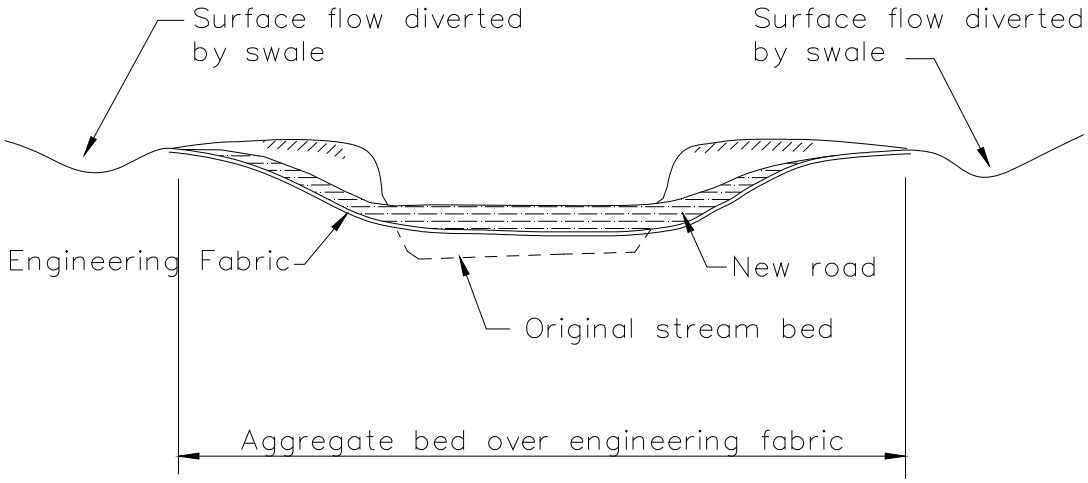
Temporary Stream Crossing (cont.)



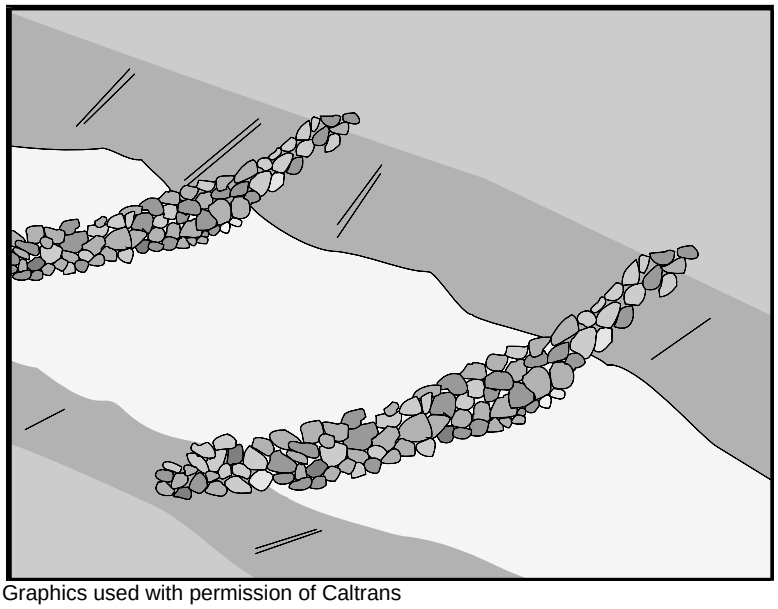
Aggregate approch
1:5 (V:H) Maximum slope on road



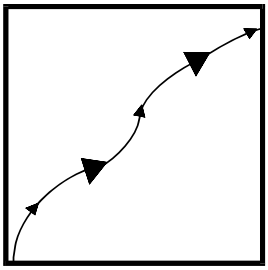
TYPICAL FORD CROSSING
NOT TO SCALE

Graphic used with permission of Caltrans.

Check Dams



Graphics used with permission of Caltrans



Map Symbol

Purpose: To reduce erosion in channels, swales and ditches caused by high flow velocities through the installation of temporary dams constructed of rocks or gravel bags. Check dams reduce flow velocity and channel scour and encourage sediment deposition. Fiber rolls can also be used in low flow and low gradient drainage swales (< 1 cfs and < 3H:1V), provided they are securely anchored in place.

Applications:

- Used in small open channels draining 10 acres or less.
- Used in steep channels when runoff velocities exceed 3 feet/second.
- Used when establishing grass linings in channels or drainage ditches.

Limitations:

- Do not use in live streams.
- Do not use in channels draining areas greater than 10 acres.
- Do not construct a check dam with silt fencing or straw bales.
- Check dams shall not be used as primary sediment-trapping devices.
- Extensive maintenance may be required following high flow events.
- Check dams typically trap sediment, which can be re-suspended during subsequent storm events and during check dam removal.

Standards and Specifications:

- Place check dams at a distance and height to allow small pools to temporarily form behind them.
- Space the dams at regular intervals based upon soil types and slope gradients.

Check Dams (cont.)

- Use clean rock riprap with the D_{50} ranging from 3 to 6 inches in diameter.
- Install the first check dam approximately 16 feet downstream of the outfall device. Steeper channel slopes and more erosive soils require shorter spacing intervals between check dams.
- Space check dams such that the downstream toe of each dam meets the backwater from the next downstream check dam.
- Design check dams to pass a 2-year, 24-hour storm without causing damage to the dam or any upstream flooding.
- The maximum height of a check dam is 4 feet from the upstream toe to the crest and the center of the dam.
- Construct the crest and the center of the dam 6 inches lower than the edges.
- Install (keyed) dam materials at least 6 inches into the sides and bottom of the channel.
- Do not dump rocks when constructing check dams. Place rocks individually by hand or by mechanical methods.
- If gravel bags are used in the construction of check dams, follow the design criteria presented in BMP fact sheet SC-3 (do not use sand bags).
- If fiber rolls are to be used as check dams in low flow (< 1 cfs) and low gradient (< 3H:1V) drainage swales, they must be securely anchored in place (e.g. keyed-into the soil at least 1/3 the diameter of the fiber roll and staked in place) and follow the design criteria presented in BMP fact sheet SC-1.
- Check dams should be removed once vegetation has been established in a channel. However, check dams may be left in place if they are designed as permanent structures and in accordance with local drainage policies.
- From October to May, do not allow water to pond behind check dams for more than 7 days.

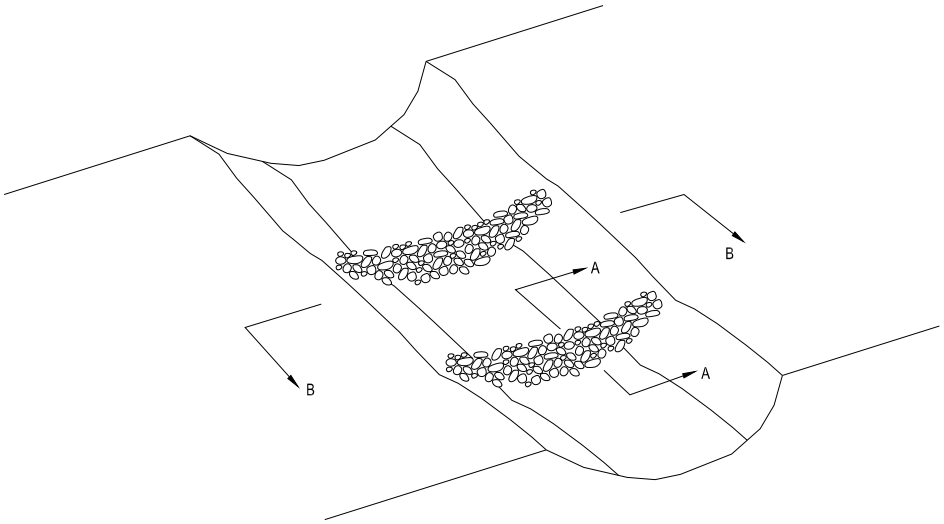
Inspection and Maintenance:

- Inspect regularly and after each runoff event for sediment buildup and signs of erosion under or around the dam.
- Replace loose material.
- Remove accumulated sediments when it reaches one third of the check dam height.
- Remove accumulated sediment prior to performing soil stabilization or permanent seeding practices.

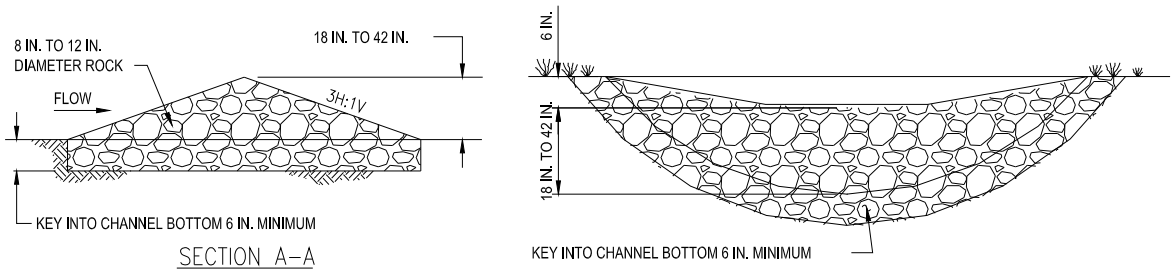
Check Dams (cont.)

- Remove check dam and accumulated sediment when dams are no longer needed.
- Dispose of accumulated sediments properly.

Check Dams (cont.)



TEMPORARY CHECK DAM
(ADAPTED FROM CALTRANS)



ROCK CHECK DAM
NOT TO SCALE

Graphics adapted from Caltrans.

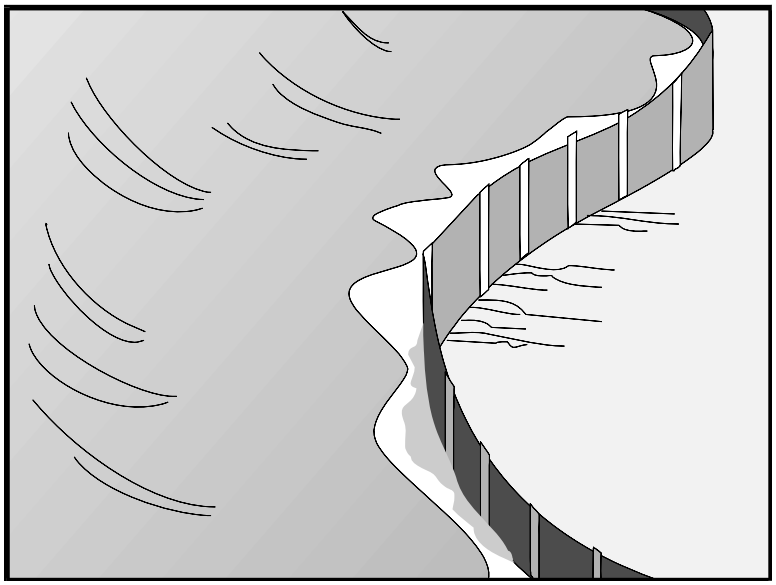
Check Dams (cont.)

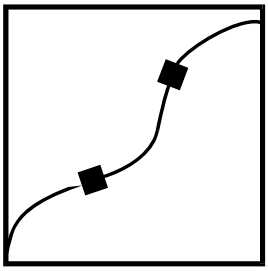
NOTES

1. Spillway depth "D" shall be maintained to prevent flanking of concentrated flow around the ends of the check dam.

Graphics adapted from Caltrans

Silt Fence





Map Symbol

Graphics used with permission of Caltrans

Purpose: To slow and detain sediment laden sheet flow from disturbed areas, which allows the settlement of sediment and reduces or prevents sediment from discharging to storm drains, streams or other watercourses.

Applications:

- Along the construction site perimeter.
- Below the toe of slopes.
- Along streambanks and channels.
- Around temporary stockpiles.

Limitations:

- Not effective unless properly installed.
- Do not use on slopes greater than 4H:1V.
- Labor-intensive maintenance may be required.
- Fencing must be removed and disposed of properly upon completion of construction.

Silt Fence (cont.)

Standards and Specifications:

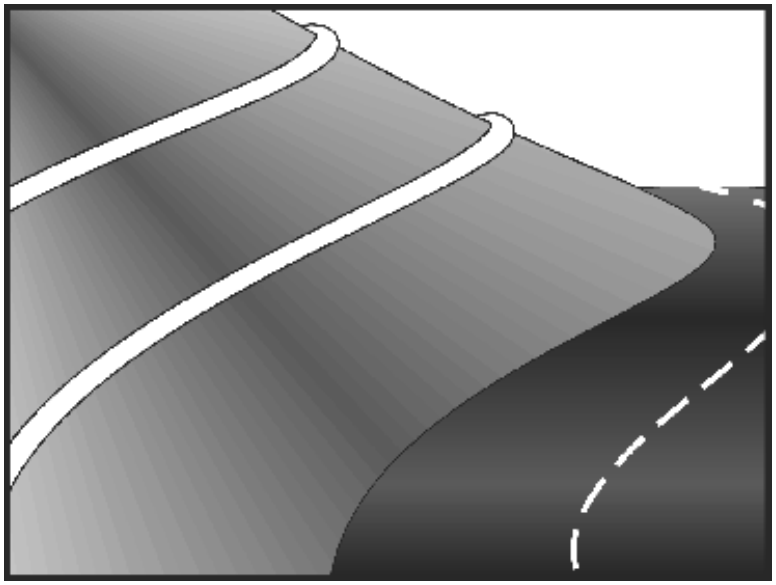
- Do not install silt fences across streams, channels, or in any location where flows may be concentrated.
- Fencing must be located where waters may temporarily pond and sediments can be deposited.
- Application in environmentally sensitive areas requires additional practices.
- Install the fencing along a level contour at the toe of a slope.
- Install fencing a minimum of 3 feet from the toe of the slope or at the top of the bank.
- Limit drainage area upstream of fence to 0.25 acre/100 feet of fence.
- Limit the length of the slope area draining to any point along the silt fence to 100 feet or less.
- Maximum length of any single run of fencing is 500 feet.
- Angle the last 8 feet of fence upslope in a “J” or “L” shape to allow for ponding.
- Silt fence material shall be woven nylon reinforced polypropylene with a built in top chord running along the top of the fabric.
- Minimum requirements of fabric are: tensile strength (ASTM D4632) of 90 lbs, puncture rating (ASTM D4833) of 60 lbs, and mullen burst rating (ASTM D3786) of 280 psi.
- Fence posts shall be free from decay, splits, or cracks, have a minimum thickness of 2 inches, and have a minimum length of 4 feet.
- Fence posts shall be installed a minimum depth of 12 inches into the ground, and have a maximum spacing of 8 feet.
- Steel fence posts may also be used.
- Areas prone to high winds will require closer spacing of fence posts.
- Fence posts shall be located on the downstream side of the fabric and mesh.
- Fabric must be stapled or wired to the posts.
- Locate a 6-inch X 6-inch trench on the upstream side of the fence. Overlap at least 6 inches of fabric into the trench. Key in the bottom of the fence as shown in Detail A. Fill the trench with tamped native soil or washed gravel.

