PHASE I CULTURAL RESOURCE SURVEY FOR THE 8352 LA JOLLA SHORES DRIVE PROJECT

CITY OF SAN DIEGO

Project No. 355787
APN 346-172-19

Submitted to:

City of San Diego
Development Services Department
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San Diego, California 92101

Prepared for:

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National Archaeological Database Information

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USGS Quadrangle:	USGS 7.5-minute *La Jolla, California*; Township 15 South, Range 4 West
Study Area:	5,500 square feet
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I. PROJECT DESCRIPTION AND LOCATION

As required by the City of San Diego, Brian F. Smith and Associates, Inc. (BFSA) conducted an archaeological survey and limited testing of the residential parcel at 8352 La Jolla Shores Drive (City of San Diego Project Number 355787; Assessor's Parcel Number [APN] 346-172-19), which is located northwest of the intersection of La Jolla Shores Drive and Calle De La Garza. Specifically, the project is located in the unsectioned Pueblo Lands of San Diego in the western portion of projected Section 22, Township 15 South, Range 4 West of the *La Jolla* USGS 7.5-minute Quadrangle. The archaeological survey was undertaken in order to determine if cultural resources exist within the property and to assess the possible effects of the construction of a proposed development project, which would include the demolition of an existing residence and the construction of a 4,060-square-foot single-family residence on the 5,500-square-foot property. The project Area of Potential Effect (APE) lies within close proximity to previously recorded Site SDI-19,235. Because impacts could possibly be made to Site SDI-19,235, archaeological shovel test pits (STPs) were excavated to determine if any subsurface cultural materials were present. BFSA conducted the archaeological survey and the excavation of the three STPs on June 5, 2015 accompanied by a Native American monitor from Red Tail Monitoring & Research, Inc. No significant cultural resources were observed during the survey and testing. Maps of the property location and development plan have been included in Attachment B. As part of this study, a copy of the report will be submitted to the South Coastal Information Center (SCIC) at San Diego State University (SDSU). All investigations conducted by BFSA related to this project conformed to the California Environmental Quality Act (CEQA) and City of San Diego guidelines.

II. SETTING

The project setting includes both physical and biological contexts of the proposed project, as well as the cultural setting of prehistoric and historic human activities in the general area.

Natural Setting

The 5,500-square-foot project area is situated in the western portion of the Peninsular Ranges geomorphic province of southern California. Elevations within the project area range from 28 to 32 feet above mean sea level (AMSL), with an open coast habitat that lies approximately 285 meters (938 feet) to the west that is characterized by sandy beaches. The present environment has been sculpted for development; most of the native vegetation has been removed and replaced by introduced grasses, shrubs, and trees. The area can be characterized as a moderately dense population of single-family homes. In prehistoric times, the natural environment of the area included coastal sage scrub habitat.

Geologically, the project area lies within the Pleistocene Bay Point Formation between the Scripps and Rose Canyon faults (Kennedy 1975). Nearby, toward the south, southwest, and west, lay Holocene alluvium and slope wash. Soils in the project area are classified as Corralitos loamy sand, 5 to 9 percent slopes (CsC), that formed in alluvium derived from marine sandstone (Bowman 1973).

Cultural Setting

The cultures that have been identified in the general vicinity of the project consist of a possible Paleo Indian manifestation of the San Dieguito Complex, the Archaic and Early Milling Stone horizons represented by the La Jolla Complex, and the Late Prehistoric Kumeyaay culture. The area was used for ranching and farming following the Hispanic intrusion into the region, which continued through the historic period. A brief discussion of the cultural elements in the project area is provided in the following subsections.

Paleoenvironment

Because of the close relationship between prehistoric settlement and subsistence patterns and the environment, it is necessary to understand the setting in which these systems operated. At the end of the final period of glaciation, approximately 11,000 to 10,000 years before the present (YBP), the sea level was considerably lower than it is now; the coastline at that time would have been between 2.0 and 2.5 miles west of its present location (Smith and Moriarty 1985). At approximately 7,000 YBP, the sea level rose rapidly, filling in many coastal canyons that had been dry during the glacial period. The period between 7,000 and 4,000 YBP was characterized by conditions that were drier and warmer than they were previously, followed by a cooler, moister environment (Robbins-Wade 1990). Changes in sea level and coastal topography are often manifested in archaeological sites through the types of shellfish that were utilized by prehistoric groups. Different species of shellfish prefer certain types of environments, and dated sites that contain shellfish remains reflect the setting that was exploited by the prehistoric occupants.

Unfortunately, pollen studies have not been conducted for this section of San Diego; however, studies in other areas of southern California, such as Santa Barbara, indicate that the coastal plains supported a pine forest between approximately 12,000 and 8,000 YBP (Robbins-Wade 1990). After 8,000 YBP, this environment was replaced by more open habitats, which supported oak and non-arboreal communities. The coastal sage scrub and chaparral environments of today appear to have become dominant after 2,200 YBP (Robbins-Wade 1990).

Prehistory

In general, the prehistoric record of San Diego County has been documented in many reports and studies, several of which represent the earliest scientific works concerning the recognition and interpretation of the archaeological manifestations present in this region.

Geographer Malcolm Rogers initiated the recordation of sites in the area during the 1920s and 1930s, using his field notes to construct the first cultural sequences based upon artifact assemblages and stratigraphy (Rogers 1966). Subsequent scholars expanded the information gathered by Rogers and offered more academic interpretations of the prehistoric record. Moriarty (1966, 1967, 1969), Warren (1964, 1966), and True (1958, 1966) all produced seminal works that critically defined the various prehistoric cultural phenomena present in this region (Moratto 1984). Additional studies have sought to refine these earlier works to a greater extent (Cardenas 1986; Moratto 1984; Moriarty 1966, 1967; True 1970, 1980, 1986; True and Beemer 1982; True and Pankey 1985; Waugh 1986). In sharp contrast, the current trend in San Diego prehistory has also resulted in a revisionist group that rejects the established cultural historical sequence for San Diego. This revisionist group (Warren et al. 1998) has replaced the concepts of La Jolla, San Dieguito, and all of their other manifestations with an extensive, all-encompassing, chronologically undifferentiated cultural unit that ranges from the initial occupation of southern California to around A.D. 1000 (Bull 1983, 1987; Ezell 1983, 1987; Gallegos 1987; Kyle et al. 1990; Stropes 2007). For the present study, the prehistory of the region is divided into four major periods: Early Man, Paleo Indian, Early Archaic, and Late Prehistoric.

Early Man Period (Prior to 8500 B.C.)

At the present time, there has been no concrete archaeological evidence to support the occupation of San Diego County prior to 10,500 YBP. Some archaeologists, such as Carter (1957, 1980) and Minshall (1976), have been proponents of Native American occupation of the region as early 100,000 YBP. However, their evidence for such claims is sparse at best and has lost much support over the years as more precise dating techniques have become available for skeletal remains thought to represent early man in San Diego. In addition, many of the "artifacts" initially identified as products of the Early Man Period in the region have since been rejected as natural products of geologic activity. Some of the local proposed Early Man Period sites include Texas Street, Mission Valley (San Diego River Valley), Del Mar, La Jolla, Buchanan Canyon, and Brown (Bada et al. 1974; Carter 1957, 1980; Minshall 1976, 1989; Moriarty and Minshall 1972; Reeves 1985; Reeves et al. 1986).

Paleo Indian Period (8500 to 6000 B.C.)

For the region, it is generally accepted that the earliest identifiable culture in the archaeological record is represented by the material remains of the Paleo Indian Period San Dieguito Complex. The San Dieguito Complex was thought to represent the remains of a group of people who occupied sites in this region between 10,500 and 8,000 YBP, and who were related to or contemporaneous with groups in the Great Basin. As of yet, no absolute dates have been forthcoming to support the great age attributed to this cultural phenomenon. The artifacts recovered from San Dieguito Complex sites duplicate the typology attributed to the Western Pluvial Lakes Tradition (Moratto 1984; Davis et al. 1969). These artifacts generally include

scrapers, choppers, large bifaces, large projectile points, and few milling tools. Tools recovered from San Dieguito Complex sites, along with the general pattern of their site locations, led early researchers to believe that the people of the San Dieguito Complex were a wandering, hunting, and gathering society (Moriarty 1969; Rogers 1966).

The San Dieguito Complex is the least understood of the cultures that have inhabited the San Diego County region. This is due to an overall lack of stratigraphic information and/or datable materials recovered from sites identified as the San Dieguito Complex. Currently, controversy exists among researchers regarding the relationship of the San Dieguito Complex and the subsequent cultural manifestation in the area, the La Jolla Complex. Although, firm evidence has not been recovered to indicate whether the San Dieguito Complex "evolved" into the La Jolla Complex, the people of the La Jolla Complex moved into the area and assimilated with the people of the San Dieguito Complex, or the people of the San Dieguito Complex retreated from the area due to environmental or cultural pressures.

Early Archaic Period (6000 B.C. to A.D. 0)

Based upon evidence suggesting climatic shifts and archaeologically observable changes in subsistence strategies, a new cultural pattern is believed to have emerged in the San Diego region around 6000 B.C. This Archaic Period pattern is believed by archaeologists to have evolved from or replaced the San Dieguito Complex culture, resulting in a pattern referred to as the Encinitas Tradition. In San Diego, the Encinitas Tradition is thought to be represented by the coastal La Jolla Complex and its inland manifestation, the Pauma Complex. The La Jolla Complex is best recognized for its pattern of shell middens, grinding tools closely associated with marine resources, and flexed burials (Shumway et al. 1961; Smith and Moriarty 1985). Increasing numbers of inland sites have been identified as dating to the Archaic Period, focusing on terrestrial subsistence (Cardenas 1986; Smith 1996; Raven-Jennings and Smith 1999a, 1999b).

The tool typology of the La Jolla Complex displays a wide range of sophistication in the lithic manufacturing techniques used to create the tools found at their sites. Scrapers, the dominant flaked tool type, were created by either splitting cobbles or by finely flaking quarried material. Evidence suggests that after about 8,200 YBP, milling tools began to appear in the La Jolla Complex sites. Inland sites of the Encinitas Tradition (Pauma Complex) exhibit a reduced quantity of marine-related food refuse and contain large quantities of milling tools and food bone. The lithic tool assemblage shifts slightly to encompass the procurement and processing of terrestrial resources, suggesting seasonal migration from the coast to the inland valleys (Smith 1996). At the present time, the transition from the Archaic Period to the Late Prehistoric Period is not well understood. Many questions remain concerning the cultural transformation between periods, possibilities of ethnic replacement, and/or a possible hiatus from the western portion of the county.