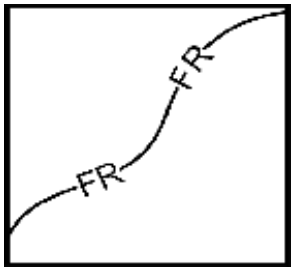
Silt Fence (cont.)

Inspection and Maintenance:

- Inspect before and after each rain event.
- Repair any damage caused by construction (undercutting of the fence, split, torn, and weathered fabrics, or slumping of the fence).
- Fabrics may have to be replaced every 5-8 months.
- Remove silt when the depth of the deposit reaches one-third the fence height.
- Remove silt and dispose of to avoid siltation problems.
- From May through October, do not allow water to pond behind silt fences for more than 7 days.
- Remove fencing at the completion of the construction project or when the site has been stabilized.
- Backfill any holes or depressions caused by the removal of the silt fence according to standard specifications.

Fiber Rolls





Map Symbol

Graphics used with permission of Caltrans

Purpose: Fiber rolls allow water to pass through while decreasing runoff velocity, increasing infiltration rates, and trapping sediments. Also known as sediment logs or straw wattles, they can provide temporary or permanent controls and biodegrade with time.

Applications:

- Along the top and face of slopes to reduce the slope length and to spread runoff as sheet flow.
- At grade breaks where slopes transition from shallow to steep.
- As check dams in drainage swales where flows will not exceed 1 cfs.
- Along streambanks.
- If properly anchored or weighted, to protect storm drain inlets.
- Down-slope of exposed soil areas.
- Around temporary stockpiles.
- Along the perimeter of a project.

Limitations:

- Proper siting and installation are critical to ensure effectiveness and to prevent exacerbated erosion and/or blockage of storm drain systems.
- Not to be used where surface flows are anticipated to exceed 1 cfs.
- Fiber rolls can be transported by high flows if not properly anchored.

Fiber Rolls (cont.)

- Fiber rolls are not to be used at the base of slopes in place of linear sediment barriers such as silt fences.
- Do not use fiber rolls on slopes subject to creep, slumping of landslides.
- Fiber rolls are difficult to move or remove when saturated.

Standards and Specifications:

- Fiber rolls consist of straw, flax, coconut fiber, or similar materials contained in tubular cylinders of synthetic netting.
- When placed along the face of slopes, spacing between rows of fiber rolls is determined by slope inclination and slope length (see table below).

Slope Steepness	Fiber Roll Spacing
2H:1V or steeper	10 feet or less
4H:1V to 2H:1V	15 feet or less
4H:1V or flatter	20 feet or less

- Create a 2-4 inch wide concave trench along the proposed installation route. Place the excavated soil on the uphill or downhill side of the roll to prevent undercutting.
- Remove debris and stones from the trench before installing fiber rolls.
- Lay the fiber roll into the trench, stake it on both sides of the roll at the ends, and continue to stake every 4 feet.
- Stakes shall have a minimum dimension of ¾-inch X ¾-inch X 24-inches.
- Install stakes on alternating sides of the fiber roll.
- If more than one fiber roll is placed in a row, overlap the end sections. Do not abut the ends or leave gaps between the end sections.

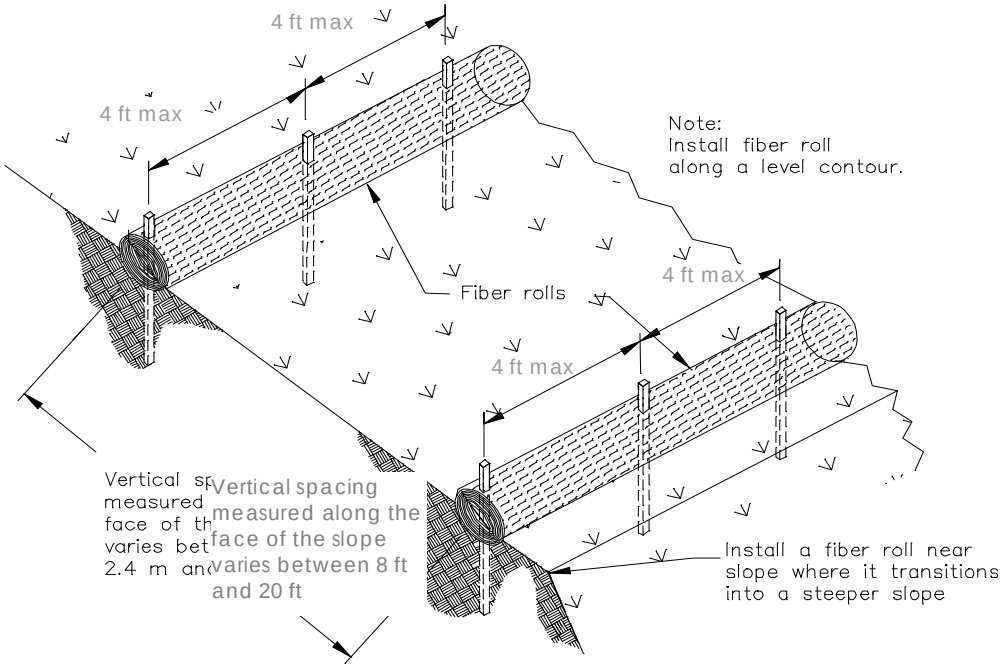
Inspection and Maintenance:

- Repair and/or replace torn, split, unraveling, or slumping fiber rolls.
- Inspect fiber rolls before and after storm events. Check fiber rolls daily during prolonged rainfall events.
- Re-trench and stake down fiber rolls that are undercut by rills or gullies.
- Remove accumulated sediment when it reaches three quarters (3/4) of the barrier height. Properly dispose of collected sediment or move to a vegetated area or other place at the site where it will not wash into storm drains, ditches, channels, or streams.

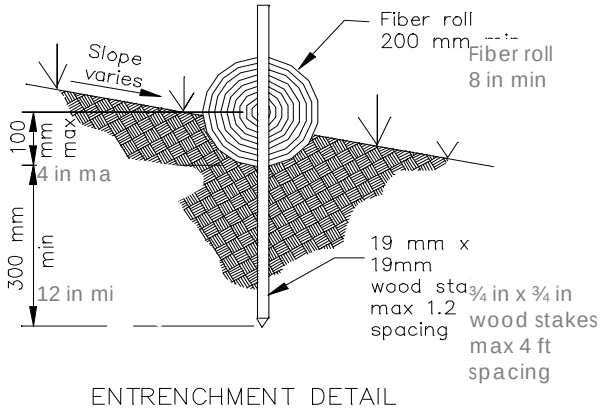
Fiber Rolls (cont.)

- Fiber rolls are typically removed if part of the permanent erosion control and site stabilization. If fiber rolls are removed, collect and dispose of sediment accumulation, and fill and compact holes, trenches, depressions or any other ground disturbance to blend with adjacent ground. Seed and mulch, or otherwise stabilize the disturbed area where the fiber rolls were removed (apply seed during winter or fall months).

Graphic adapted and used with permission of Caltrans.

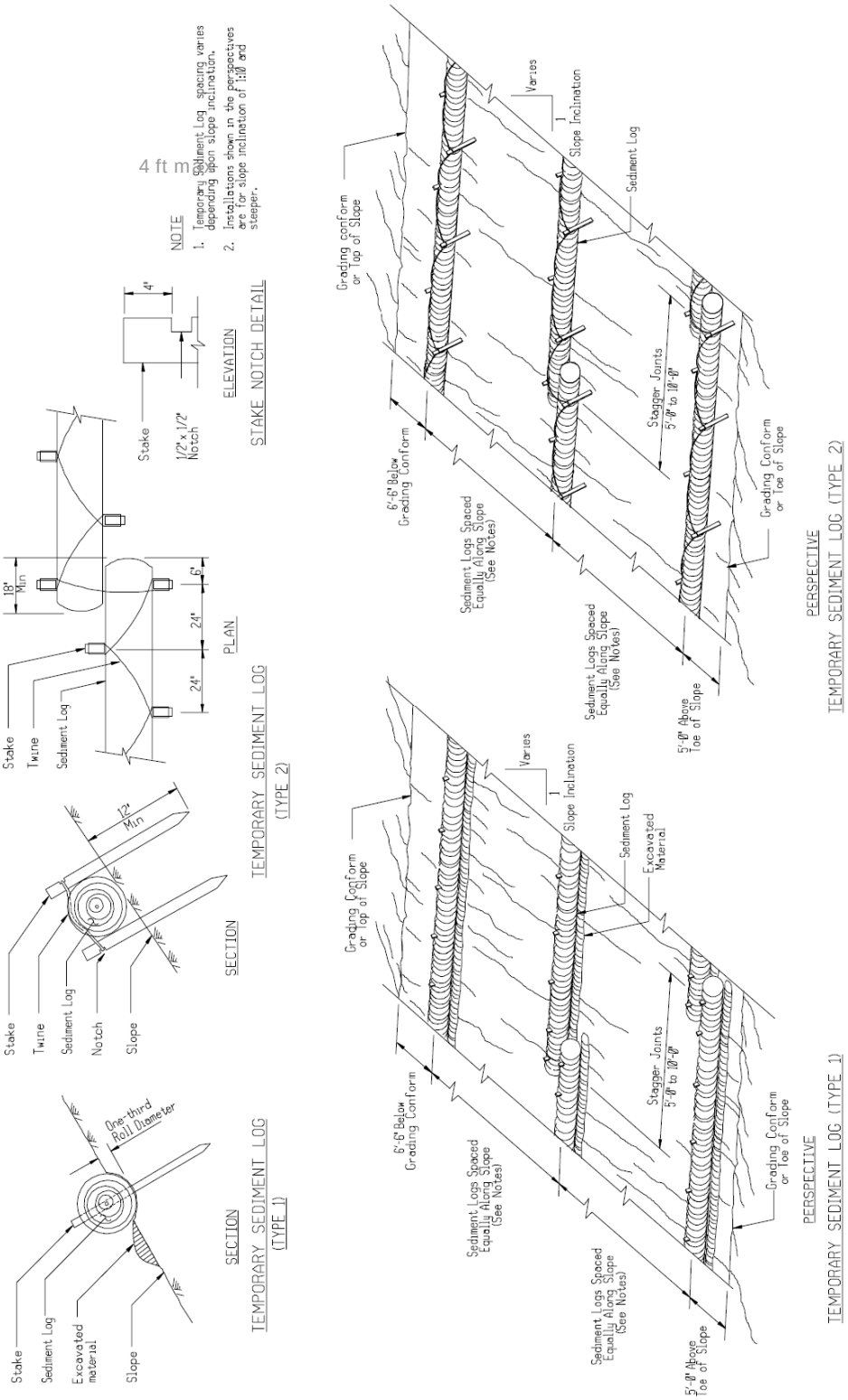


TYPICAL FIBER ROLL INSTALLATION
N.T.S.



ENTRENCHMENT DETAIL
N.T.S.

Fiber Rolls (cont.)



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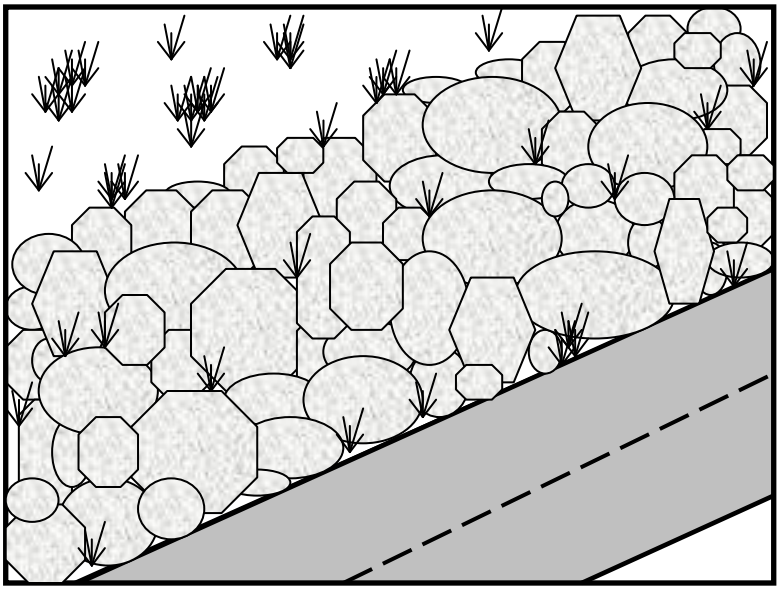
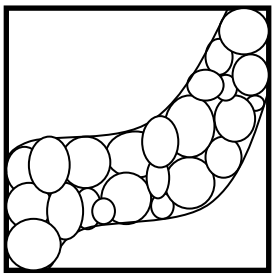
Riprap





Map Symbol

Graphics produced by Kennedy/Jenks Consultants

Purpose: To stabilize and to protect soil from erosion in areas of concentrated runoff.

Applications:

- Used on cut-and-fill slopes, channel side slopes, channel bottoms, inlets and outlets of culverts and slope drains, and streambanks.

Limitations:

- Riprap is not allowed for use as an erosion or sediment control on disturbed slopes within the City of Sparks.
- Slopes greater than 2H:1V may lose riprap.
- Implement measures to minimize erosion and excess turbidity in flowing streams during construction.

Standards and Specifications:

- When using riprap in the Truckee River the rock should be washed before being placed into the river.
- Use a well-graded mixture of rock sizes that are appropriate for the flows (cfs) in the river.
- Use durable stone that won't quickly decompose from freeze/thaw cycles (typically granite).
- Construct riprap layers twice as thick as the maximum stone diameter.
- Use a filter cloth material or a layer of gravel as a filter between the riprap and the underlying soil surface.

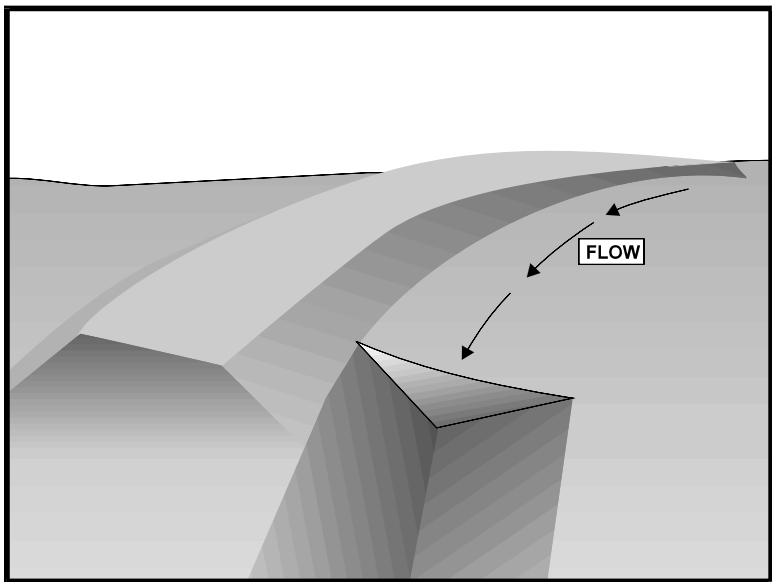
Riprap (cont.)

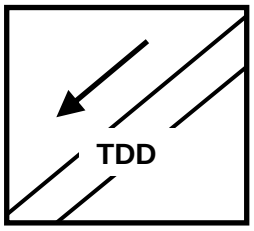
- Extend riprap as high as the maximum flow depth in channels or streams (minimum of 4 feet) or to a height where vegetation will be satisfactory to control erosion.
- On curves, extend riprap through the curve to five times the upstream and downstream curve endpoints.
- Riprap size depends upon site-specific conditions.

Inspection and Maintenance:

- Inspect annually and after major storms.
- Repair and replace damaged riprap immediately.
- Keep channel clear of obstructions such as trees and sediment bars.

Temporary Diversion Berms & Ditches





Map Symbol

Graphics used with permission of Caltrans

Purpose: To prevent erosion by capturing and diverting runoff away from the unprotected slopes. Also used along the perimeter of construction sites to prevent runoff from leaving the site. Use temporary diversion berms and dikes, ditches and swales to convey runoff to sediment trapping devices, stabilized outlets or level spreaders, where appropriate.

Applications:

- Used on upslope of disturbed areas.
- Located at the perimeter of construction sites.
- Intercepts runoff from paved surfaces.
- Directs runoff to sediment trapping devices or stabilized outlets.

Limitations:

Temporary Diversion Berms and Dikes

- Do not remove or trap sediments.
- Surrounding slopes shall not exceed 5 percent.
- Upstream drainage areas shall not exceed 5 acres.
- Dikes may become barriers to construction equipment.
- Concentrated runoff may damage adjacent areas.
- Diversion dikes shall not cross roadways.
- Dikes must not adversely affect upstream or downstream properties.

Temporary Diversion Berms & Ditches (cont.)

Limitations:

Temporary Diversion Ditches and Swales

- Must conform to local floodplain management regulations and shall not adversely impact upstream or downstream properties.
- Not to be used as sediment trapping devices.
- Scour and erosion in newly graded swales and ditches may occur.
- Ditches and swales may require lining or check dams to prevent erosion and gully formation.
- Can be expensive if engineering design is required.
- Vegetation and ponded water in the bottom of these facilities can provide midge and mosquito habitat.

Standards and Specifications:

- Firmly compact dikes, berms, ditches and swales to minimize erosion and prevent unequal settling.
- Drain dikes, berms, ditches and swales to protected outlets and/or sediment trapping devices.
- Provide a continuous grade to prevent water from ponding.
- Keep in place until the disturbed area is permanently stabilized.

Temporary Diversion Dikes & Berms

- Dikes & Berms shall have the following minimum dimensions: top width of 24 inches, height of 18 inches, and side slopes of 2H:1V or flatter.
- When revegetation is not possible, stabilize with filter cloth if necessary to reduce erosion potential.

Temporary Diversion Ditches and Swales

- No bushes, trees, shrubs, straw bales or silt fences shall be located within ditches or swales.
- Stabilization with liners and/or check dams is required when channel grades exceed 2 percent or velocities are in excess of 6 ft/sec.

Temporary Diversion Berms & Ditches (cont.)

Level Spreaders

- Provides an outlet from a temporary runoff diversion and consist of a lowered section in the sidewall of a temporary dike or swale.
- Spreads storm water runoff over the ground as even shallow flow instead of through channels.
- Only to be used for runoff that is relatively free of sediment.
- Construct of 2 to 4-inch washed gravel at zero grade.
- Design length based on drainage area and design flow.

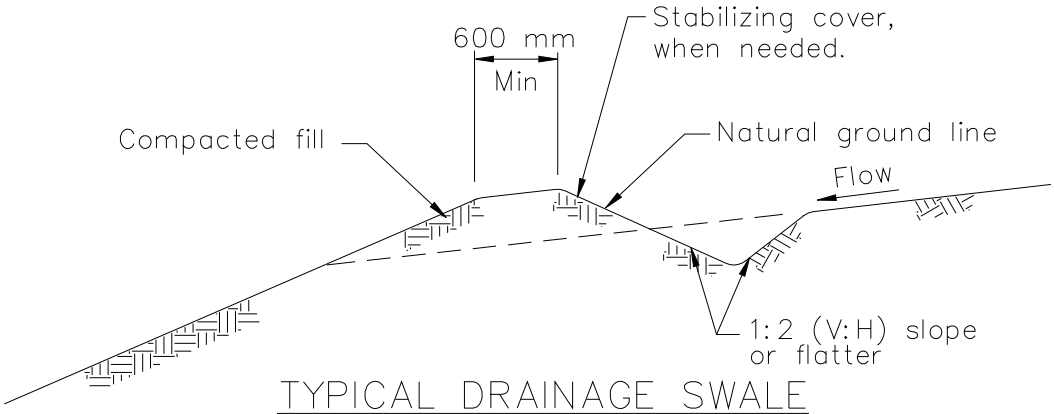
Drainage Area (acres)	Minimum Spreader Length (feet)
1	10
2	10
3	15
4	18
5	20

- Height of spreader based on depth of design flow.
- Lip of spreader shall be a gravel berm a minimum of 6-inches high.
- Width of spreader shall be 6 feet minimum.
- Slope of the undisturbed outlet must not exceed 6 percent.
- Construct level spreaders on natural soil and not on fill material or easily erodible soils.
- Grade of runoff diverter entering the spreader shall be less than one percent for at least 20 feet upstream of the spreader.
- Do not allow heavy equipment or traffic onto the level spreader.
- Regrade the spreader if ponding or erosion channels begin to develop.

Inspection and Maintenance:

- Inspect every week and after rainfall events for debris buildup or damage to dikes, ditches, swales and liners.
- Remove accumulated sediment and debris and repair embankments and repair linings as needed.
- From May to October, do not allow water to pond behind dikes or in ditches or swales for more than 7 days.

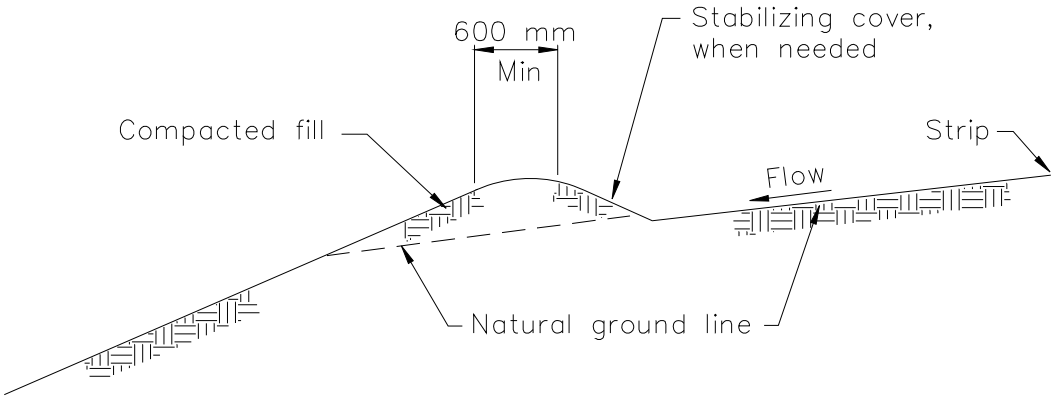
Temporary Diversion Berms & Ditches (cont.)



TYPICAL DRAINAGE SWALE
NOT TO SCALE

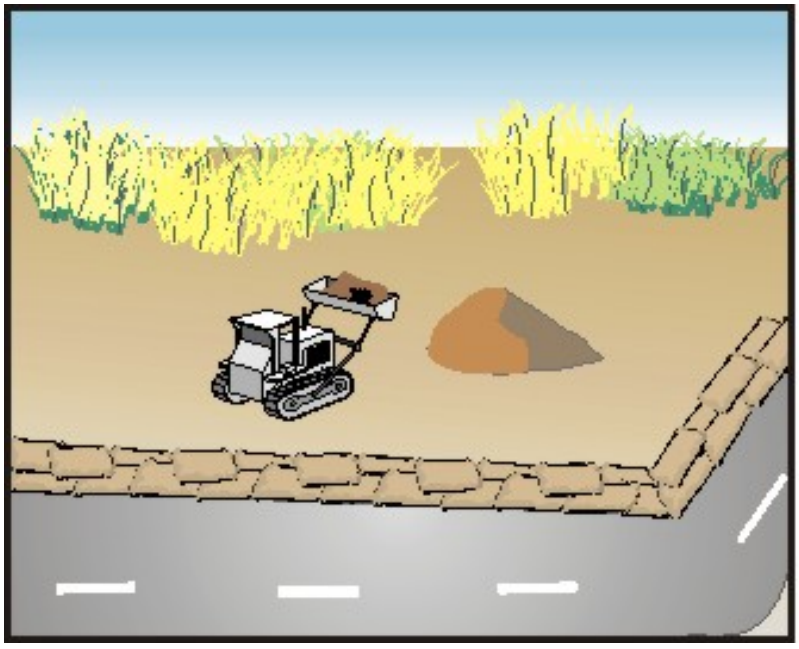
NOTES:

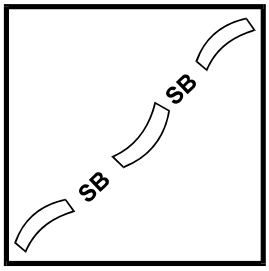
1. Stabilize inlet, outlets and slopes.
2. Properly compact the subgrade, in conformance with Section 19–5 of the Caltrans Standard Specifications.



TYPICAL EARTH DIKE
NOT TO SCALE

Sand & Gravel Bag Barriers





Map Symbol

Graphics produced by Kennedy/Jenks Consultants

Purpose: To detain sediment laden runoff from disturbed areas and to allow settling of sediment prior to release to storm drains, streams or other watercourses.

Applications:

Sand Bags and Gravel Bags

- Along the perimeter of a site.
- Parallel to roadways to keep sediments off pavement.
- Near the toe or at the top of slopes.
- Around stockpiled materials.
- To create a sediment basin.
- To capture and detain non-storm water discharges.

Sand Bags only

- To divert flows from storm drains, channels or watercourses.

Gravel Bags only

- To protect storm drain inlets and filter sediment from storm water.

Limitations:

- Upstream drainage areas are limited to 5 acres or less.

Sand & Gravel Bag Barriers (cont.)

- Degraded gravel bags may rupture when removed.
- Berm heights are limited to 18 inches or less.
- Installation can be labor intensive.
- Do not use gravel bag barriers to detain concentrated flows.

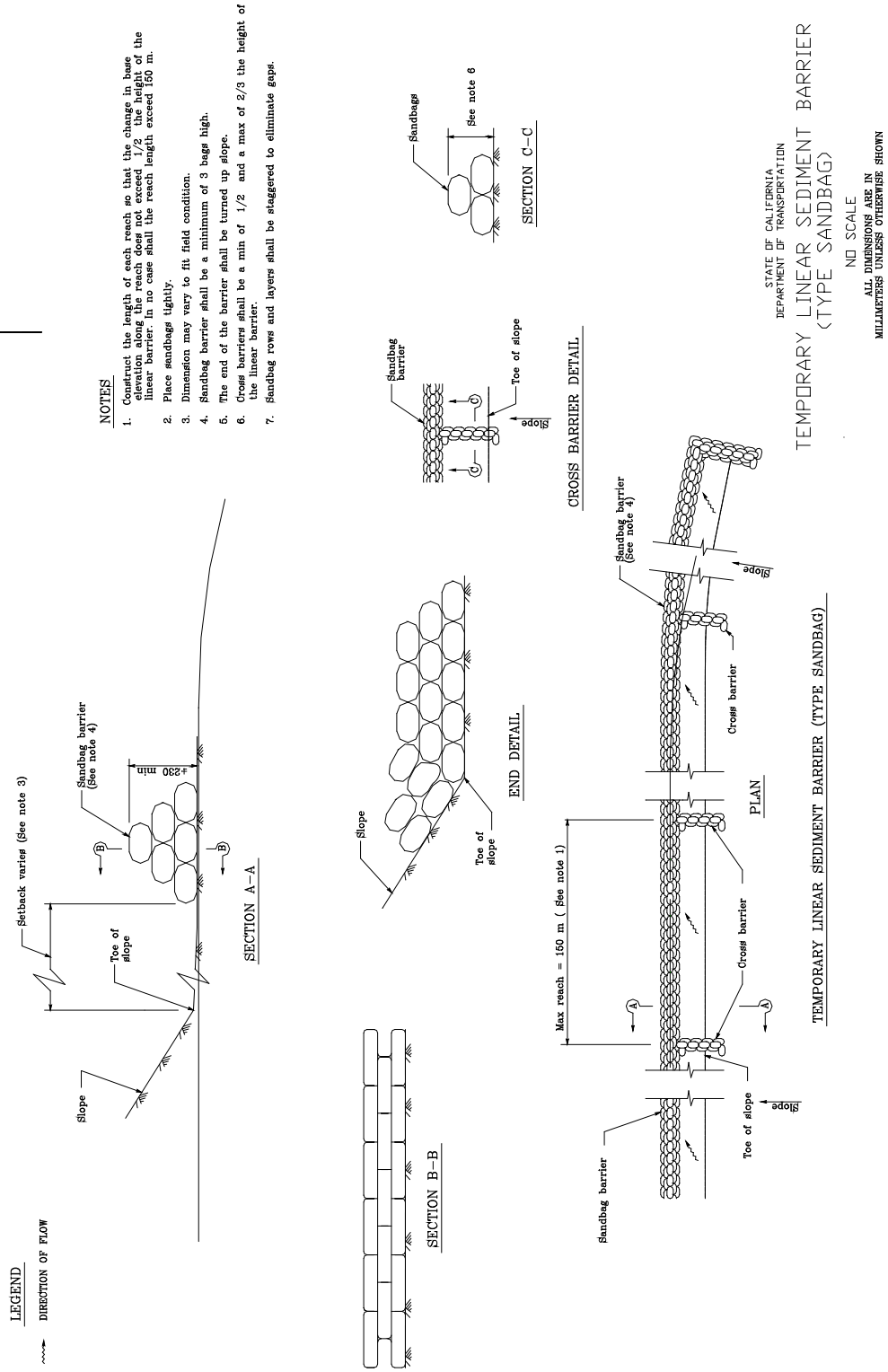
Standards and Specifications:

- Sand bags and gravel bags shall be constructed of woven polypropylene, polyethylene or polyamide fabric. Minimum fabric weight is 4 ounces per square yard and the mullen burst strength shall exceed 300 psi. The materials shall conform to ASTM D3786 and have ultraviolet stability in excess of 70 percent according to ASTM D4355. Burlap is not acceptable.
- Sand bags and gravel bag size shall be 18 inches x 12 inches x 6 inches.
- Fill materials shall be non-cohesive, free from clay or other deleterious materials and conform to 200.05.04 of the Standard Specifications for Public Works Construction (e.g. the “Orange Book”).
- Install bags a minimum of 3 feet from the toe of the slope or from the top of the bank to allow access of construction machinery.
- Stagger bags so ends do not align.