Late Prehistoric Period (A.D. 0 to 1769)

The transition into the Late Prehistoric Period in the project area is primarily represented by a marked change in archaeological patterning known as the Yuman Tradition. This tradition is primarily represented by the Cuyamaca Complex, which is believed be derived from the mountains of southern San Diego County. The people of the Cuyamaca Complex are considered as ancestral to the ethnohistoric Kumeyaay (Diegueño). Although several archaeologists consider the local Native American tribes to be latecomers, the traditional stories and histories that are orally passed down by the local Native American groups speak both presently and ethnographically to tribal presence in the region as being since the time of creation.

The Kumeyaay Native Americans were a seasonal hunting and gathering people with cultural elements that were very distinct from the people of the La Jolla Complex. Noted variations in material culture included cremation, the use of bows and arrows, and adaptation to the use of the acorn as a main food staple (Moratto 1984). Along the coast, the Kumeyaay made use of marine resources by fishing and collecting shellfish for food. Game and seasonally available plant food resources (including acorns) were sources of nourishment for the Kumeyaay. By far, though, the most important food resource for these people was the acorn. The acorn represented a storable surplus, which in turn allowed for seasonal sedentism and its attendant expansion of social phenomena.

Firm evidence has not been recovered to indicate whether the people of the La Jolla Complex were present when the Kumeyaay Native Americans migrated into the coastal zone. However, stratigraphic information recovered from Site SDI-4609 in Sorrento Valley suggests a possible hiatus of 650 ± 100 years between the occupation of the coastal area by the La Jolla Complex (1,730 ± 75 YBP is the youngest date for the La Jolla Complex inhabitants at SDI-4609) and late prehistoric cultures (Smith and Moriarty 1983). More recently, a reevaluation of two prone burials at the Spindrift Site excavated by Moriarty (1965) and radiocarbon dates of a pre-ceramic phase of Yuman occupation near the San Diego suburb of Santee suggest a commingling of the latest La Jolla Complex inhabitants and the earliest Yuman inhabitants about 2,000 YBP (Kyle and Gallegos 1993).

History

Exploration Period (1530 to 1769)

The historic period around San Diego Bay began with the landing of Juan Rodriguez Cabrillo and his men in 1542 (Chapman 1925). Sixty years after the Cabrillo expeditions (1602 to 1603), Sebastian Vizcaíno made an extensive and thorough exploration of the Pacific coast. Although his voyage did not extend beyond the northern limits of the Cabrillo track, Vizcaíno had the most lasting effect on the nomenclature of the coast. Many of the names Vizcaíno gave to various locations throughout the region have survived to the present time, whereas nearly every one of Cabrillo's has faded from use. For example, Cabrillo gave the name "San Miguel" to the first port he stopped at in what is now the United States; 60 years later, Vizcaíno changed

the port name to "San Diego" (Rolle 1969).

Spanish Colonial Period (1769 to 1821)

The Spanish occupation of the claimed territory of Alta California took place during the reign of King Carlos III of Spain (Engelhardt 1920). Jose de Gálvez, a powerful representative of the king in Mexico, conceived the plan to colonize Alta California and thereby secure the area for the Spanish Crown (Rolle 1969). The effort involved both a military and religious contingent, where the overall intent of establishing forts and missions was to gain control of the land and the native inhabitants through conversion. Actual colonization of the San Diego area began on July 16, 1769, when the first Spanish exploring party, commanded by Gaspar de Portolá (with Father Junípero Serra in charge of religious conversion of the native populations), arrived by the overland route to San Diego to secure California for the Spanish Crown (Palou 1926). The natural attraction of the harbor at San Diego and the establishment of a military presence in the area solidified the importance of San Diego to the Spanish colonization of the region and the growth of the civilian population. Missions were constructed from San Diego to as far north as San Francisco. The mission locations were based upon important territorial, military, and religious considerations. Grants of land were made to persons who applied, but many tracts reverted back to the government for lack of use. As an extension of territorial control by the Spanish Empire, each mission was placed so as to command as much territory and as large a population as possible. While primary access to California during the Spanish Period was by sea, the route of El Camino Real served as the land route for transportation, commercial, and military activities within the colony. This route was considered to be the most direct path between the missions (Rolle 1969; Caughey 1970). As increasing numbers of Spanish and Mexican peoples, as well as the later Americans during the Gold Rush, settled in the area, the Native American populations diminished as they were displaced or decimated by disease (Carrico and Taylor 1983).

Mexican Period (1821 to 1846)

On September 16, 1810, the priest Father Miguel Hidalgo y Costilla started a revolt against Spanish rule. He and his untrained Native American followers fought against the Spanish, but his revolt was unsuccessful and Father Hidalgo was executed. After this setback, Father José Morales led the revolutionaries, but he too failed and was executed. These two men are still symbols of Mexican liberty and patriotism. After the Mexican-born Spanish and the Catholic Church joined the Revolution, Spain was finally defeated in 1821. Mexican Independence Day is celebrated on September 16 of each year, signifying the anniversary of the start of Father Hidalgo's revolt. The revolution had repercussions in the northern territories, and by 1834, all of the mission lands had been removed from the control of the Franciscan Order under the Acts of Secularization. Without proper maintenance, the missions quickly began to disintegrate, and after 1836, missionaries ceased to make regular visits inland to minister to the

needs of the Native Americans (Engelhardt 1920). Large tracts of land continued to be granted to persons who applied for them or who had gained favor with the Mexican government. Grants of land were also made to settle government debts and the Mexican government was called upon to reaffirm some older Spanish land grants shortly before the Mexican-American War of 1846 (Moyer 1969).

Anglo-American Period (1846 to Present)

California was invaded by United States troops during the Mexican-American War of 1846 to 1848. The acquisition of strategic Pacific ports and California land was one of the principal objectives of the war (Price 1967). At the time, the inhabitants of California were practically defenseless, and they quickly surrendered to the United States Navy in July of 1847 (Bancroft 1886).

The cattle ranchers of the "counties" of southern California had prospered during the cattle boom of the early 1850s. They were able to "reap windfall profit … pay taxes and lawyer's bills … and generally live according to custom" (Pitt 1966). However, cattle ranching soon declined, contributing to the expansion of agriculture. With the passage of the "No Fence Act," San Diego's economy shifted from raising cattle to farming (Robinson 1948). The act allowed for the expansion of unfenced farms, which was crucial in an area where fencing material was practically unavailable. Five years after its passage, most of the arable lands in San Diego County had been patented as either ranchos or homesteads, and growing grain crops replaced raising cattle in many of the county's inland valleys (Blick 1976; Elliott 1883 [1965]).

By 1870, farmers had learned to dry farm and were coping with some of the peculiarities of San Diego County's climate (*San Diego Union,* February 6, 1868; Van Dyke 1886). Between 1869 and 1871, the amount of cultivated acreage in the county rose from less than 5,000 to more than 20,000 acres (*San Diego Union,* January 2, 1872). Of course, droughts continued to hinder the development of agriculture (Crouch 1915; *San Diego Union,* November 10, 1870; Shipek 1977). Large-scale farming in San Diego County was limited by a lack of water and the small size of arable valleys. The small urban population and poor roads also restricted commercial crop growing. Meanwhile, cattle continued to be grazed in parts of inland San Diego County. In the Otay Mesa area, for example, the "No Fence Act" had little effect on cattle farmers because ranches were spaced far apart and natural ridges kept the cattle out of nearby growing crops (Gordinier 1966).

During the first two decades of the twentieth century, the population of San Diego County continued to grow. The population of the inland county declined during the 1890s, but between 1900 and 1910, it rose by about 70 percent. The pioneering efforts were over, the railroads had broken the relative isolation of southern California, and life in San Diego County had become similar to other communities throughout the west. After World War I, the history of San Diego County was primarily determined by the growth of San Diego Bay. In 1919, the United States Navy decided to make the bay the home base for the Pacific Fleet (Pourade 1967),

followed by the aircraft industry in the 1920s (Heiges 1976). The establishment of these industries led to the growth of the county as a whole; however, most of the civilian population growth occurred in the north county coastal areas, where the population almost tripled between 1920 and 1930. During this time period, the history of inland San Diego County was subsidiary to that of the city of San Diego, which had become a Navy center and an industrial city (Heiges 1976). In inland San Diego County, agriculture became specialized, and recreational areas were established in the mountain and desert areas. Just before World War II, urbanization began to spread to the inland parts of the county.

History of the La Jolla Area

A limited research effort was initiated in order to characterize the circumstances of the early development of La Jolla so that the current project could be placed in context with the surrounding community. Several early land developments contributed to the overall disturbance to the major prehistoric sites in the area of the project. However, small development projects continuously encounter pockets of cultural sites that have survived grading and construction impacts over the years.

The origin of the name La Jolla, most researchers agree, is a variation of the original "La Hoya," which literally translated from Spanish means "pit, hole, grave, or valley." The equivalent American translation is "river basin" (Castillo and Bond 1975). The city surveyor, James Pascoe, spelled it "La Joya" on his map of city land in 1870, which translates as "the jewel." The location of La Hoya (or La Joya) was consistently shown as the canyon in which the southern portion of Torrey Pines Road is located today. The first post office was established on February 28, 1888 and closed on March 31, 1893, but reopened as "Lajolla" (one word) on August 17, 1894. On June 19, 1905, the name of this post office was changed to "La Jolla" (two words) (Salley 1977).

The first purchase of Pueblo Lands in this area occurred on February 27, 1869, when the City of San Diego sold Pueblo Lot 1261 to Samuel Sizer. On the same day, the City sold Pueblo Lot 1259 to Daniel Sizer. These lots sold for $1.25 per acre. Both lots were located south of "La Hoya Valley." The *San Diego Union* (March 31, 1869) referred to the canyon as "La Hoya" when describing Sizer's agricultural development to the south. By the 1870s, excursions to the point and cove were offered by the Horton House in their Concord Coach, a stagecoach drawn by four horses (*San Diego Union,* August 9, 1932).