Inspection and Maintenance:

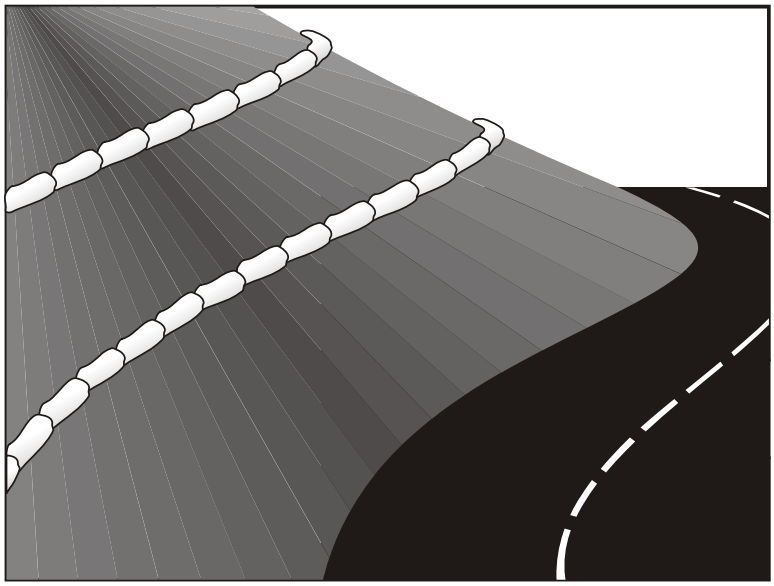
- Inspect before and after each rain event and weekly during the wet season.
- Reshape barrier or replace bags as needed.
- Repair any washouts or other damage caused by construction.
- Remove silt when the depth reaches one-third the barrier height.
- Remove silt and dispose of so as not to cause siltation problems.
- Prevent water from flowing around the ends of the barrier.
- From May through October, do not allow water to pond behind gravel bag barriers for more than 7 days.
- Remove bags at the end of the construction period or when the site has been stabilized.

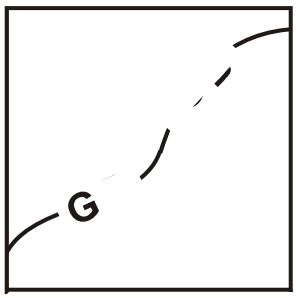
Sand & Gravel Bag Barriers (cont.)



Graphic used with permission by Caltrans.

Gravel Filter Berm





Map Symbol

Graphics used with permission of Caltrans

Purpose: To detain sediment laden runoff from disturbed areas and to allow settling of sediment prior to release to storm drains, streams or other watercourses.

Applications:

- Across slopes.
- Near the toe of slopes.
- To act as temporary check dams across construction roads or other unpaved roads when not in use.
- Around the base of stockpiled materials.

Limitations:

- Upstream drainage area limited to 5 acres or less.
- Difficult to clean up when applied to landscaped areas.
- Gravel bags will be damaged by vehicles if not moved.

Gravel Filter Berm (cont.)

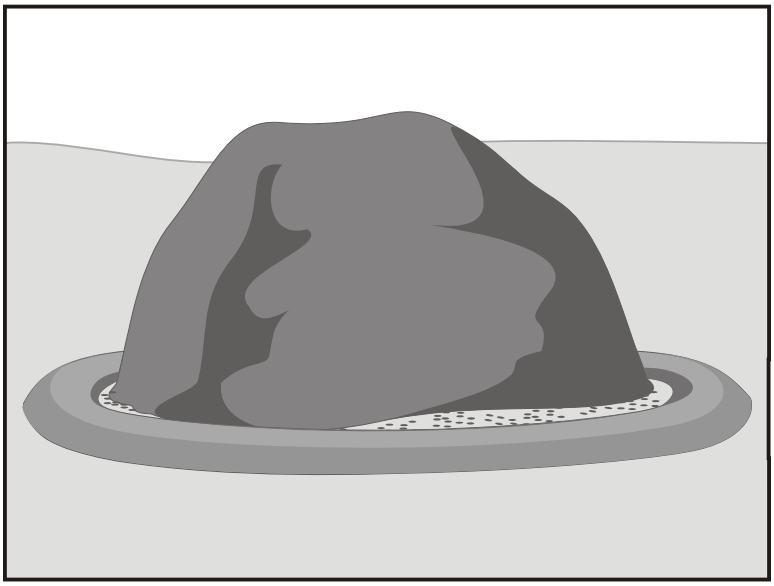
Standards and Specifications:

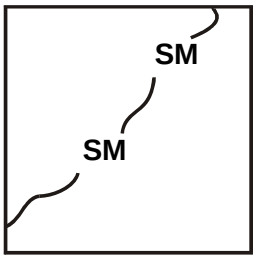
- Rock gradation: ¾-inch to 3-inch open graded when used for sheet flow, 3 to 5-inch open graded for concentrated flows.
- Use 1-inch, galvanized hexagonal woven wire mesh constructed from 20 gage wire to anchor gravel in concentrated flows.
- Provide multiple berms in series every 300 feet on slopes less than 5 percent, every 200 feet on slopes 5-10 percent, and every 100 feet on slopes greater than 10 percent.
- Non-traffic areas: Maximum flow rate per square foot through the berm is 60 gpm/ft^2, maximum height is 18 inches, top width is 24 inches, side slopes of 2H:1V or flatter.
- Traffic areas: Maximum height is 12 inches.

Inspection and Maintenance:

- Inspect monthly and after each rain event. Reshape or replace as needed.
- Repair any washouts or other damage caused by construction.
- Remove silt when the depth reaches one-third the berm height.
- Remove silt and dispose of to avoid siltation problems.
- Prevent flows around the ends of the barrier.
- From May through October, do not allow water to pond behind gravel filter berms for more than 7 days.
- Remove berms at the end of construction or when the site is stabilized.

Stockpile Management





Map Symbol

Graphics used with permission of Caltrans

Purpose: Proper management of stockpiled materials can reduce or eliminate pollution of storm water from these sources.

Applications:

- All locations and projects where materials such as soils, composts, aggregates, and paving materials are stockpiled.

Limitations:

- None have been identified.

Standards and Specifications:

- Locate stockpiles away from storm water flows, drainage courses and inlets.
- Use temporary berms, dikes, silt fences, fiber rolls, sandbags or gravel bag barriers to surround and contain stockpiles to prevent transport of materials offsite from storm water runoff.
- Apply wind erosion and dust control measures on the surface of stockpiles (see EC-5).
- Place bagged materials on pallets and cover (see GM-10 and GM-11).
- Maintain stockpile management controls year-round.
- Install stockpile perimeter controls such as temporary berms, dikes, silt fences, fiber rolls, sandbags or gravel bag barriers as soon as possible after stockpiles are created. These temporary sediment transport barriers can be temporarily removed or moved to one side when materials are removed or added to the stockpile.

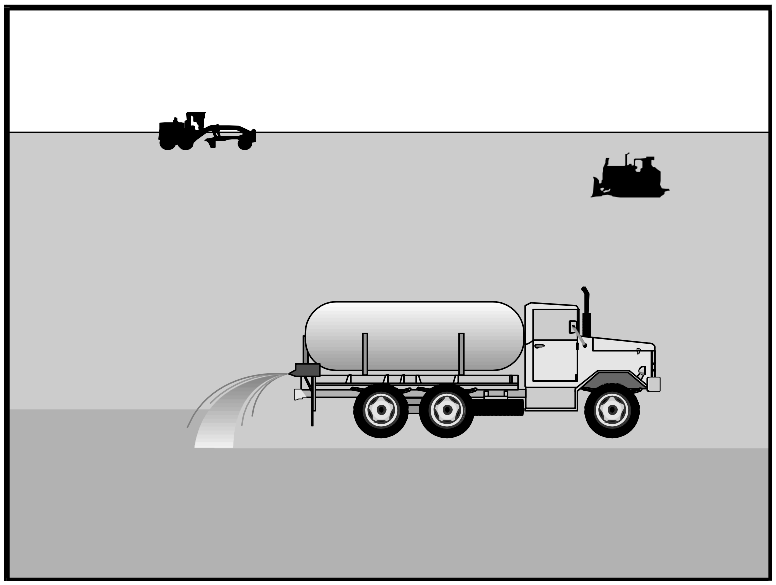
Stockpile Management (cont.)

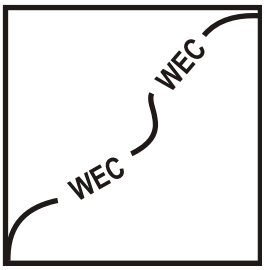
- If stockpiles are not to be used within 21 days, temporary covers (e.g. hydromulch, plastic covers, etc.) must be installed as soon as practicable and no later than 14 days after stockpiles are created. Covers shall be placed on stockpiles as soon as practicable where the initiation of temporary covers is precluded by snow or frozen ground conditions.

Inspection and Maintenance:

- Inspect perimeter controls and covers weekly and before and after storm events.
- Inspect temporary covers before, during and after windy weather.
- Replace or repair perimeter controls and covers as needed.

Wind Erosion and Dust Control





Map Symbol

Graphics used with permission of Caltrans

Purpose: Storm water runoff, wind, erosion, and vehicle trackout from construction sites can re-disperse sediments to the air by high winds and traffic. Therefore, the purpose of dust control is to minimize these effects.

Applications:

- All construction sites having exposed soils must perform dust control measures.
- Wind erosion and dust control is important in arid and windy regions.
- Areas with soils of silts and clays are prone to dust.
- Dust control is a treatment between disturbance and construction or revegetation and is a temporary measure.
- Dust control methods can help to minimize pollutants in the stormdrain system, are inexpensive, and are easy to install and maintain.
- Wind Fences are applicable in arid regions where large areas of cleared land are susceptible to blowing sand and dust.

Limitations:

- Dust control measures are only temporary and therefore require reapplication.
- Incorrect usage of chemical stabilizers can have adverse effects on water quality.
- Discharges from the site can occur if excessive water is sprinkled on the soils.

- Factors such as soil type, temperature, humidity, and wind velocity will impact the effectiveness of the dust control measures.
- Wind fences do not control sediment carried in storm water runoff. Install additional sediment and erosion control measures to capture sediment in runoff (see Section 9).

Standards and Specifications:

- Follow District Health Department standards and specifications when applying dust control measures at construction sites.
- Sand fences are barriers made of small, evenly spaced wooden slats or fabric. They are erected to reduce wind velocity and to trap blowing sand.
- Erect wind fences perpendicular to the prevailing wind source. Multiple fences may be erected to help prevent wind erosion.
- In some soil types, turning the soil brings clods to the surface where they can act to keep down the dust. In dry sandy soils, however, tilling may cause more dust to enter the air.
- Other techniques used to control and minimize dust include the addition of vegetative covers, mulch, stones, or soil binders.

o Sprinkling/Irrigation

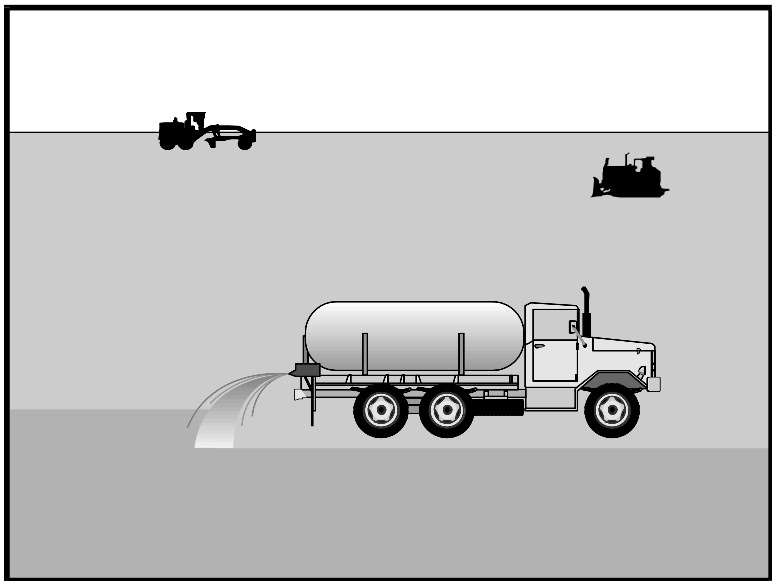
- Moistening road surfaces is an effective dust control method for traffic routes.
- This technique can be applied to all sites but lasts less than 1 day so it must be reapplied often.
- Apply 0.03 – 0.3 gal/yd^2 uniformly to pre-wet the soil surface.
- Apply 0.125 gal/yd^2 every 20-30 minutes.
- Reactivate chemicals in dry climates by rewetting with 0.1 – 0.2 gal/yd^2.
- Avoid ponding by crowning the soil surface.
- Compact soils if necessary.
- Use a pressure-type distributor or a pipeline equipped with a spray system to evenly distribute water for dust control.
- Provide a positive means to shut off distribution equipment.
- Provide at least one mobile unit to apply water or dust palliative to the construction site.
- If non-potable water is used for dust control, all tanks, pipes, and other conveyances shall be clearly marked with “NON-POTABLE WATER – DO NOT DRINK”. There shall be no connection between potable and non-potable water.

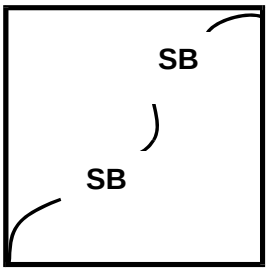
Wind Erosion and Dust Control (cont.)

Inspection and Maintenance:

- Daily inspections shall occur for areas experiencing excessive winds, vehicle traffic, or rains. If dust is observed to be leaving the site, corrective action shall be taken.
- Inspect wind fences periodically for damage and repair as needed.