The boom of the 1880s extended to La Jolla in the form of the construction of a hotel and rental cottages (Randolph 1955). Initially, water supplies were unreliable, consisting of only two sources: a small well in Rose Canyon and a small pipeline connected to the Pacific Beach water supply. Reliable transportation to La Jolla came with the extension of the San Diego, Old Town, and Pacific Beach Railway to La Jolla in 1894. This narrow-gauge railroad was responsible for bringing passengers and prefabricated cottages (on flat cars) to the growing community (Randolph 1955). The railroad was dismantled in 1919, but not before an unsuccessful

experiment with a gasoline-powered rail car (known locally as the "Red Devil") was conducted.

As the number of residences and businesses increased in La Jolla, so did the need for public services. On July 10, 1888, the San Diego City Council passed an ordinance providing for the disposal of garbage, night soil, dead animals, ashes, and rubbish (Document 101817). In 1909, natural gas was brought to La Jolla, and in 1911, electricity was made available to the community (Randolph 1955). An electric railway provided service to La Jolla between 1924 and 1940. In 1918, street paving began, and by 1922, the Girard Street business section was completely paved.

Visitors to La Jolla enjoyed the park at Alligator Head from the earliest days of stagecoach excursions. Trees and shrubs were planted around the park, but a months-long failure of the water supply during 1890 caused many of the plants to die. During the 1890s, the park was also the focus of construction for guest cottages and hotels, such as the La Jolla Beach House, which indicates that developmental impacts to prehistoric archaeological resources, as well as impacts from increased visitation, occurred from this early period. Randolph (1955) wrote about a Native American settlement at La Jolla (probably SDI-39), which was supported by Native American informants and the recovery of several artifacts, including metates, stone utensils, and other relics from La Jolla Cove. As the development of La Jolla continued, other subdivisions and plots were converted from farming and/or grazing to residential use. The "La Jolla Vista" subdivision of 1923 was one of those subdivisions (San Diego County Engineering Map Records).

The earliest notable development in this area was the construction of the Spindrift Inn in the 1920s. Also at this time, the initial development of the La Jolla Beach and Tennis Club (originally the La Jolla Beach and Yacht Club) took place. These early facilities gained in popularity and were successful in spite of the Depression that gripped the country between the stock market crash of 1929 and the opening of World War II. The La Jolla Vista subdivision, on the other hand, was slow in building to capacity, possibly because of the real estate bust of 1925 to 1926 (Brandes et al. 1999).

Two military training camps came to La Jolla during World War II: Camp Callan and Camp Elliot. In addition, two emplacements on Mount Soledad and one on the beach in La Jolla were established during the war years (Pierson 2001). Although these military installations were replaced after the Korean War with the University of California at San Diego campus and the expansion of the Scripps Institution of Oceanography, the economic base of La Jolla grew to include a substantial business element. Today, this trend continues with ever-present tourism playing a significant part in the local economy. Throughout the history of this community, the residential population has included both permanent and seasonal residents, many of whom have achieved a significant degree of financial and historical notoriety and success.

III. AREA OF POTENTIAL EFFECT (APE)

The APE consists of a 5,500-square-foot property (APN 346-172-19). The APE can be characterized as previously developed and surrounded by residential development. Photographs of the property are provided in Plates 1 through 4). The property lies just northwest of the intersection of La Jolla Shores Drive and Calle De La Garza (Attachment B: Figures 1 through 3). The proposed project includes the construction of a new single-family home, driveway, garage, associated landscaping, and utilities (Attachment B: Figure 4).

Plate 1: Overview of the project site, facing west.

Plate 2: Southern portion of the property showing a walkway, facing west.

Plate 3: View of the backyard (area of STPs 2 and 3), facing north.

Plate 4: View of the backyard (area of STPs 2 and 3), facing southeast.

IV. STUDY METHODS

The archaeological assessment included a reconnaissance of the property and an institutional records search review of previous studies in the area. BFSA reviewed the results of a records search completed by the South Coastal Information Center (SCIC) at San Diego State University (SDSU) for the project area to determine the presence of any previously recorded cultural resources (see Confidential Appendix). A Sacred Lands File search was also requested by BFSA from the Native American Heritage Commission (NAHC). As of the date of this report, a response has not been received (Attachment C).

The SCIC reported that there are three recorded sites (all prehistoric) and three historic addresses recorded within a one-quarter-mile radius of the project area. The records search also indicated that there have been 14 reports conducted within one-quarter mile of the project. The records search indicated that previously recorded archaeological Site SDI-19,235 is located in the adjacent parcel to the north. The site consists of a prehistoric subsurface deposit; however, the boundaries of the deposit are unclear. The site is described as being heavily disturbed due to previous residential development. The eastern margin of the resource appears to be less

disturbed than the western margin. Because the previously recorded site is in close proximity to the current project area, three STPs were excavated in order to determine if remnants from Site SDI-19,235 were present.

On June 5, 2015, BFSA archaeologists conducted an intensive pedestrian survey of the project. Aerial photographs, maps, and compass permitted orientation and location of project boundaries. Where possible, the archaeologists employed narrow transect paths to ensure maximum lot coverage. Paved areas were largely excluded from the survey and all exposed ground was inspected for cultural materials. A survey form, an STP excavation form, field notes, and photographs documented the survey work and limited testing work undertaken.

V. RESULTS OF THE STUDY

Background Research

The coastal area to the north, west, and southwest of the project has yielded substantial cultural remains that document prehistoric occupation. For example, Site SDI-39 represents multicomponent occupation (Early Archaic La Jolla Complex and Late Prehistoric Kumeyaay) beginning approximately 5,000 YBP (Christenson 1990). During the historic period, new Native American encampments developed as the native population was displaced by European settlements (Carrico 1986). The mesa (later known as Torrey Pines State Reserve) may have been used for livestock grazing until the development of small farms and residences in the early part of the twentieth century.

The presence of three known cultural resources, three historic addresses, and 14 reports within one-quarter mile of the project area suggests the potential for historic and prehistoric cultural deposits in this area. Because previously recorded Site SDI-19,235 is located in the adjacent property to the north of the 8352 La Jolla Shores Drive Project area, an archaeological survey and limited testing were necessary to determine if archaeological resources are present within the current project boundaries.

Due to the location of the property near the recorded location of SDI-19,235 and in proximity to the recently suggested site boundary limits for SDI-20,130/W-2 (Pigniolo et al. 2009), the likelihood of prehistoric cultural resources being present at this location was considered to be moderate to high. It is suggested that SDI-20,130/W-2 is bordered by residences "along Camino del Oro to the north, La Jolla Shores Drive to the east, Avenida de la Playa on the south, and on the north by Camino del Oro and across the Kellogg Beach parking lot west to the original beach berm. The beach berm (La Vereda Street) would serve as a western boundary between this point and the start point at Avenida de la Playa" (Pigniolo et al. 2009). Recent private and public development projects in this area have encountered several areas of previous prehistoric occupation along the beach and within the streets immediately south of the project APE. In addition, multiple fragments of human bone and partial human burials have been encountered within the bounds of SDI-20,130/W-2, approximately 600 feet south of

the project APE.

Field Reconnaissance

On June 5, 2015, Principal Investigator Brian F. Smith directed the archaeological assessment for the project. BFSA archaeologist Clarence Hoff conducted the survey along with Native American monitor Howard Diaz from Red Tail Monitoring & Research, Inc. The entire project has been previously disturbed by grading, the construction of a single-family residence, the installation of utilities, and associated landscaping. The archaeological survey was achieved using a Brunton field compass to orient directional transects spaced in three-meter intervals across the entire project, where possible. The survey boundaries are defined by La Jolla Shores Drive to the east and the surrounding residential lots located to the north, west, and south. BFSA staff carefully inspected exposed ground surfaces within the APE (disturbed terrain, planters, and surrounding landscape). As a result of the development of the property, areas of planting along the periphery of the property and exposures of soil in the lawns and planters offered an unobstructed view of the ground. No constraints were encountered during the survey. Surface visibility was approximately 20 percent and limited due to the existing single-family residence, shed, patio, and backyard deck.

As part of the investigation within the project, and because of the close proximity of Site SDI-19,235, three STPs were excavated around the existing structure to determine if any elements of SDI-19,235 remain within the property (see Figure 5: Excavation Location Map in the Confidential Appendix). The results of the shovel tests have been listed in Table 1.

Table 1

Shovel Test Excavation Data

Shovel Test	Depth (cm)	Soils	Object Name	Material Type	Quantity	Weight (g)	Cat. No.
1	0-10	Very dark grayish brown (2.5Y 3/2) medium grained sand, with rootlets	No Recovery				
	10-20		Ecofact	Shell	4	0.6	1
	20-30		Ecofact	Shell	2	1.0	2
	30-40		No Recovery				
	40-50						
2	0-10	Duff, peat and sandy gravel fill	Ecofact	Shell	2	1.3	3
	10-20	Dark yellowish brown (10YR 3/6) coarse grained sand	Ecofact	Shell	2	0.2	4
			Window Glass	Glass, Aqua Tint	1	2.0	5
			Indeterminate Metal	Metal, Ferrous	1	2.7	6
	20-30		Indeterminate Container	Glass, Colorless	1	0.5	7

Shovel Test	Depth (cm)	Soils	Object Name	Material Type	Quantity	Weight (g)	Cat. No.
	30-35		No Recovery				
3	0-10	Duff, peat and sandy gravel fill	No Recovery				
	10-20	Dark brown (10YR 3/3) coarse grained sandy fill	Ecofact	Shell	3	0.4	8
	20-30	Dark yellowish brown (10YR 3/6) coarse grained sandy fill	Ecofact	Shell	3	0.5	9
			Indeterminate Container	Glass, Amber	1	19.7	10
	30-40		Ecofact	Shell	8	0.8	11
			Ecofact	Shell	3	0.4	12
	40-50		No Recovery				
	50-60						
	60-70						

The three shovel tests produced only 27 fragments of marine shell (5.2 grams), one piece of aqua window glass, two indeterminate glass container fragments, and one piece of indeterminate metal. It is important to note that during the excavation of STPs 2 and 3, a small amount of shell was recovered from between zero and 40 centimeters; however, modern glass and metal fragments were encountered at levels within and below the marine shell, reflecting the effect of prior episode(s) of grading or similar disturbances within this property. The previous disturbance within the property appears to be the cause for the presence of marginal traces of SDI-19,235 within the 8352 La Jolla Shores Drive Project. The study did not result in the observation of any significant artifact concentrations, cultural deposits, or other features related to the prehistoric or historic use within the project boundaries. No midden soils or significant cultural resources were observed during the survey.

Evaluation

Based upon the results of the survey, records search, and STP excavations, no intact cultural deposits were identified on the subject property. The presence of traces of marine shell and historic glass matches the reports from archaeological studies along La Jolla Shores where archaeological materials are characterized as highly disturbed and likely relocated to this area by the grading of the neighborhood in the 1940s. No further investigations are necessary as part of this survey process. Because of the close proximity of Site SDI-19,235, mitigation monitoring will be required as a condition of project approval. Archaeological and Native American monitoring of all earth-moving activities is recommended for the 8352 La Jolla Shores Drive Project.

VI. RECOMMENDATIONS

No significant cultural resources were identified during the archaeological survey and limited testing conducted for the 8352 La Jolla Shores Drive Project. The records search for this project indicates that previously recorded Site SDI-19,235 is located within close proximity to the project area. If cultural elements of Site SDI-19,235 existed previously at the parcel at 8352 La Jolla Shores Drive, these elements appear to have been completely disturbed by past grading of the residential lot. The traces of marine shell that appeared in all three STPs reflect the prehistoric human activity that previously took place in the area of this property; however, no intact elements of a cultural site, or even disturbed but recognizable cultural deposits, could be detected as a consequence of the archaeological study. However, the existing residence, paved surfaces, cement paths, and moderate vegetation limited the investigation, and the potential for some surviving elements of the prehistoric site within the APE cannot be completely addressed. A review of the proposed new construction suggests that there will be new soil excavation within the APE. Because there is the possibility for buried or otherwise masked prehistoric archaeological features beneath the existing structure that is to be removed, an archaeological monitoring program is recommended as a condition of permit approval. Archaeological and Native American monitoring of all grading and excavation activities attendant to the improvements of this property are recommended. The archaeological monitor should have the authority to halt or divert grading or excavation activity in the area of any discovery until such discovery can be characterized and its significance under CEQA assessed. The Mitigation Monitoring and Reporting Program (MMRP) for cultural resources is outlined below:

Mitigation Monitoring and Reporting Program

Prior to obtaining any building, or other, permits, and prior to commencement of construction, the applicant shall contract with a City of San Diego-certified archaeologist to implement a grading monitoring program to the satisfaction of the City of San Diego Development Services Department (DSD) and Mitigation Monitoring Coordination section (MMC). This program shall include, but not be limited to the following actions:

1. The City of San Diego-certified archaeologist/historian and Native American observer shall attend the pre-grading meeting with the contractors to explain and coordinate the requirements of the monitoring program. DSD and MMC shall approve all persons involved in the monitoring program prior to any preconstruction meetings.
2. The consulting archaeologist shall contract with a Native American observer to be involved with the grading monitoring program.
3. An adequate number of monitors (archaeological/historical/Native American) shall be present to ensure that all earth-moving activities are observed and shall be on-site

during all grading activities.

4. During the original cutting of previously undisturbed deposits, the archaeological monitor(s) and Native American observer shall be on-site full-time to perform inspections of the excavations. The frequency of inspections can be determined by the consulting archaeologist, and depending upon the grading process, the need for monitoring and duration of site visits can be reduced. Any changes to the monitoring plan must be communicated to DSD and MMC.
5. Isolates and clearly non-significant deposits encountered during grading will be minimally documented in the field so the monitored grading can proceed.
6. In the event that previously unidentified potentially significant cultural resources are discovered, the archaeologist shall have the authority to divert or temporarily halt ground disturbance operation in the area of discovery to allow for evaluation of potentially significant cultural resources. The archaeologist shall contact MMC at the time of discovery. The archaeologist, in consultation with DSD and MMC, shall determine the significance of the discovered resources. The City of San Diego-certified archaeologist must concur with the evaluation before construction activities will be allowed to resume in the affected area. For significant cultural resources, a Research Design and Data Recovery Program to mitigate impacts shall be prepared by the consulting archaeologist and approved by the City of San Diego, then carried out using professional archaeological methods. If any human remains are discovered, the county coroner shall be contacted. In the event that the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the NAHC, shall be contacted in order to determine proper treatment and disposition of the remains.
7. Before construction activities are allowed to resume in the affected area, the artifacts shall be recovered and features recorded using professional archaeological methods. The archaeological monitor(s) and Native American observer shall determine the amount of material to be recovered for an adequate artifact sample for analysis.
8. In the event that previously unidentified cultural resources are discovered, all cultural material collected during the grading monitoring program shall be processed and curated according to current professional repository standards. The collections and associated records shall be transferred, including title, to an appropriate curation facility within San Diego County, to be accompanied by payment of the fees necessary for permanent curation.
9. In the event that previously unidentified cultural resources are discovered, a report documenting the field and analysis results and interpretation of the artifacts and research data within the research context shall be completed and submitted to the satisfaction of DSD and MMC prior to the issuance of any building permits. The report will include Department of Parks and Recreation Primary and Archaeological

Site Record forms.

10. In the event that no cultural resources are discovered, a brief letter to that effect shall be sent to the City of San Diego by the consulting archaeologist signifying that the grading monitoring activities have been completed.
11. Prior to rough grading inspection sign-off, the archeological monitor shall provide evidence that the grading monitoring activities have been completed to the satisfaction of DSD and MMC.

VII. SOURCES CONSULTED — DATE

National Register of Historic Places ☑	Month and Year: June 2015
California Register of Historical Resources ☑	Month and Year: June 2015
City of San Diego Historical Resources Register ☑	Month and Year: June 2015
Archaeological/Historical Site Records: South Coastal Information Center ☑	Month and Year: June 2015
Other Sources Consulted: NAHC Sacred Lands File Search (Attachment C) References (Attachment A)	

VIII. CERTIFICATION

I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this archaeological report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief, and have been compiled in accordance with CEQA criteria as defined in Section 15064.5 and City of San Diego Historical Resources Guidelines.

July 28, 2015

Brian F. Smith — Date

Principal Investigator

IX. ATTACHMENT A

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Resumes

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San Diego Union – March 31, 1869
San Diego Union – August 9, 1932

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Education

Master of Arts, History, University of San Diego, California **1982**

Bachelor of Arts, History and Anthropology, University of San Diego, California **1975**

Experience

Principal Investigator **1977–Present**
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Brian F. Smith is the owner and principal historical and archaeological consultant for Brian F. Smith and Associates. In the past 35 years, he has conducted over 2,500 cultural resource studies in California, Arizona, Nevada, Montana, and Texas. These studies include every possible aspect of archaeology from literature searches and large-scale surveys to intensive data recovery excavations. Reports prepared by Brian Smith have been submitted to all facets of local, state, and federal review agencies, including the US Army Crops of Engineers (USACE), the Bureau of Land Management (BLM), Bureau of Reclamation (BR), the Department of Defense (DOD), and Department of Homeland Security. In addition, Mr. Smith has conducted studies for utility companies (Sempra Energy) and state highway departments (CalTrans).

Professional Accomplishments

These selected major professional accomplishments represent research efforts which have added significantly to the body of knowledge concerning the prehistoric lifeways of cultures once present in the southern California area and historic settlement since the late 18th century. Mr. Smith has been principal investigator on the following select projects, except where noted.

Downtown San Diego Mitigation and Monitoring Reporting Programs: Large number of downtown San Diego mitigation and monitoring projects submitted to the Centre City Development Corporation, some of which included Strata (2008), Hotel Indigo (2008), Lofts at 707 10th Avenue Project (2007), Breeza (2007), Bayside at the Embarcadero (2007), Aria (2007), Icon (2007), Vantage Pointe (2007), Aperture (2007), Sapphire Tower (2007), Lofts at 655 Sixth Avenue (2007), Metrowork (2007), The Legend (2006), The Mark (2006), Smart Corner (2006), Lofts at 677 7th Avenue (2005), Aloft on Cortez Hill (2005), Front and Beech Apartments (2003), Bella Via Condominiums (2003), Acqua Vista Residential Tower (2003), Northblock Lofts (2003), Westin Park Place Hotel (2001), Parkloft Apartment Complex (2001), Renaissance Park (2001), and Laurel Bay Apartments (2001).

Archaeology at the Padres Ballpark: Involved the analysis of historic resources within a seven block area of the "East Village" area of San Diego, where occupation spanned a period from the 1870s to

the 1940s. Over a period of two years, BFSA recovered over 200,000 artifacts and hundreds of pounds of metal, construction debris, unidentified broken glass, and wood. Collectively, the Ballpark project and the other downtown mitigation and monitoring projects represent the largest historical archaeological program anywhere in the country in the past decade. 2000-2007.

The Navy Broadway Complex: Architectural and historical assessment of over 25 structures that comprise the Naval Supply Depot, many of which have been in use since World War I and were used extensively during World War II. The EIR/EIS which was prepared included National Register evaluations of all structures. The archaeological component of the project involved the excavation of backhoe trenches to search for evidence of the remains of elements of the historic waterfront features that characterized the bay front in the latter half of the 19th century. This study was successful in locating portions of wharves and shanties that existed on the site prior to capping of this area after construction of the sea wall in the early 20th century.

4S Ranch Archaeological and Historical Cultural Resources Study: Data recovery program consisted of the excavation of over 2,000 square meters of archaeological deposits that produced over one million artifacts, primarily prehistoric materials. The archaeological program at 4S Ranch is the largest archaeological study ever undertaken in the San Diego County area and has produced data that has exceeded expectations regarding the resolution of long-standing research questions and regional prehistoric settlement patterns.

Charles H. Brown Site: Attracted international attention to the discovery of evidence of the antiquity of man in North America. Site located in Mission Valley, in the City of San Diego.

Del Mar Man Site: Study of the now famous Early Man Site in Del Mar, California, for the San Diego Science Foundation and the San Diego Museum of Man, under the direction of Dr. Spencer Rogers and Dr. James R. Moriarty.

Old Town State Park Projects: Consulting Historical Archaeologist. Projects completed in the Old Town State Park involved development of individual lots for commercial enterprises. The projects completed in Old Town include Archaeological and Historical Site Assessment for the Great Wall Cafe (1992), Archaeological Study for the Old Town Commercial Project (1991), and Cultural Resources Site Survey at the Old San Diego Inn (1988).