Soil Binders





Map Symbol

Graphics used with permission of Caltrans

Purpose: To provide temporary stabilization of disturbed soils.

Applications:

- Locations where other methods such as temporary or permanent seeding of vegetation cannot be applied.
- Used in combination with vegetative or perimeter practices to enhance erosion and sediment control.

Limitations:

- May limit infiltration and increase runoff.
- Overuse may adversely impact water quality.
- Chemical stabilizers are expensive compared to vegetative practices.
- Soil binders are only temporary and therefore need to be reapplied.
- Some binders need at least 24 hours to become fully effective.
- Heavy rainfall events may cause spot failures.
- Soil binders are weakened by pedestrian or construction traffic.
- Soil surfaces comprised of compacted silts and clays may be impenetrable to soil binders.
- Low temperatures may not allow soil binders to cure.
- Some soil binders do not perform well in climates with low relative humidity.

Soil Binders (cont.)

Standards and Specifications:

- Soil binders must be non-toxic to plants and animals, easy to apply, easy to maintain, and not stain paved surfaces.
- Do not allow overspray to reach sidewalks, lined drainage channels, or existing vegetation.

Types of soil binders:

- Copolymer – Provides long-term soil stabilization (1-2 years) and is compatible with existing vegetation. However, it is relatively costly and 80 – 100 gallons/acre is the suggested application rate.
- Lignin sulfonate – Good for short- to medium-term soil stabilization in low traffic areas. Effective in dry climates and should be applied in a 1-2 inch thick layer on loosened surfaces.
- Psyllium/Guar – Good for short-term application. They are low cost but may adversely affect vegetation.
- Starch, Rosin and Bonded Fiber Matrix (EC-3) can also be used.

Factors to consider when choosing a soil binder:

- Consider where the soil binder will be applied.
- Soil type and frequency of application.
- Follow the manufacturer's recommended application rates and procedures.
- Roughen embankments and fill areas prior to application of soil binders.
- Do not apply soil binders during or immediately after rainfall.
- Do not apply soil binders to frozen soils or areas with standing water or during rainy conditions or when the temperature is less than 40°F.
- Allow 24 hours for soil binders to cure.

The application of liquid agents requires:

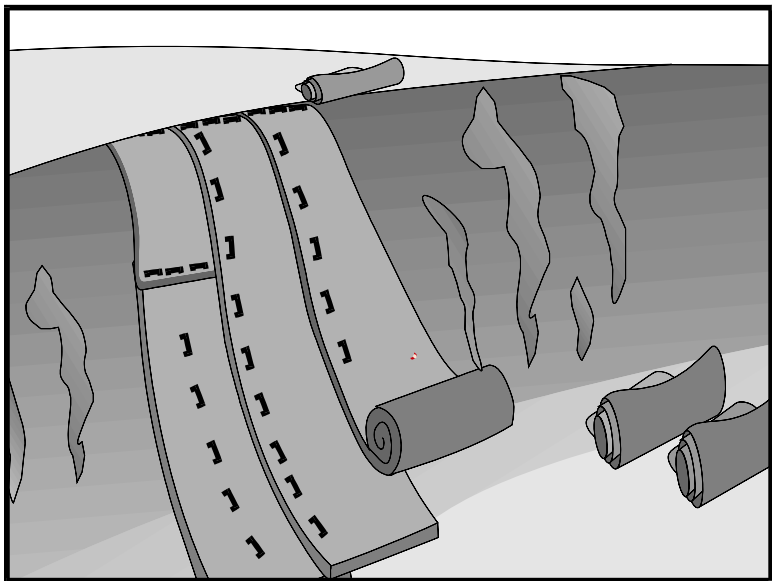
- Pre-wetting of the ground surface.
- Overlapping solution 6 to 12 inches.
- Curing for a minimum of 24 hours.
- Applying a second treatment when first treatment becomes 50 percent ineffective.
- Re-wetting the chemicals with water to reactivate them in dry climates.

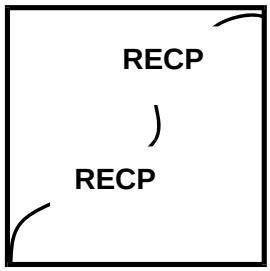
Soil Binders (cont.)

Inspection and Maintenance:

- Inspect regularly areas that have been chemically stabilized.
- Inspect daily high traffic areas while lower trafficked areas need only weekly inspection.
- Reapply stabilizers if needed.

Rolled Erosion Control Products





Map Symbol

Graphics used with permission of Caltrans

Purpose: To protect soils from wind and water and to stabilize disturbed soil areas through the application of geotextiles, plastic covers, erosion control blankets, cellular confinement systems or turf reinforcement mats.

Applications:

- Effective on steep slopes (3H:1V or greater) with high erosion potentials, slopes that are adjacent to streams or wetlands, on disturbed soils that are slow to establish vegetative cover, and on slopes where mulch must be anchored. Can also be applied in stream channels where flow velocities exceed 3.3 ft/sec.

Limitations:

- RECPs are not appropriate for sites that will be mowed or that contain rocky surfaces.
- Erosion control blankets and geotextiles are rarely used as a temporary control measure.
- Erosion control blankets and geotextiles tend to be more expensive than other erosion control methods due to labor costs and material expenses.
- Do not use erosion control blankets and geotextiles in high wind areas.
- Only use turf reinforcement mats (TRMs) with irrigation or where there is surface hydrology (i.e. wetlands) to support vegetation.
- Plastic sheeting is not degradable, can be easily torn, and must be disposed of at a landfill. It also results in 100 percent runoff, which increases the potential for erosion and downstream flooding.

Rolled Erosion Control Products (cont.)

Standards and Specifications:

- Factors to consider when choosing an erosion control blanket include cost, effectiveness, acceptability, vegetation enhancement, installation, and operation and maintenance.
- Use geotextiles with a minimum thickness of 0.6 inches and a minimum width of 12 feet. Secure geotextiles in place with wire staples or sandbags.
- Anchor polyethylene sheeting of 6-mil minimum thickness with sandbags placed a maximum distance of 10 feet apart. Hold down seams with tape or weights across their entire length. Overlap all seams at least 12 inches.
- Turf reinforcement mats are a three dimensional matrix of interwoven layers of polypropylene, nylon, and polyvinyl chloride netting. They allow for soil filling and retention as well as aiding in the enhancement of vegetative root and stem development.
- Turf reinforcement mats have high shear strengths, are resistant to ultraviolet light, and are inert to the chemicals in soils.
- Straw, coconut, straw/coconut, or Excelsior blankets are used as erosion control mats.
- Remove all rocks, vegetation, clods, and debris from the site before installing erosion control mats to allow for direct contact with soil.
- Seed the area before installing erosion control blankets.
- To anchor mats, u-shaped wire staples, triangular wooden stakes, or metal geotextile stake pins can be used.
- Staples shall be made of steel wire and be a minimum of 11 gauge.
- Metal stake pins shall have steel washers at the head of the pins.
- All anchors shall be 6-18 inches long.

<u>Steps to install erosion control blankets on slopes:</u>

- At the top of the slope, install a trench 6 inches deep by 6 inches wide to anchor the blanket and then backfill the trench.
- Follow the direction of water and unroll the blanket (downslope).
- Overlap parallel rolls by 2 inches and staple every 3 feet.
- Splice the blankets by laying them over each other with a 6-inch overlap.
- Keep the blankets in direct contact with the soil. Do not stretch them.

Rolled Erosion Control Products (cont.)

To anchor the blanket, install staples:

- Steep slopes (2H:1V and steeper) – minimum of 2 staples/yd^2
- Moderate slopes (2H:1V and flatter) – 1½ staples/yd^2
- Gentle slopes require a minimum of 1 staple/yd^2

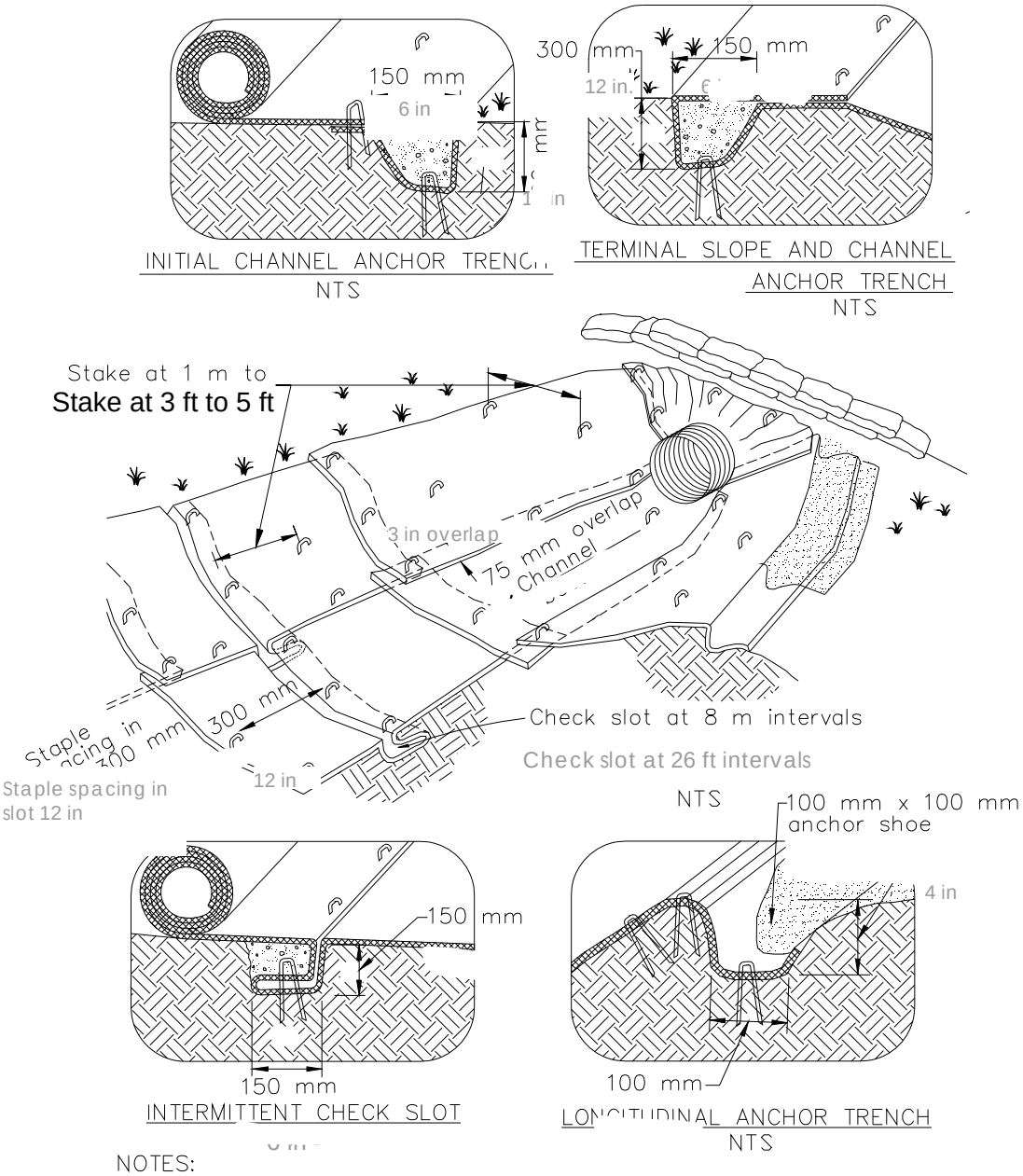
Steps to install erosion control blankets in channels:

- Anchor trench shall be a minimum of 12 inches deep and 6 inches wide across the channel at the lower end of the project area.
- Dig 6-inch deep and 6-inch wide intermittent check slots across the channel at a spacing of 25 to 30 feet.
- To bury the edge of the matting, dig 4-inch deep and 4-inch wide anchor slots longitudinally along the channel.
- Place the initial roll in the center of the channel at the downstream end. Secure it every 12 inches. Note that the matting will be upside down initially.
- Repeat the previous step using the adjacent rolls and creating a 3-inch overlap of blankets. Be sure to anchor the ends of the mats down securely every 12 inches.
- Unroll the center mat upstream and follow with the others maintaining the 3-inch overlap.
- Secure all rolls snugly into transverse check slots by laying the mat into the slot, folding the mat back on itself, installing anchors, filling with backfill and compacting the soil.

Inspection and Maintenance:

- Inspect blankets after installation and periodically during construction activities.
- Inspect blankets and mats before and after significant storm events, for erosion and undermining.
- Repair damages and failures immediately.
- Repair the slope or channel before reinstalling blankets if washouts or breakages have occurred.

Rolled Erosion Control Products (cont.)

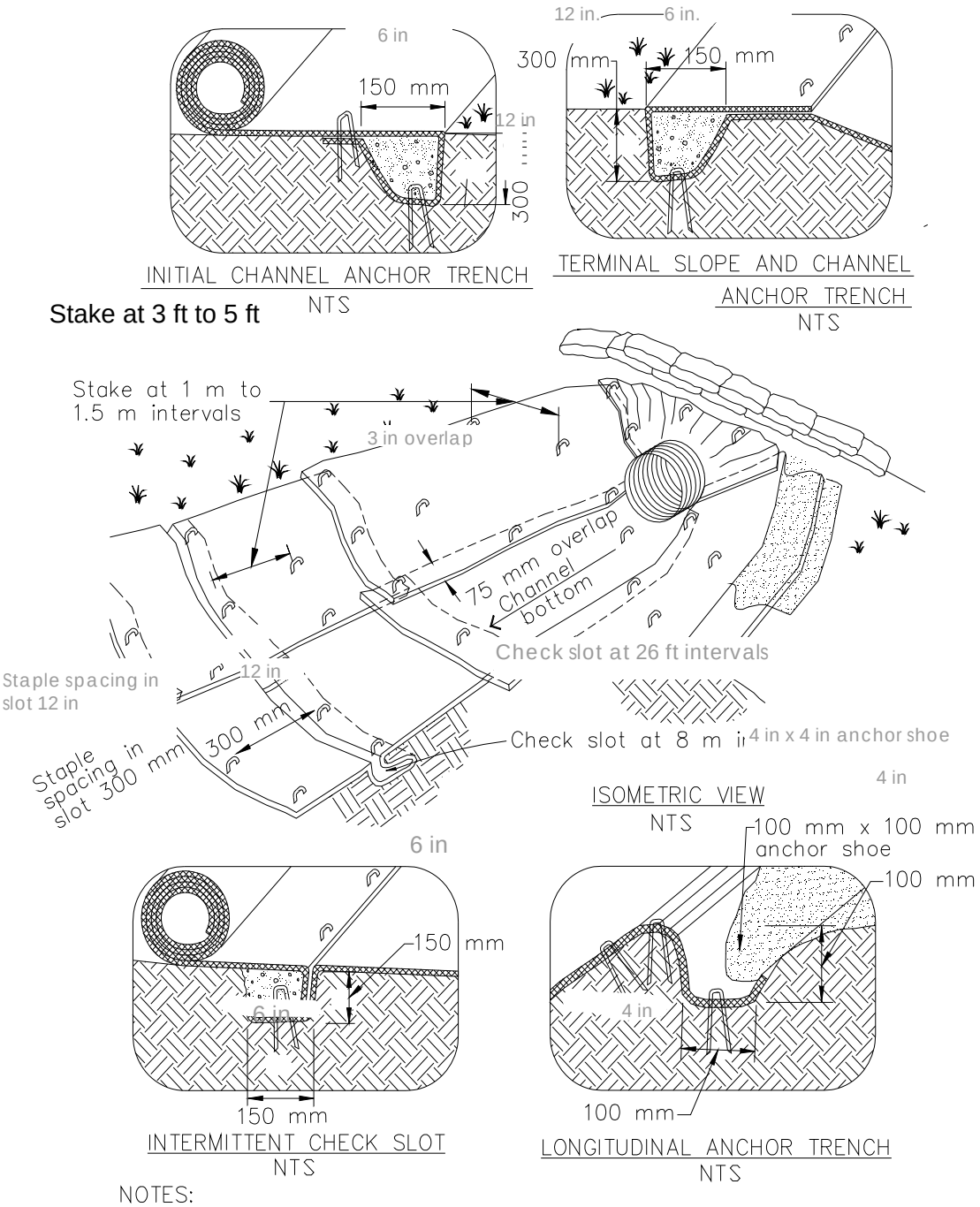


NOTES:

1. Check slots to be constructed per manufacturers specifications.
2. Staking or stapling layout per manufacturers specifications.
3. Install per manufacturer's recommendations

Graphics used with permission of Caltrans.

Rolled Erosion Control Products (cont.)



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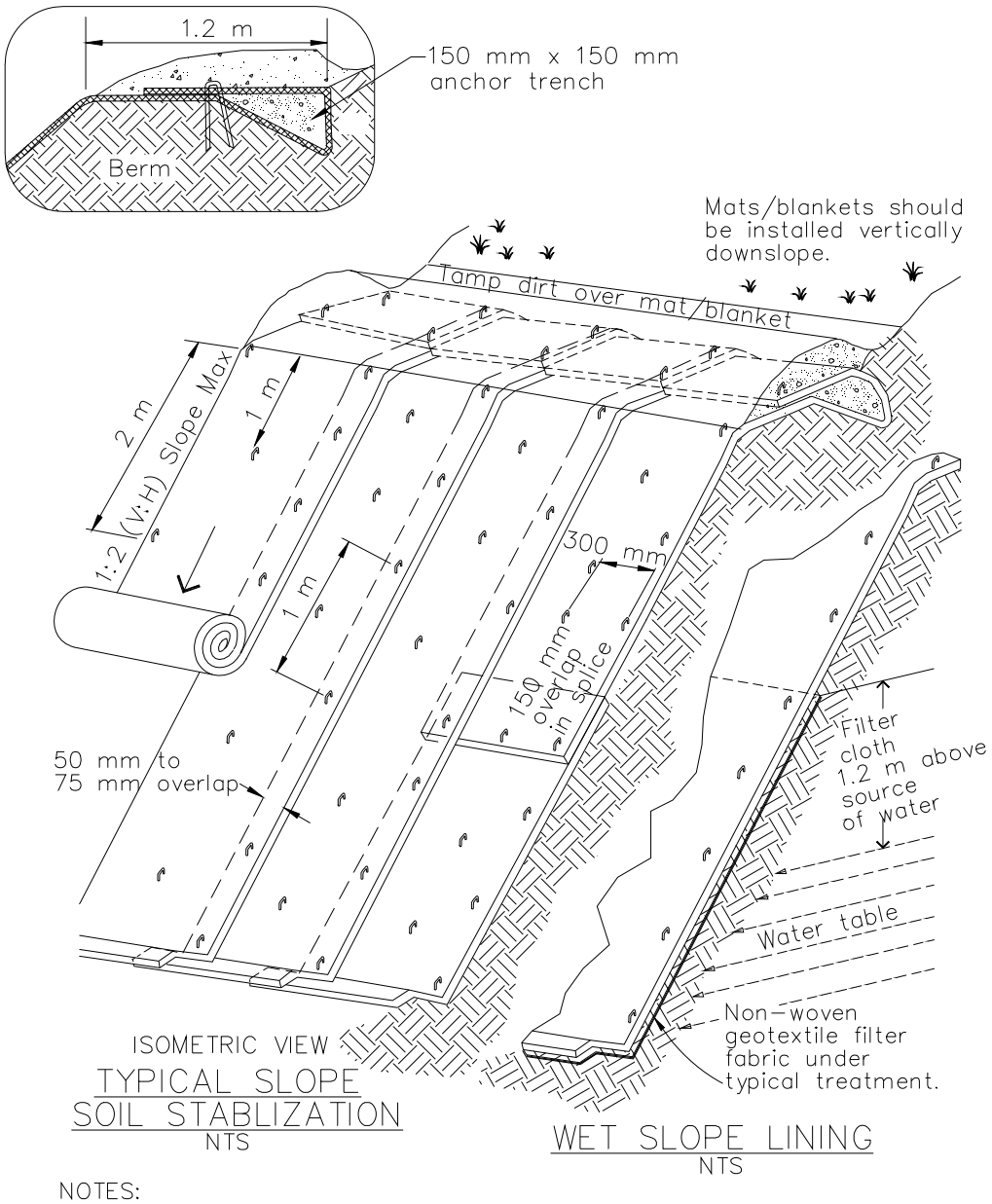
3. Install per manufacturer's recommendations

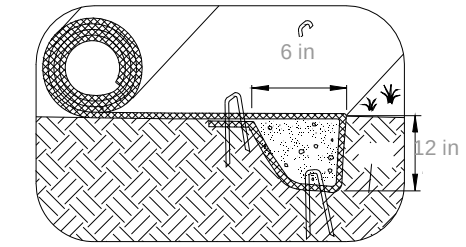
Rolled Erosion Control Products (cont.)



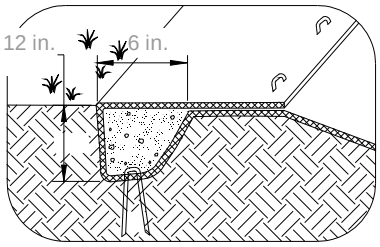
NOTES:

1. Slope surface shall be free of rocks, clods, sticks and grass. Mats/blankets shall have good soil contact.
2. Lay blankets loosely and stake or staple to maintain direct contact with the soil. Do not stretch.
3. Install per manufacturer's recommendations

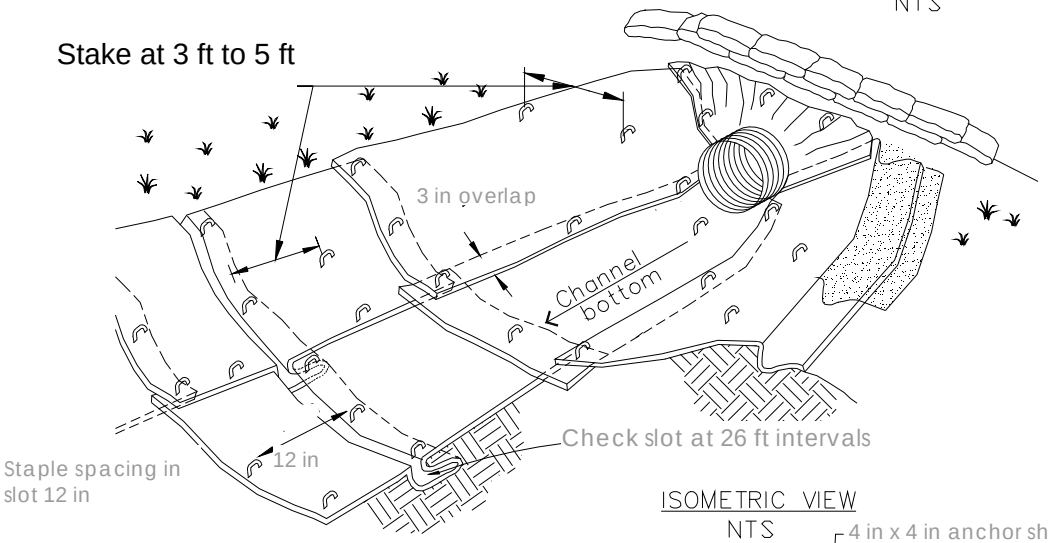
Rolled Erosion Control Products (cont.)



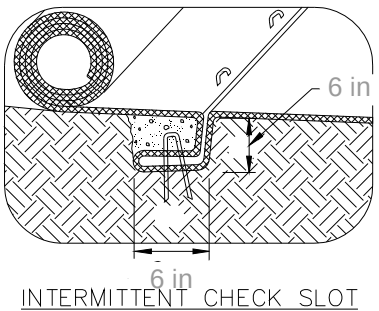
INITIAL CHANNEL ANCHOR TRENCH
NTS



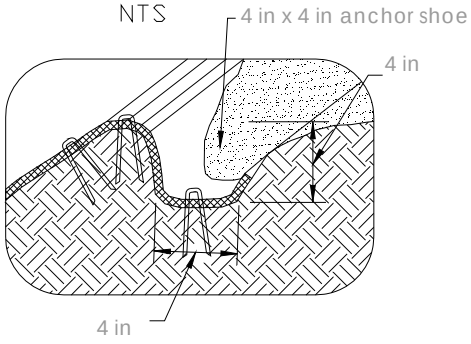
TERMINAL SLOPE AND CHANNEL ANCHOR TRENCH
NTS



ISOMETRIC VIEW
NTS



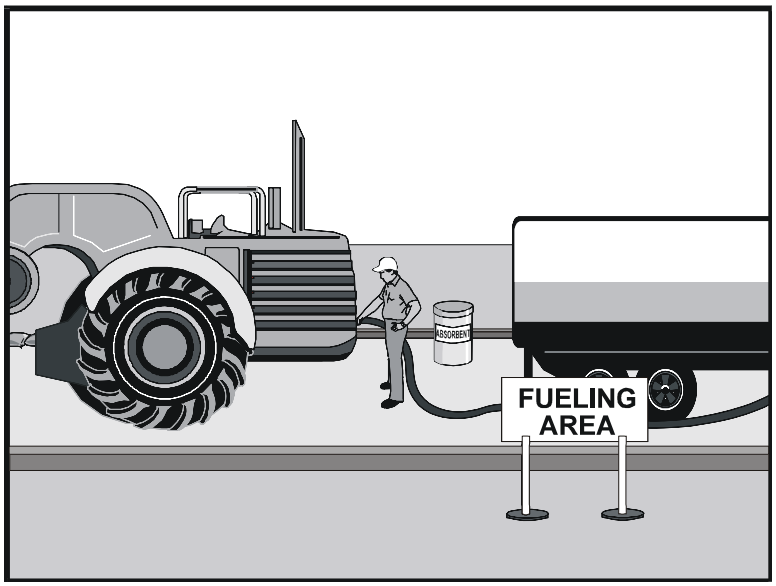
INTERMITTENT CHECK SLOT
NTS

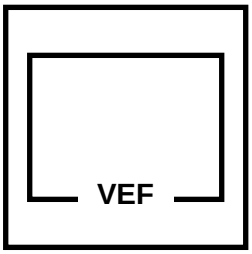


LONGITUDINAL ANCHOR TRENCH
NTS

NOTES:
1. Check slots to be constructed per manufacturers specifications.
2. Staking or stapling layout per manufacturers specifications.
3. Install per manufacturer's recommendations

Vehicle & Equipment Maintenance & Fueling





Map Symbol

Graphics used with permission of Caltrans

Purpose: To minimize or eliminate the discharge of fuel spills and other pollutants into the storm drain system or on construction sites.

Applications:

- All construction sites where storage and maintenance of heavy equipment and vehicles occurs on-site.
- Fueling areas on all construction sites.

Limitations:

- Fuel vehicles on-site only when off-site fueling is impractical.
- Comply with local codes regarding fluid disposal and onsite equipment maintenance.

Standards and Specifications:

- Provide spill cleanup kits in fueling areas and on fueling trucks. Proper disposal is required.
- Use a drip pan or absorbent pad unless fueling or conducting maintenance activities occur over an impervious surface.

Vehicle & Equipment Maintenance & Fueling (cont.)

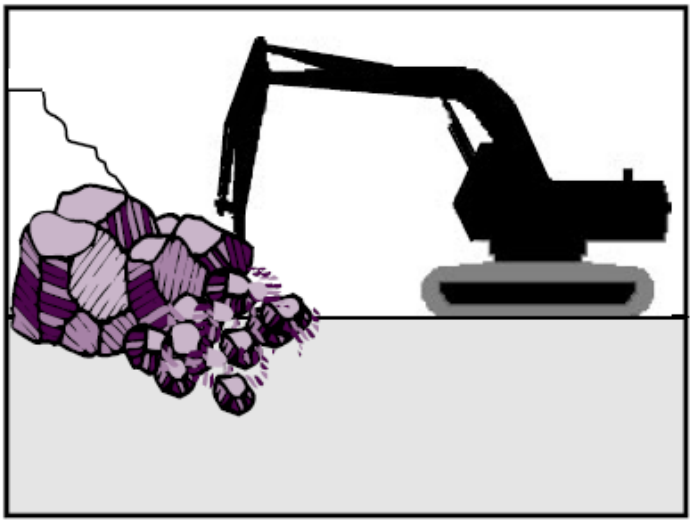
- Place a drip pan or sheet under vehicles when they are located over a water body (e.g. on a dock or a barge) and they will be idle for more than one hour (refer to fact sheet GM-20 for additional information).
- Fueling areas:
  - Locate at least 100 feet from waterways, channels and storm drains.
  - Protect from run-on and runoff by elevating or berming and covering the fueling area.
  - Located on a level-graded area.
  - Attended at all times during fueling.
- Equip fueling equipment with automatic shut-off nozzles to contain drips.
- Do not “top-off” fuel tanks.
- Avoid mobile fueling.
- Observe federal, state, and local requirements relating to any aboveground storage tank.
- Provide secondary containment for fuel tanks and other containerized hazardous materials. The volume of the secondary containment area shall be at least 1.5 times the volume of the primary container.
- Do not dump fuels and lubricants on the ground.
- Do not bury used tires.
- Do not dispose of oil in a dumpster or pour it down the storm drain.
- Properly dispose of used batteries.
- Conduct washing, fueling, and major maintenance offsite whenever possible.
- Inspect vehicles for leaky hoses, gaskets, or other problems.
- Locate vehicle service areas away from waterways, storm drains, gutters, and curbs.
- Use berms, sandbags, or other barriers to contain areas.
- Do not use detergents, solvents, degreasers, or other chemical products to do on-site cleaning.
- Use a drip pan or drip cloth if fluids will be drained and replaced on-site.
- Collect all used fluids, store in separate labeled containers, and either recycle or dispose of properly.