Site W-20, Del Mar, California: A two-year-long investigation of a major prehistoric site in the Del Mar area of the City of San Diego. This research effort documented the earliest practice of religious/ceremonial activities in San Diego County (circa 6,000 years ago), facilitated the projection of major non-material aspects of the La Jolla Complex, and revealed the pattern of civilization at this site over a continuous period of 5,000 years. The report for the investigation included over 600 pages, with nearly 500,000 words of text, illustrations, maps, and photographs which document this major study.

City of San Diego Reclaimed Water Distribution System: A cultural resource study of nearly 400 miles of pipeline in the City and County of San Diego.

Master Environmental Assessment Project, City of Poway: Conducted for the City of Poway to produce a complete inventory of all recorded historic and prehistoric properties within the City. The information was used in conjunction with the City's General Plan Update to produce a map matrix of the City showing areas of high, moderate, and low potential for the presence of cultural resources. The effort also included the development of the City's Cultural Resource Guidelines, which were adopted as City policy.

Draft of the City of Carlsbad Historical and Archaeological Guidelines: Contracted by the City of Carlsbad to produce the draft of the City's historical and archaeological guidelines for use by the Planning Department of the City.

The Midbayfront Project for the City of Chula Vista: Involved a large expanse of undeveloped agricultural land situated between the railroad and San Diego Bay in the northwestern portion of the City. The study included the analysis of some potentially historic features and numerous prehistoric sites.

Cultural resources survey and test of sites within the proposed development of the Audie Murphy Ranch, Riverside County, California: Project Manager/Director of the investigation of 1,113.4 acres and 43 sites, both prehistoric and historic—included project coordination; direction of field crews; evaluation of sites for significance based on County of Riverside and CEQA guidelines; assessment of cupule, pictograph, and rock shelter sites, co-authoring of cultural resources project report. February-September 2002.

Cultural resources evaluation of sites within the proposed development of the Otay Ranch Village 13 Project, San Diego County, California: Project Manager/Director of the investigation of 1,947 acres and 76 sites, both prehistoric and historic—included project coordination and budgeting; direction of field crews; assessment of sites for significance based on County of San Diego and CEQA guidelines; co-authoring of cultural resources project report. May-November 2002.

Cultural resources survey for the Remote Video Surveillance Project, El Centro Sector, Imperial County: Project Manager/Director for a survey of 29 individual sites near the U.S./Mexico Border for proposed video surveillance camera locations associated with the San Diego Border barrier Project—project coordination and budgeting; direction of field crews; site identification and recordation; assessment of potential impacts to cultural resources; meeting and coordinating with U.S. Army Corps of Engineers, U.S. Border Patrol, and other government agencies involved; co-authoring of cultural resources project report. January, February, and July 2002.

Cultural resources survey and test of sites within the proposed development of the Menifee West GPA, Riverside County, California: Project Manager/Director of the investigation of nine sites, both prehistoric and historic—included project coordination and budgeting; direction of field crews; assessment of sites for significance based on County of Riverside and CEQA guidelines; historic research; co-authoring of cultural resources project report. January-March 2002.

Mitigation of a Archaic cultural resource for the Eastlake III Woods Project for the City of Chula Vista, California: Project Archaeologist/ Director—included direction of field crews; development and completion of data recovery program including collection of material for specialized faunal and botanical analyses; assessment of sites for significance based on CEQA guidelines; management of artifact collections cataloging and curation; data synthesis; co-authoring of cultural resources project report, in prep. September 2001-March 2002.

Cultural resources survey and test of sites within the proposed French Valley Specific Plan/EIR, Riverside County, California: Project Manager/Director of the investigation of two prehistoric and three historic sites—included project coordination and budgeting; survey of project area; Native American consultation; direction of field crews; assessment of sites for significance based on CEQA guidelines; cultural resources project report in prep. July-August 2000.

Cultural resources survey and test of sites within the proposed Lawson Valley Project, San Diego County, California: Project Manager/Director of the investigation of 28 prehistoric and two historic sites—included project coordination; direction of field crews; assessment of sites for significance based on CEQA guidelines; cultural resources project report in prep. July-August 2000.

Cultural resource survey and geotechnical monitoring for the Mohyi Residence Project, La Jolla, California: Project Manager/Director of the investigation of a single-dwelling parcel—included project coordination; field survey; assessment of parcel for potentially buried cultural deposits; monitoring of geotechnichal borings; authoring of cultural resources project report. Brian F. Smith and Associates, San Diego, California. June 2000.

Enhanced cultural resource survey and evaluation for the Prewitt/Schmucker/Cavadias Project, La Jolla, California: Project Manager/Director of the investigation of a single-dwelling parcel—included project coordination; direction of field crews; assessment of parcel for potentially buried cultural deposits; authoring of cultural resources project report. June 2000.

Cultural resources survey and test of sites within the proposed development of the Menifee Ranch, Riverside County, California: Project Manager/Director of the investigation of one prehistoric and five historic sites—included project coordination and budgeting; direction of field crews; feature recordation; historic structure assessments; assessment of sites for significance based on CEQA guidelines; historic research; co-authoring of cultural resources project report. February-June 2000.

Salvage mitigation of a portion of the San Diego Presidio identified during water pipe construction for the City of San Diego, California: Project Archaeologist/Director—included direction of field crews; development and completion of data recovery program; management of artifact collections cataloging and curation; data synthesis and authoring of cultural resources project report in prep. April 2000.

Enhanced cultural resource survey and evaluation for the Tyrian 3 Project, La Jolla, California: Project Manager/Director of the investigation of a single-dwelling parcel—included project coordination; assessment of parcel for potentially buried cultural deposits; authoring of cultural resources project report. April 2000.

Enhanced cultural resource survey and evaluation for the Lamont 5 Project, Pacific Beach, California: Project Manager/Director of the investigation of a single-dwelling parcel—included project coordination; assessment of parcel for potentially buried cultural deposits; authoring of cultural resources project report. April 2000.

Enhanced cultural resource survey and evaluation for the Reiss Residence Project, La Jolla, California: Project Manager/Director of the investigation of a single-dwelling parcel—included project coordination; assessment of parcel for potentially buried cultural deposits; authoring of cultural resources project report. March-April 2000.

Salvage mitigation of a portion of Site SDM-W-95 (CA-SDI-211) for the Poinsettia Shores Santalina Development Project and Caltrans, Carlsbad, California: Project Archaeologist/ Director—included direction of field crews; development and completion of data recovery program; management of artifact collections cataloging and curation; data synthesis and authoring of cultural resources project report in prep. December 1999-January 2000.

Survey and testing of two prehistoric cultural resources for the Airway Truck Parking Project, Otay Mesa, California: Project Archaeologist/Director—included direction of field crews; development and completion of testing recovery program; assessment of site for significance based on CEQA guidelines; authoring of cultural resources project report, in prep. December 1999-January 2000.

Cultural resources Phase I and II investigations for the Tin Can Hill Segment of the Immigration and Naturalization Services Triple Fence Project along the International Border, San Diego County,

California: Project Manager/Director for a survey and testing of a prehistoric quarry site along the border—NRHP eligibility assessment; project coordination and budgeting; direction of field crews; feature recordation; meeting and coordinating with U.S. Army Corps of Engineers; co-authoring of cultural resources project report. December 1999-January 2000.

Mitigation of a prehistoric cultural resource for the Westview High School Project for the City of San Diego, California: Project Archaeologist/ Director—included direction of field crews; development and completion of data recovery program including collection of material for specialized faunal and botanical analyses; assessment of sites for significance based on CEQA guidelines; management of artifact collections cataloging and curation; data synthesis; co-authoring of cultural resources project report, in prep. October 1999-January 2000.

Mitigation of a prehistoric cultural resource for the Otay Ranch SPA-One West Project for the City of Chula Vista, California: Project Archaeologist/Director—included direction of field crews; development of data recovery program; management of artifact collections cataloging and curation; assessment of site for significance based on CEQA guidelines; data synthesis; authoring of cultural resources project report, in prep. September 1999-January 2000.

Monitoring of grading for the Herschel Place Project, La Jolla, California: Project Archaeologist/ Monitor—included monitoring of grading activities associated with the development of a single-dwelling parcel. September 1999.

Survey and testing of an historic resource for the Osterkamp Development Project, Valley Center, California: Project Archaeologist/ Director—included direction of field crews; development and completion of data recovery program; budget development; assessment of site for significance based on CEQA guidelines; management of artifact collections cataloging and curation; data synthesis; authoring of cultural resources project report. July-August 1999.

Survey and testing of a prehistoric cultural resource for the Proposed College Boulevard Alignment Project, Carlsbad, California: Project Manager/Director —included direction of field crews; development and completion of testing recovery program; assessment of site for significance based on CEQA guidelines; management of artifact collections cataloging and curation; data synthesis; authoring of cultural resources project report, in prep. July-August 1999.

Survey and evaluation of cultural resources for the Palomar Christian Conference Center Project, Palomar Mountain, California: Project Archaeologist—included direction of field crews; assessment of sites for significance based on CEQA guidelines; management of artifact collections cataloging and curation; data synthesis; authoring of cultural resources project report. July-August 1999.

Survey and evaluation of cultural resources at the Village 2 High School Site, Otay Ranch, City of Chula Vista, California: Project Manager/Director —management of artifact collections cataloging and curation; assessment of site for significance based on CEQA guidelines; data synthesis; authoring of cultural resources project report. July 1999.

Cultural resources Phase I, II, and III investigations for the Immigration and Naturalization Services Triple Fence Project along the International Border, San Diego County, California: Project Manager/Director for the survey, testing, and mitigation of sites along border—supervision of multiple field crews, NRHP eligibility assessments, Native American consultation, contribution to Environmental Assessment document, lithic and marine shell analysis, authoring of cultural resources project report. August 1997-January 2000.

Phase I, II, and II investigations for the Scripps Poway Parkway East Project, Poway California: Project

Archaeologist/Project Director—included recordation and assessment of multicomponent prehistoric and historic sites; direction of Phase II and III investigations; direction of laboratory analyses including prehistoric and historic collections; curation of collections; data synthesis; coauthorship of final cultural resources report. February 1994; March-September 1994; September-December 1995.