Vehicle & Equipment Maintenance & Fueling (cont.)

Inspection and Maintenance:

- Perform inspections on all containment structures.
- Maintain waste fluid containers in a leak proof condition.
- Service sumps associated with wash areas regularly.
- Inspect daily for leaks on vehicles and equipment.
- Keep an ample supply of spill cleanup materials available onsite.
- Clean up spills immediately and dispose of waste properly.
- Prevent boil-overs by regularly cleaning equipment radiators.

Structure Demolition/Removal Over or Adjacent to Water



BMP Objectives
- ○ Soil Stabilization
- ○ Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ● Non-Storm Water Management
- ● Materials and Waste Management

Graphics used with permission of NDOT

Purpose: To protect water bodies from debris and wastes associated with structure demolition or removal at locations over or adjacent to watercourses.

Applications:

- Bridge demolition and removal.
- Bridge modification (barrier rail, edge of deck replacement).
- Bridge widening projects.
- Concrete channel removal.
- Dam removal.

Limitations:

- Comply with all necessary permits required for construction within or near the watercourse.

Standards and Specifications:

- Do not allow demolished waste material to enter waterway.
- If necessary, divert water away from the demolition area using coffer dams.

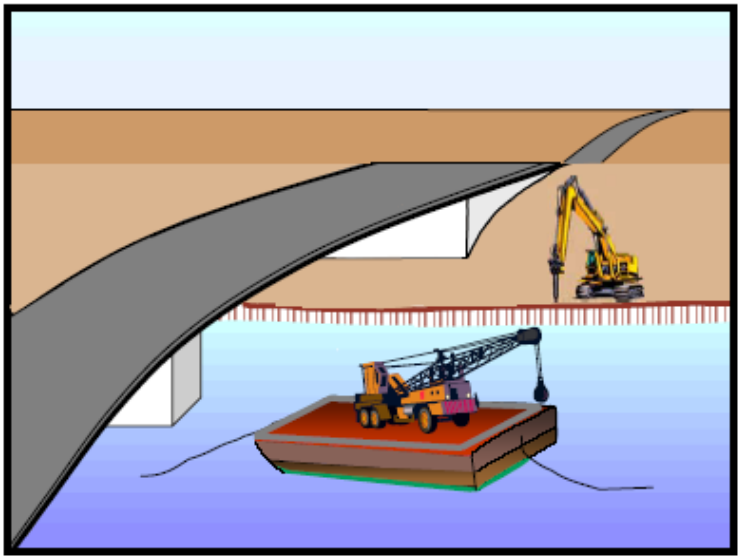
Structure Demolition/Removal Over or Adjacent to Water (cont.)

- Backhoes and other equipment may have attachments that can be used to catch debris from small demolition operations.
- Use covers or platforms to surround the site and to collect debris.
- Stockpile accumulated debris and waste generated during demolition in a location away from watercourses and in accordance with BMP GM-2 “Stockpile Management.”
- Do not obstruct safe passage for wildlife.
- Immediately report any accidental discharges to a waterway.
- For structures containing hazardous materials, (i.e., lead paint or asbestos) refer to BMP GM-17 “Hazardous Waste Management.”

Inspection and Maintenance:

- Contractor must inspect demolition areas over or near adjacent watercourses on a daily basis.
- Any debris-catching devices shall be emptied regularly. Collected debris shall be removed and stored away from the watercourse and protected from run-on and runoff.
- Inspect the waterbody regularly to ensure that no adverse impacts are occurring.

Material & Equipment Use Over Water



BMP Objectives

- ○ Soil Stabilization
- ○ Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ● Non-Storm Water Management
- ● Materials and Waste Management

Graphics used with permission of NDOT

Purpose: Equipment operation from barges, boats, construction pads, bridges, and platforms directly over a waterbody calls for extra vigilance and care to prevent pollution. This BMP presents procedures for the proper use, storage, and disposal of materials and equipment located above a watercourse.

Applications:

- For construction materials and wastes (solid and liquid) and any other materials that may be detrimental if released.
- Where materials and equipment are used on barges, bridges, boats, docks, and other platforms over or adjacent to a watercourse.

Limitations:

- Comply with all necessary permits required for construction within or near the watercourse, such as Nevada Division of State Lands, U.S. Army Corps of Engineers, NDEP, and other local permitting agencies

Standards and Specifications:

- Apply BMPs GM-10 “Material Delivery and Storage” and GM-6 “Spill Prevention and Control”
- Ensure that an adequate supply of spill cleanup materials is available.
- If a vehicle or piece of equipment is expected to be idle for more than one hour, drip pans shall be placed under all vehicles and equipment positioned over water bodies.

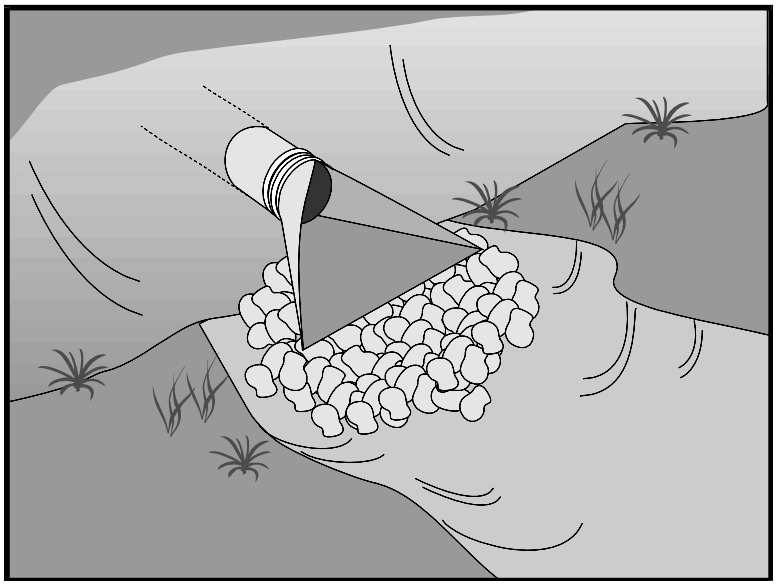
Material & Equipment Use Over Water (cont.)

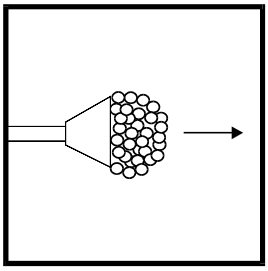
- Secure all materials in windy conditions, and cover any items that may blow into the water.
- Maintain equipment in accordance with BMP GM-8 “Vehicle and Equipment Maintenance.” Do not conduct maintenance operations over water, and if leaks cannot be repaired, do not use equipment over the water.
- Provide watertight curbs or toe boards along the edge of the barge, platform or dock to contain spills and prevent materials, tools, and debris from falling into the water.
- Identify types of spill control measures to be employed, including the storage of such materials and equipment. Ensure that staff is trained regarding the deployment and access of control measures and those measures are being used.
- Remove accumulated wastes in a timely manner,
- Refer to BMP GM-21 **“**Structure Demolition/Removal Over or Adjacent to Water.”

Inspection and Maintenance:

- Inspect equipment for leaks and spills on a daily basis, and make necessary repairs.
- Ensure that employees and subcontractors are aware of the BMPs in practice, and implement appropriate measures for storage and use of materials and equipment.
- Inspect and maintain all BMPs frequently to ensure continuous function and protection of the watercourse.

Stormdrain Outlet Protection





Map Symbol

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Purpose: To reduce storm water flow velocities and energy from construction sites by placing a section of rock at pipe outlets and within channels. Permanent installations must be designed per local standards noted in drainage design manuals.

Applications:

- At locations where discharge velocities and energies may erode downstream reaches.
- Pipe, drain, culvert, conduit or channel outlets.
- At outlets located at the bottom of mild to steep slopes.
- At the outlets of channels that carry continuous flows.
- Outlets subject to short, intense flows of water.
- Points where lined conveyances discharge to unlined conveyances.

Limitations:

- Loose rock may be washed away during high flow events.
- Freeze and thaw cycles may break down grouted riprap.
- Inadequate design and installation may cause grouted riprap to break up due to hydrostatic pressure.

Stormdrain Outlet Protection (cont.)

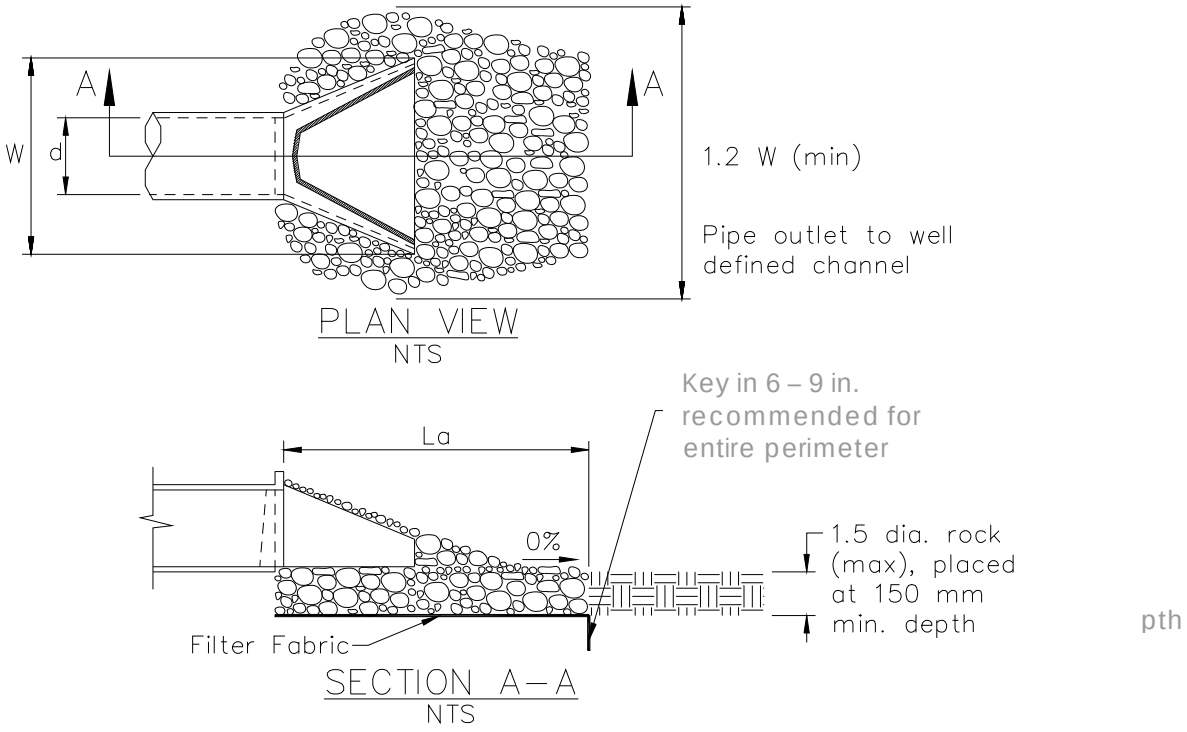
Standards and Specifications:

- Design per local drainage design manual standards (use the table on the following page as general design guidance).
- Install riprap, grouted riprap, or concrete aprons at all outlets. Riprap aprons are well suited for use during construction.
- Provide additional protection for outlets on slopes steeper than 10 percent.
- Higher outlet velocities require larger rocks.
- Flow must be slowed to non-erosive velocity.
- Align the apron with the receiving stream and keep it straight throughout its length. If a curve is needed to fit site conditions, place it in the upper section of apron.
- Protect the underlying filter fabric with a gravel blanket if the riprap is too large.

Inspection and Maintenance:

- Inspect weekly and after every significant rainfall event.
- Check for displacement of riprap or damage to underlying fabric.
- Check for scour beneath the riprap and around the outlet.
- Replace riprap as needed.
- Repair damage to slopes or underlying filter fabric.
- Remove promptly all devices when the drainage area has been stabilized or at the completion of construction.
- Modify outlet protection if downstream erosion is evident.
- Remove temporary facilities from service when construction is complete. Outlet protection may be left in place if designed to be a permanent installation per local standards and specifications.

Stormdrain Outlet Protection (cont.)

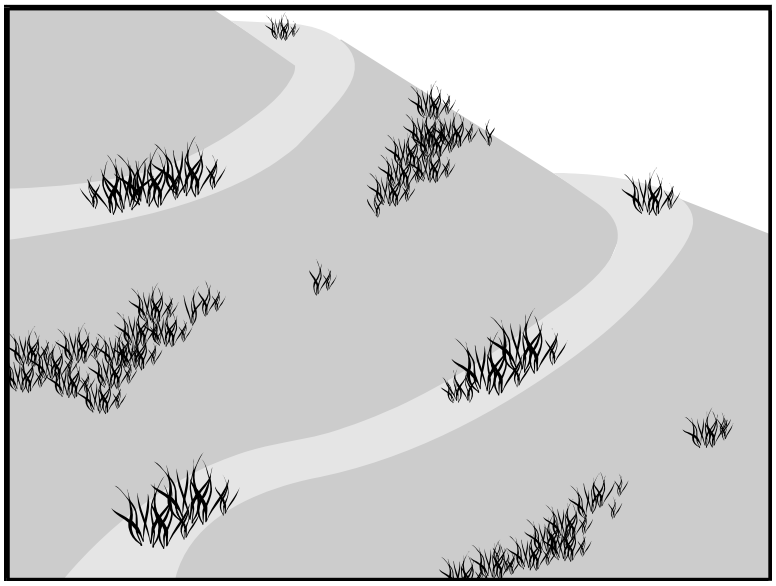


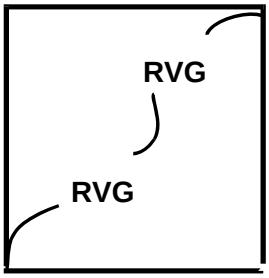
Graphic used with permission of Caltrans.