Archaeological evaluation of cultural resources within the proposed corridor for the San Elijo Water Reclamation System Project, San Elijo, California: Project Manager/Director —test excavations; direction of artifact identification and analysis; graphics production; coauthorship of final cultural resources report. December 1994-July 1995.

Evaluation of Cultural Resources for the Environmental Impact Report for the Rose Canyon Trunk Sewer Project, San Diego, California: Project Manager/Director —direction of test excavations; identification and analysis of prehistoric and historic artifact collections; data synthesis; co-authorship of final cultural resources report, San Diego, California. June 1991-March 1992.

Reports/Papers

Author, coauthor, or contributor, to over 2,500 cultural resources management publications, a selection of which are presented below.

2009 Cultural Resource Assessment of the North Ocean Beach Gateway Project City of San Diego #64A-003A; Project #154116.

2009 Archaeological constraints study of the Morgan Valley Wind Assessment Project, Lake County, California.

2008 Results of an archaeological review of the Helen Park Lane 3.1-acre Property (APN 314-561-31), Poway, California.

2008 Archaeological Letter Report for a Phase I Archaeological Assessment of the Valley Park Condominium Project, Ramona, California; APN 282-262-75-00.

2007 Archaeology at the Ballpark. Brian F. Smith and Associates, San Diego, California. Submitted to the Centre City Development Corporation.

2007 Result of an Archaeological Survey for the Villages at Promenade Project (APNs 115-180-007-3,115-180-049-1, 115-180-042-4, 115-180-047-9) in te City of Corona, Riverside County.

2007 Monitoring Results for the Capping of Site CA-SDI-6038/SDM-W-5517 within the Katzer Jamul Center Project; P00-017.

2006 Archaeological Assessment for The Johnson Project (APN 322-011-10), Poway, California.

2005 Results of archaeological monitoring at the El Camino Del Teatro Accelerated Sewer Replacement Project (Bid No. K041364; WO # 177741; CIP # 46-610.6.

2005 Results of archaeological monitoring at the Baltazar Draper Avenue Project (Project No. 15857; APN: 351-040-09).

2004 TM 5325 ER #03-14-043 Cultural Resources.

X. ATTACHMENT B

Project Maps:

General Location Map
USGS Project Location Map
800' Scale City Engineering Map
Project Development Map

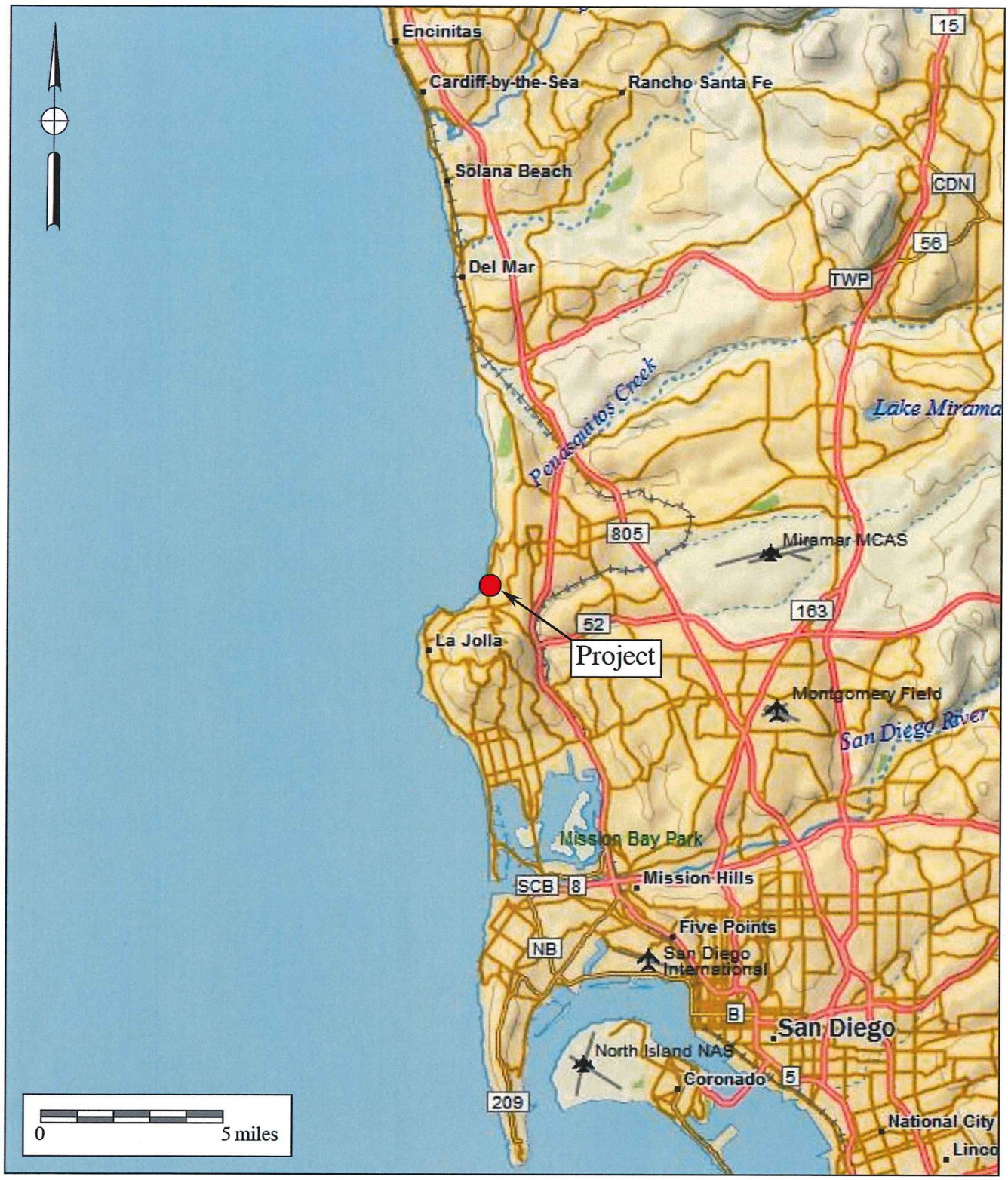


Figure 1

General Location Map

The 8352 La Jolla Shores Drive Project

DeLorme (1:250,000)

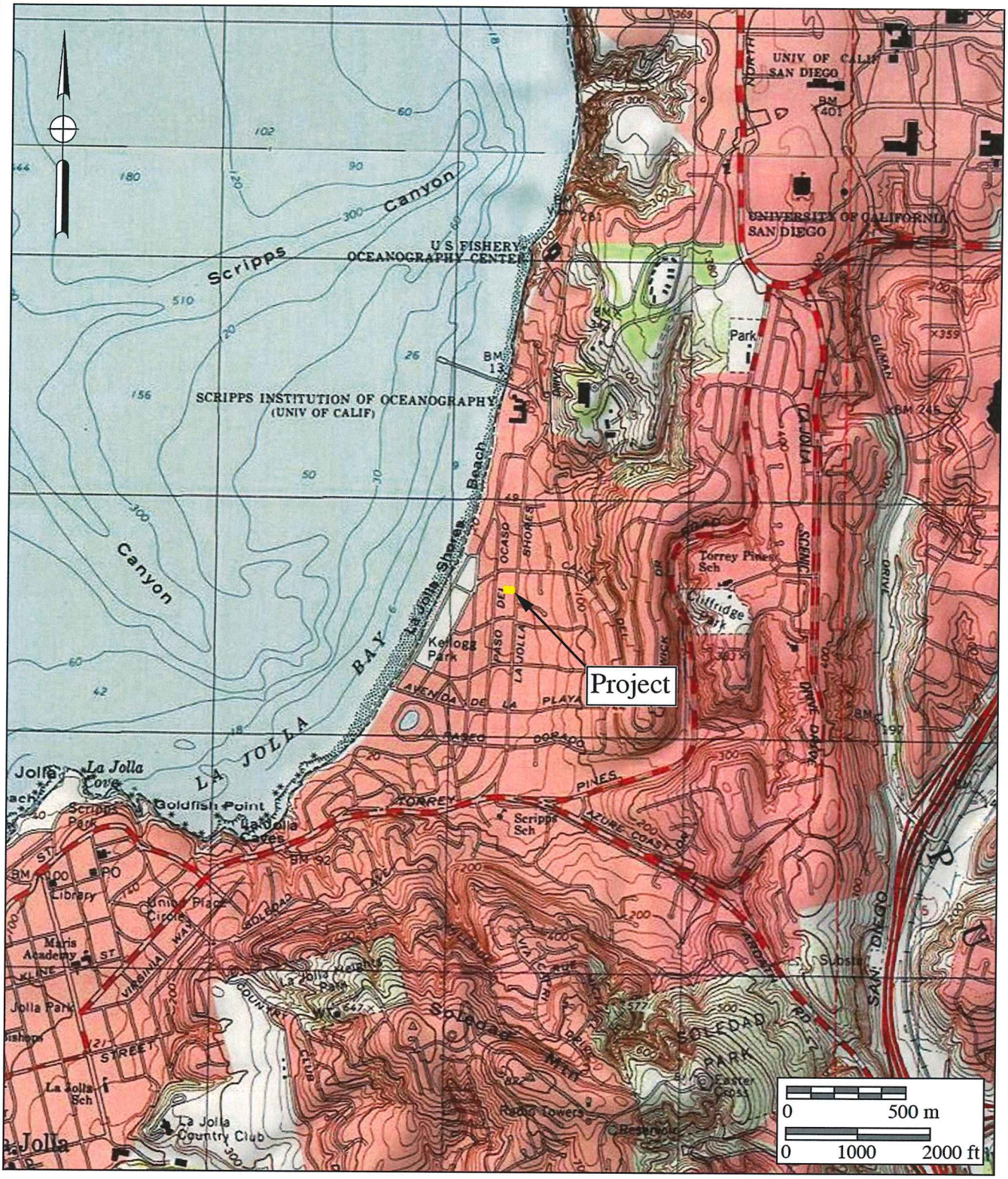


Figure 2

Project Location Map

The 8352 La Jolla Shores Drive Project

USGS *La Jolla* Quadrangle (7.5-minute series)

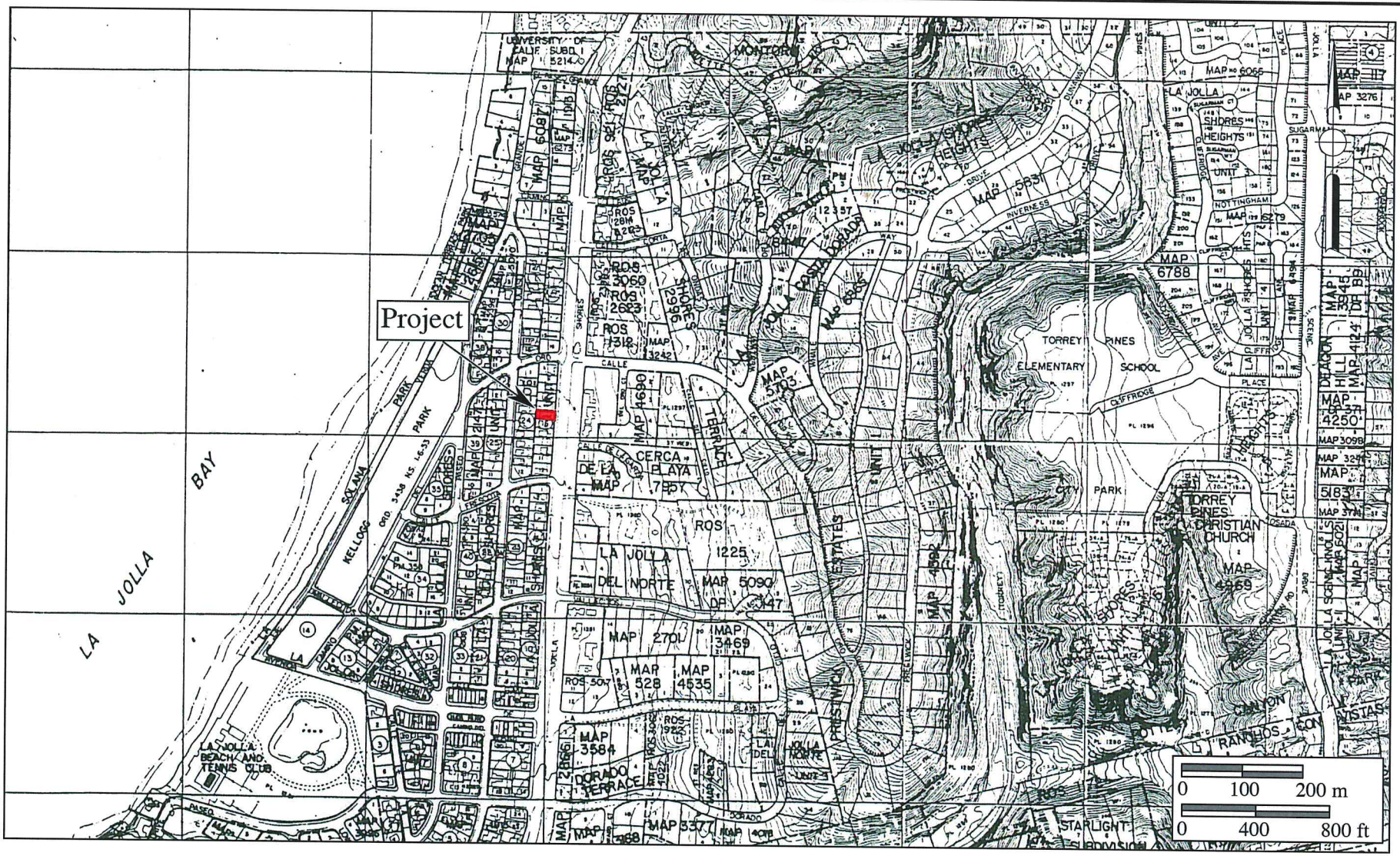


Figure 3

Project Location Map

The 8352 La Jolla Shores Drive Project

Shown on The City of San Diego 1" to 800' Scale Engineering Map

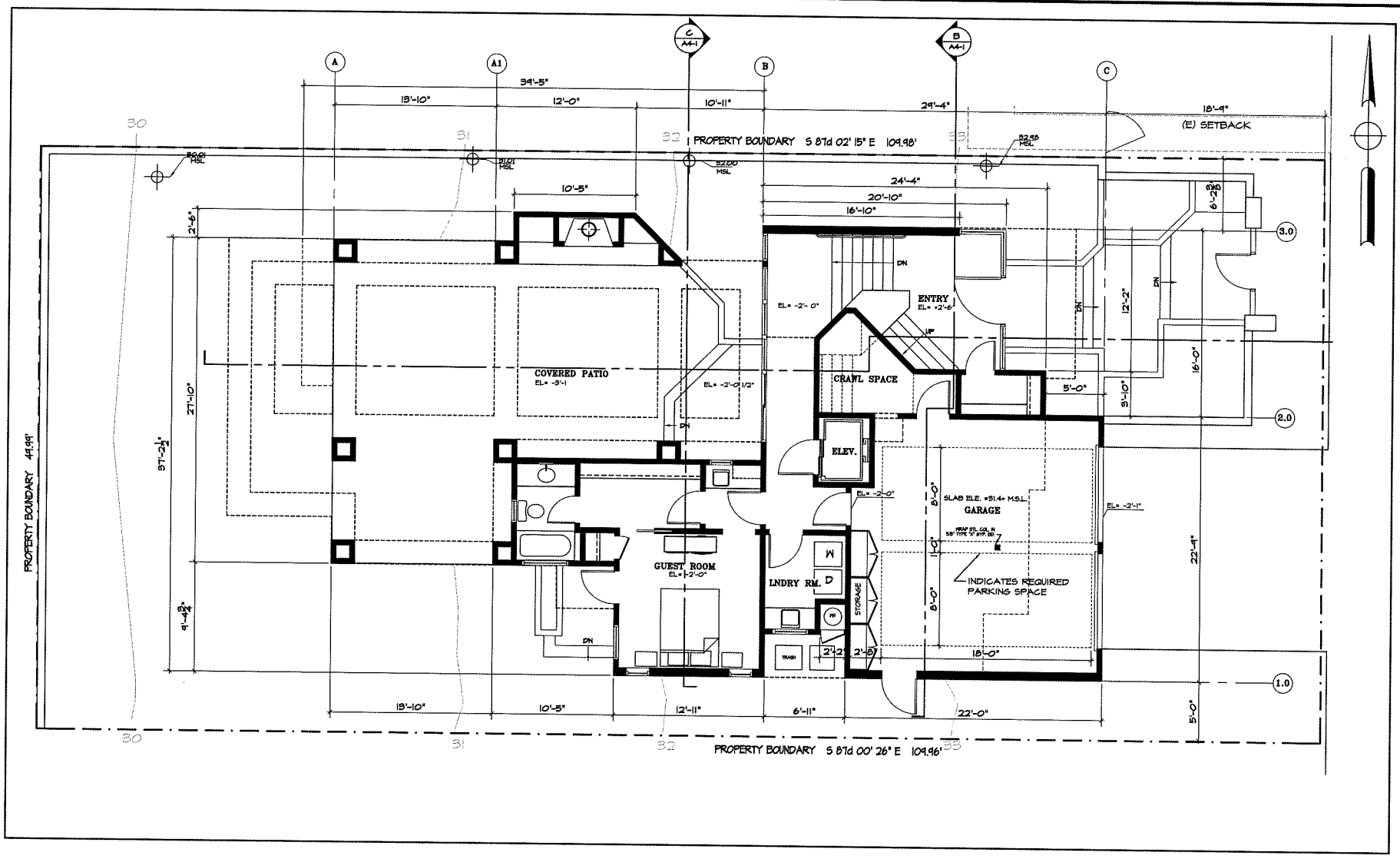


Figure 4

Project Development Map

The 8352 La Jolla Shores Drive Project

XI. ATTACHMENT C

NAHC Sacred Lands File Search Results

June 2, 2015

For: Native American Heritage Commission
915 Capitol Mall, Room 364
Sacramento, California 95814

From: Eric A Rodriguez, M.A., RPA
Brian F. Smith and Associates Inc.
14010 Poway Rd. Suite A
Poway, CA 92064

Re: Request for a Sacred Lands File records search for the 8352 La Jolla Shores Drive Project in La Jolla, California.

I am writing to request a record search of the Sacred Lands File and a list of appropriate Native American contacts for the 8352 La Jolla Shores Drive Project. The location of this project is within San Diego County, California. The project area can be found near the intersection of La Jolla Drive and Calle De la Garza (Assessor's Parcel Number [APN] 346-172-19), in La Jolla, California. Specifically, the project is located in the La Jolla USGS 7.5-minute Quadrangle (Township 15S, Range 04W). A copy of the project map with the project area depicted thereon, has been included for your records.

Sincerely,

Eric A. Rodriguez, M.A., RPA
Archaeologist/GIS Specialist
Phone: 858-484-0915
Email: erodriguez@bfsa-ca.com

Attachments:
-USGS 7.5 *La Jolla,* California topographic maps with project area delineated.
-Project Area Shapefile (.zip)

Sacred Lands File & Native American Contacts List Request
NATIVE AMERICAN HERITAGE COMMISSION

□915 Capitol Mall, RM 364 □Sacramento, CA 95814□(916) 653-4082 □
(916) 657-5390 – Fax□
nahc@pacbell.net

Information Below is Required for a Sacred Lands File Search

Project: 8352 La Jolla Shores Drive

County: San Diego

USGS Quadrangle Name: *La Jolla*

Township: 15S Range: 04W

Company/Firm/Agency: Brian F. Smith & Associates Inc.