Pipe Diameter inches	Discharge ft^3/sec	Apron Length, La feet	Rip Rap D_{50} Diameter Min inches
12	4.9	10	4
	9.9	13	6
18	9.9	10	6
	20.1	16	8
	30.0	23	12
	39.9	26	16
24	30.0	16	8
	39.9	26	8
	50.1	26	12
	60.0	30	16
For larger diameters or higher flows, consult a NV Registered Civil Engineer			

Source: USDA – SCS

Revegetation





Map Symbol

Graphics used with permission of Caltrans

Purpose: To stabilize soils and slopes from raindrop impact and erosion, conserve soil moisture, decrease runoff, increase infiltration, and to provide wildlife habitat.

Applications:

- Can be applied on slopes, adjacent to waterways, along right-of-ways, as buffer strips and landscape corridors, on stream banks and in cut and fill areas.

Limitations:

- Irrigation during dry weather may be desirable for specific projects, but is generally not recommended.
- Additional erosion control methods may be required if the site is prone to erosion and since it can take 3-5 years to establish adequate cover.
- Sod is much more expensive than seeding and is considered landscaping. Sod will not persist unless there is water close to or at the surface, or it is permanently irrigated.

Standards and Specifications:

- With the exception of frozen ground conditions, permanent revegetation must be seeded or planted no later than 14 days after final grading, unless final grading takes places outside the planting window. In that case temporary erosion control is required until seeding can occur.
- Seeding in northern Nevada should take place between September 15 and February 15.

Revegetation (cont.)

- Consider climate, soils, and topography when choosing the appropriate vegetation and seed mixes for installation. Develop seed mixes based on site-specific conditions. Soil testing is recommended and should include soil biology.
- Hydroseeding is a cost effective method of applying seed mixes.
- Use variety of seed species, including grasses, forbs, and shrubs, when the objective is to re-establish native and adapted species that do not require irrigation.
- Refer to the list of suitable species for the Truckee Meadows on the following pages.
- All seeding rates must be based on Pure Live Seed.
- In general, crested wheatgrass should not be the dominate species in the seed mix.
- Increase revegetation success by roughening soils (EC-2) prior to seeding then applying mulch (EC-3) with a tackifier.
- Fertilizers should not be applied. Soil amendments may be appropriate, especially where no topsoil is available (or for containerized plants).
- Germination is highly variable but should begin in late March through mid-April.
- Final stabilization requires that perennial vegetation cover consist of 70 percent of the native background cover, determined from a reference or baseline.

<u>Sod</u>

- Sod can provide immediate cover for critical areas but must be permanently irrigated, requires a significant amount of water, and is not preferred for erosion control in northern Nevada.
- If used, sod shall be free of weeds, diseases, and insects.
- Lay strips of sod perpendicular to the direction of runoff flows and stagger sections in a brick-like pattern.
- Do not use sod on slopes steeper than 3H:1V. If used on slopes, sod may need to be secured with stakes to prevent slumping.
- The harvesting, delivery, and installation of sod should occur within 36 hours.
- Avoid installing sod on gravel or non-soil surfaces.
- Avoid installation during unusually hot, wet, or cold weather and do not mow sod for 2-3 weeks after installation.

Revegetation (cont.)

- Sod often contains a high clay content that can inhibit infiltration. Therefore sod placed in low areas subject to ponding may die.

Inspection and Maintenance:

- Irrigation is discouraged, but may be required for sod. Drip irrigation methods are preferred for containerized plants.
- Examine seeded areas for failures. If failures have occurred, amend the soils, reseed and mulch as necessary.
- Conduct soil testing to determine if soil inoculants or amendments are necessary.
- Water sod regularly and uniformly.
-

Northern Nevada Seed for Revegetation

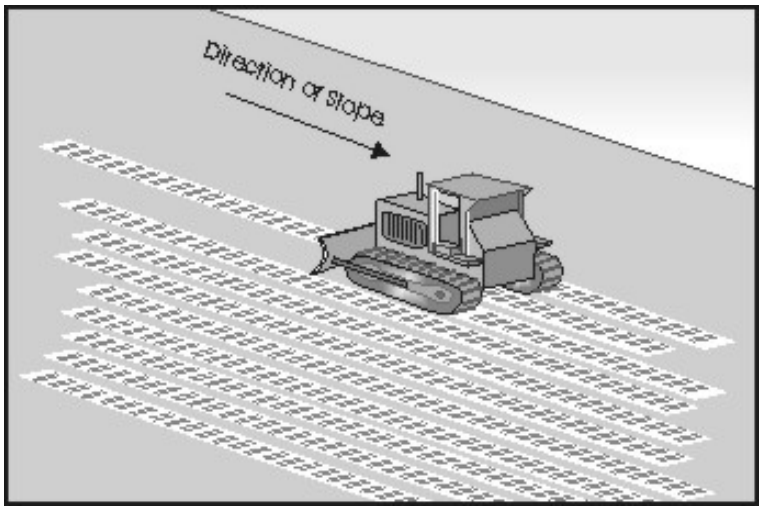
Botanical Name	Common Name/Variety	Comments
Achillea millefolium	Yarrow	Upland
Achnatherum hymenoides	Indian ricegrass	Upland
Achnatherum speciosa	Needlegrass	Upland
Agropyron cristatum	Crested wheatgrass, “Fairway”, “Ephraim”	Upland
Agropyron elongatum	Tall wheatgrass	Wetland
Agropyron X Triticum	Sterile wheat hybrid, “Escort”	Upland (nurse crop)
Agropyron fragile ssp. sibericum	Siberian wheatgrass “P-27”	Upland
Artemisia tridentata ssp vaseyana	Mountain big sagebrush	Upland
Artemisia tridentata ssp tridentata	Big sagebrush	Riparian
Artemisia tridentata ssp wyomingensis	Wyoming sagebrush	Upland
Atriplex canescens	Four-wing saltbrush	Upland (salt affected)
Atriplex confertifolia	Shadscale	Upland (salt affected)
Atriplex lentiformis	Quail bush	Upland (salt affected)
Chrysothamnus nauseosus	Rabbitbrush	Upland
Chrysothamnus viscidiflorus	Sticky rabbitbrush	Upland
Cleome lutea	Beeplant	Upland
Distichlis stricta	Inland saltgrass	Wetland (salt affected)
Elymus cinereus	Great Basin wildrye, “Magnar”	Upland
Elymus elymoides	Squirreltail	Upland
Elymus lanceolatus	Streambank wheatgrass “Sodar”	Upland, Wetland
Elymus trachycaulus	Slender wheatgrass, “Pryor”	Upland
Ephedra viridis	Mormon tea	Upland
Eriogonum umbellatum	Sulphur flower	Upland
Eriogonum wrightii	Wright’s buckwheat	Upland
Festuca longifolia	Hard fescue, “Covar”/“Durar”	Upland

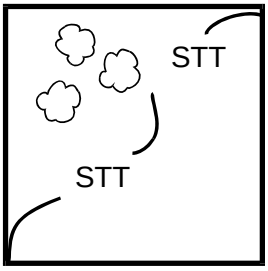
Northern Nevada Seed for Revegetation

Botanical Name	Common Name/Variety	Comments
Festuca ovina	Sheep fescue “Covar”	Upland
Gaillardia aristata	Indian blanket flower	Upland (irrigated)
Grayia spinosa	Spiny hopsage	Upland (salt affected)
Gutierrezia sarothrae	Snakeweed	Upland
Helianthus annus	Sunflower	Upland
Kochia prostrata	Prostrate summer cypress	Upland
Kraschenekovia lanata	Winterfat	Upland
Leymus triticoides	Creeping wildyre, ‘Shoshone’	Wetland
Linum lewisii	Lewis flax, ‘Apar’	Upland
Lolium multiflorum	Annual ryegrass	Upland
Lupinus argenteus	Silverleaf lupine	Upland
Penstemon palmeri	Palmer penstemon	Upland
Poa secunda	Sandberg bluegrass ‘Sherman’	Upland
Prunus andersonii	Desert peach	Upland
Psuedoroegneria spicata	Bluebunch wheatgrass “Secar”	Upland
Puccinellia lemmonii	Alkali grass	Wetland (salt affected)
Purshia tridentata	Antelope bitterbrush	Upland
Sarcobatus vermiculatus	Greesewood	Wetland (salt affected)
Sphaeralcea species	Globemallow	Upland
Sporobolus airoides	Sand dropseed	Upland
Sporobolus cryptandrus	Alkali sacaton	Wetland (salt affected)

*All seeding rates must be based on Pure Live Seed
Source: Western Botanical Services, Inc.

Slope Terracing and Tracking





Graphics produced by Kennedy/Jenks Consultants

Purpose: Terracing and soil roughening or tracking of slopes reduces erosion by creating stair-steps, furrows across slope and serrations in the soil. Uneven bare soil surfaces capture raindrops, decrease the velocity of runoff, trap sediments, increase infiltration into the soil, and aid in the establishment of vegetation.

Applications:

- Appropriate for all construction sites, particularly sites with uneven or steep topography or easily erodible soils.
- Applicable on graded areas that have smooth and hard surfaces.
- To be used in conjunction with seeding, planting, and mulching for temporary and permanent erosion control.

Limitations:

- Soil roughening will increase grading costs, may cause sloughing in certain soil types, and is not appropriate for rocky slopes.
- Stair-step grading or terracing may not be appropriate for sandy, steep, or shallow soils.
- Effectiveness of soil roughening or tracking is limited when used alone in intense rain events.
- Terracing installed as a permanent measure to shorten slope length shall be designed based on site-specific conditions and under the direction and approval of a registered professional civil engineer.

Slope Terracing and Tracking (cont.)

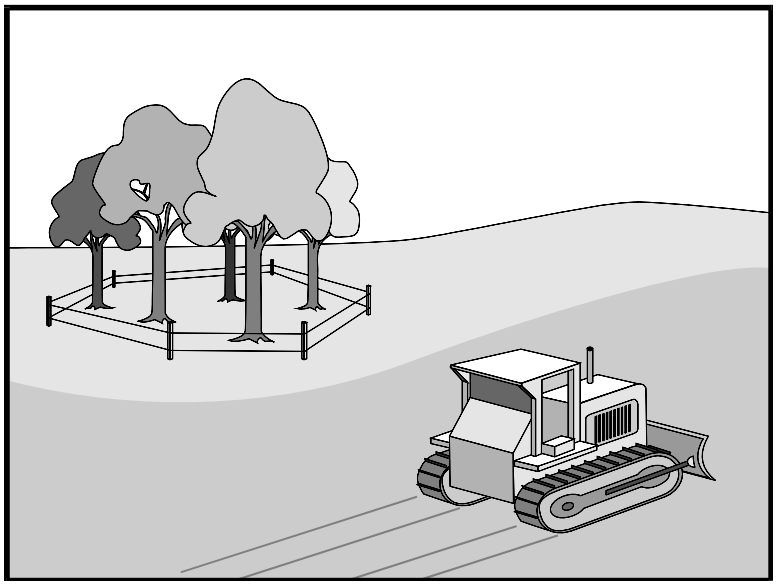
Standards and Specifications:

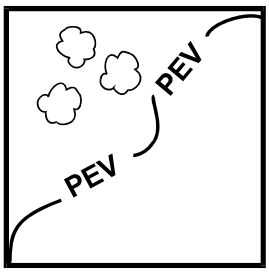
- Consider the following in grading plans:
  - The effects of grading on drainage patterns
  - The effects of runoff on receiving waters
  - Starting and ending dates for movement of earth materials
  - The degree and length of the finished slopes
  - How and where excess materials will be disposed
  - Berms, diversions, and other storm water practices
  - Site fingerprinting (clearing and grading only those areas necessary for building activities or movement of equipment)
- Roughening methods include: stair-step grading, grooving, tracking, and rough grading.
- Consider factors such as slope steepness, mowing requirements, formation of slope by cutting or filling, and availability of equipment when selecting a method of roughening.
- Stair-step graded areas steeper than 3H:1V with benches.
- Mowed areas (slopes less than 3H:1V) may have small furrows left by disking, harrowing, raking, or seed-planting machinery.
- Use terraces where the slope length needs to be shortened.

Inspection and Maintenance:

- Inspect tracked, mulched, seeded and planted slopes for gullies or rills after storm events.
- Repair immediately small-scale eroded areas to prevent them from developing into significant gullies.
- Inspect terraces annually and after significant storm events.

Preserving Existing Vegetation





Map Symbol

Graphics used with permission of Caltrans

Purpose: To protect and preserve existing desirable plants and trees in and near areas that will be exposed to land-disturbing activities. Protecting and preserving landscaped and/or native vegetation can reduce the amount of erodible area and provide buffer zones that assist with infiltrating runoff and trapping sediment so that it does not discharge to waterways or the storm drain system.

Applications:

- Can be used on all types of construction sites.
- Applicable on floodplains and steep slopes, and next to wetlands, streams, rivers, lakes, and sensitive habitat areas that have existing desirable vegetation.

Limitations:

- Requires advanced planning.
- May constrict the area available for construction activity.
- High real estate values may not allow for the preservation of some natural areas.
- Improper grading may negatively impact vegetation.

Standards and Specifications:

- Install high visibility temporary fencing to protect high value existing vegetation before beginning clearing or other soil-disturbing activities.

Preserving Existing Vegetation (cont.)

- Wherever possible, preserve native vegetation on steep slopes and near perennial and intermittent watercourses or swales.
- Wherever possible, preserve continuous areas or clumps of native or landscaped vegetation, instead of individual trees and shrubs.
- Consider the location, species, size, age, and vigor of existing vegetation.
- Local agencies may have ordinances to save natural vegetation or trees.
- Consider tree health, age, species, space needed, aesthetic values, and wildlife benefits when deciding which trees to preserve.
- Follow existing contours and avoid stands of trees when locating temporary roadways.
- Do not place equipment, construction materials, topsoil, or fill dirt within the limits of preserved areas.
- Maintain existing irrigation systems.
- Consider installing tree wells and retaining walls to additionally protect trees.
- Fires are not permitted within 100 feet of the tree drip line.
- At a minimum, extend limits of fencing to the tree drip line (end of tree branches) when protecting trees. Wherever possible, extend the limits of the no-dig root protection zone outward such that it is twice as large as the outer perimeter of the branches.
- Do not cut tree roots within the tree drip line. Curve trenches around tree drip lines to avoid large root concentrations.
- Smoothly cut off the ends of damaged roots.
- Consult local arborist where appropriate.

Inspection and Maintenance:

- Repair or replace damaged vegetation immediately. Smoothly cut off the ends of damaged roots.
- Monitor the protected areas to ensure that new structures won't compromise vegetation.
- Loosen compacted soil around the tree root zone.
- Fertilize broadleaf trees that have been stressed or damaged to aid the recovery. Consult an arborist to determine if soil amendments or fertilizers are needed to maintain tree health.
- Fertilize trees in late fall or early spring.
- Cover exposed tree roots with soil or a wet burlap as soon as possible.