Contact Person: Eric A. Rodriguez, RPA

Street Address: 14010 Poway Road, Suite A

City: Poway Zip: 92064

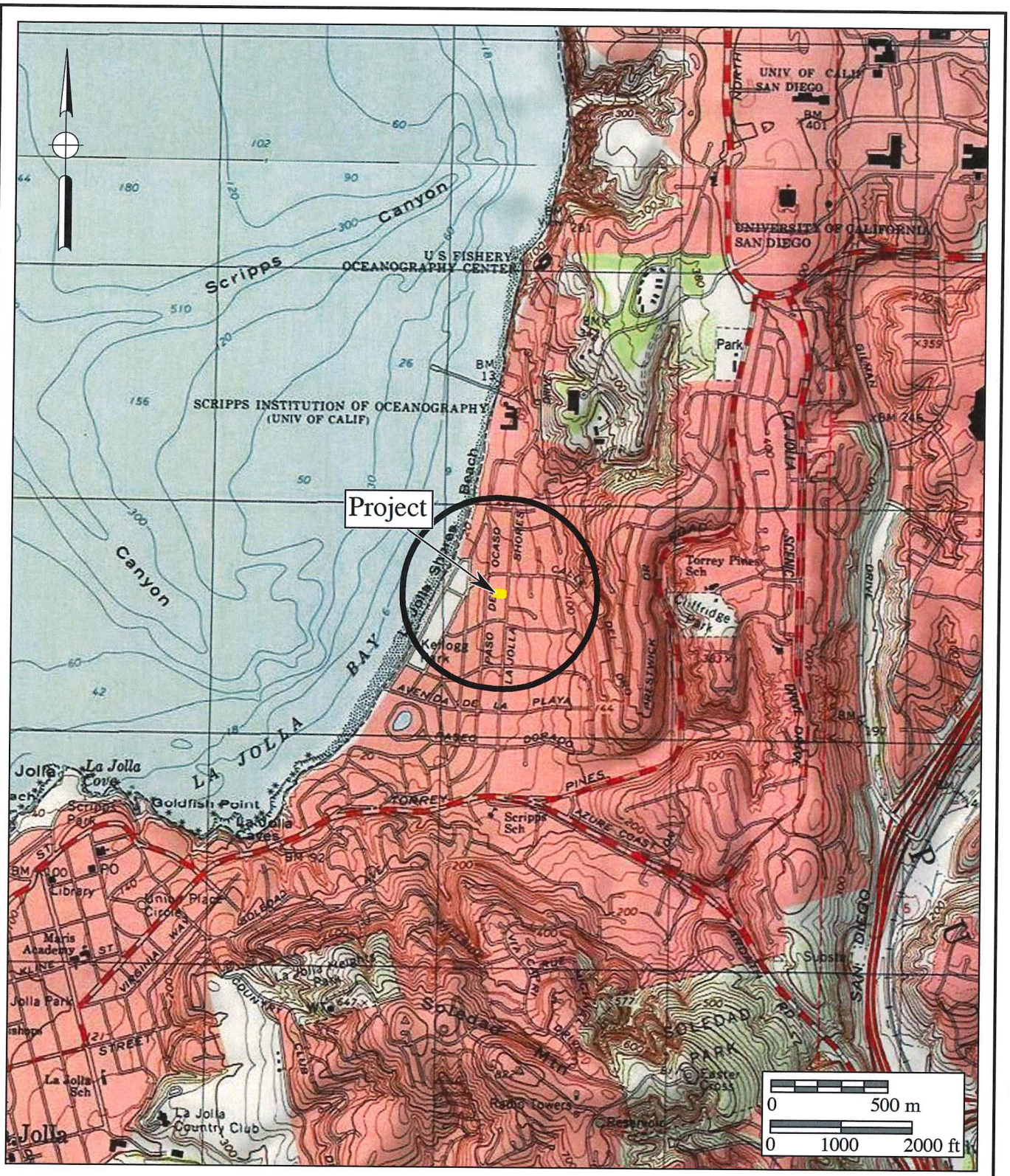
Phone: 858-484-0915

Fax: 858-679-9896

Email: erodriguez@bfsa-ca.com

Project Description:

This records search is part of an archaeological survey and Limited Test project requested by the City of San Diego. The location of this project is within San Diego County, California. The location of this project is within San Diego County, California. The project area can be found near the intersection of La Jolla Drive and Calle De la Garza (Assessor's Parcel Number [APN] 346-172-19), in La Jolla, California. Specifically, the project is located in the *La Jolla* USGS 7.5-minute Quadrangle (Township 15S, Range 04W). A copy of the project map with the project area depicted thereon, has been included for your records.



Record Search Location Map

The 8352 La Jolla Shores Drive Project

USGS *La Jolla* Quadrangle (7.5 minute series)

XII. CONFIDENTIAL APPENDIX

Archaeological Records Search Results
Confidential Map

(Deleted for Public Review; Bound Separately)

City of San Diego

2016 STORM WATER STANDARDS WATER QUALITY STUDY BMP REPORT

8352 La Jolla Shores Drive
La Jolla, CA. 92037

Prepared by Richard Gombes Architect
November 14, 2016

Table of Contents

1. Site Map Data

- Entire Property: The 5,500 S.F. site is located at 8352 La Jolla Shores Drive, La Jolla, 92037. It currently contains an existing single story residential structure which will be replaced by a new two & three story structure.

- Drainage Areas and Direction of Flow: Proposed drainage consists of surface flow from the front of the property along each of 2 side yards of the new building, until it reaches the rear yard where it is collected by a sump pump in the SW rear corner of the property which is approx. 3 feet below the front of the property. The flow is then pumped up to La Jolla Shores Drive. Downspouts located on the sides of the building collect runoff from the roof and deposit it into the landscape area before it flows to the sump pump.

- Areas of Soil Erosion: There are no known areas of erosion currently on the site.

- Nearby Water Bodies and Storm Drain Inlets: La Jolla Shores Drive carries runoff by surface flow southerly approximately 300 feet to Calle Frescota, and then westerly approximately 600 feet towards El Paseo Grande to a storm drainage system.

- Location of Waters on 303(D) List for Sedimentation or Turbidity: No such waters within or adjacent to site boundaries.

- Location of Storm Water Conveyance Systems: The sump pump is located in the SW corner of the rear yard which is approx. 3 feet below the front yard. From the pump collection point, storm water will be pumped by subsurface 2" ABS pipe upwards approx. 3 feet to La Jolla Shores Drive and discharge through the curb face.

- Location of Existing Storm Water Controls (Oil/Water Separators, Sumps, Etc.): None at this time.

- Locations of Impervious Areas –pavement, buildings, covered areas: Building footprint, driveways and other hardscape are considered impervious areas.

- Locations Where Materials Are Directly Exposed to Storm Water: Materials exposed to storm water are located near the front of the property facing the street during construction.

- Locations Where Toxic or Hazardous Materials Have Spilled In The Past: None known at this time.

- Location of Building and Activity Areas (E.G. Waste Container Area, Wash Racks Hazardous Material Storage Areas, Etc.); Building and activity areas are located near the front of the property facing the street during construction.

2. Planning and Organization

A. Team Members

The general contractor (to Be Determined) for the project, will be responsible for maintenance and implementation of BMPs during the construction phase.

B. Other Regulatory Requirements

None known at this time.

3. List of Significant Materials

Below is a list of the typical construction materials that will be stored/handled onsite that may potentially come in contact with storm water and could be a source of storm water pollution. Contact with storm water runoff shall be avoided during all phases of construction:

- Paints/Solvents/Thinners
- Drywall
- Concrete mix
- Sealants
- Insulation
- Sawdust
- Sediments
- Misc. Trash and debris

4. Assessment of Potential Pollutant Sources

Fine grading activities to prepare the site for construction of the new 2 & 3 story residence are the most likely to produce sediment pollutants as a result of disturbed land. General construction activities could potentially contribute to pollutants associated with trash & debris and oil & grease.

Human waste may contribute to pollutants associated with trash & debris as well as bacteria & viruses. Proper implementation of (SC) Source Control BMPs should significantly reduce pollutants in runoff from the project site.

5. Best Management Practices Implementation

- Sediments (from grading activities, general land disturbance): To be mitigated by sediment and erosion control devices. Fiber Rolls (SC-5) will be placed along the westerly 50 feet of property line and southwesterly 30 feet of property line. The construction entrance will prevent sediment from flowing into the street (TC-1). Gravel bags (SC-6) and fiber rolls (SC-5) will serve to slow storm flows and discourage exposure of runoff to sediments. In the event that offsite sediment tracking occurs due to construction mobilization, sediment will be collected and contained via street sweeping (SC-7).

- Nutrients (from use of fertilizers): Use of fertilizers shall be limited until vegetation is installed and functional.

- Organic Compounds (Oxygen Demanding Substances): To be kept from flowing through the work area with sand bag barriers during construction. Post construction, all drainage from the roof will be channeled through downspouts to both side yard landscape areas and then on to the sump pump in the landscaped rear yard.

- Trash & Debris (from general construction activities): To be contained by proper CALTRANS methods for trash and debris management. Hazardous and concrete waste will be manage through the use of adequate waste management procedures (WM-5, WM-6, & WM-8).

- Oil & Grease (from use of construction machinery): Proper and immediate spill cleanup per CALTRANS requirements as outlined by (WM-4).

- Bacteria & Viruses: To be contained by proper CALTRANS methods for waste management (i.e. WM-9, WM-5, etc.) until permanent BMP devices are installed.

- Pesticides (from landscaping activities): Use of pesticides shall be limited until vegetation is installed and functional.

6. Phased Grading

No Phased grading is proposed for this small site project.

7. Site Design (SD) BMP Requirements

(SD-1) Optimize the Site Layout – The proposed project will take advantage of the existing developed area. Grading will be kept to a minimum (no grading permit will be required). The majority of the earthwork will involve removal of existing hardscape, remedial grading and digging of new footings.

(SD-2) Minimize Impervious Footprint – The use of hardscape will be limited in favor of landscaped area.

(SD-3) Disperse Runoff to Adjacent Landscaping – Runoff will be directed from down spouts to landscaping areas. Hardscapes will be pitched to landscape wherever possible.

(SD-4) Soil compaction shall be minimized in landscaped areas designated for storm water treatment.

8. Source Control (SC) BMP Requirements

(3.1.6) Efficient Irrigation – The irrigation system will be designed with sensitivity to each landscape area's water requirements (per CASQA BMP SD-12).

(3.1.7) Trash Storage – Trash containers will have attached lids to prevent trash contact with storm water (per CASQA BMP SD-32).

(3.1.8) Materials Storage - In the event that any landscaping or construction or any other material that could contaminate rainwater is stored onsite they will be stored in such a way as to eliminate contact with storm water. This includes but is not limited to: storing material above ground on palettes, using plastic covers, and employing secondary containment as needed (per CASQA BMP SD-34).

(3.1.10) Employ integrated pest management principles – Plants in landscaped areas will be chosen to prevent pests (either native or pest-resistant plants) to reduce the need for pesticide use.

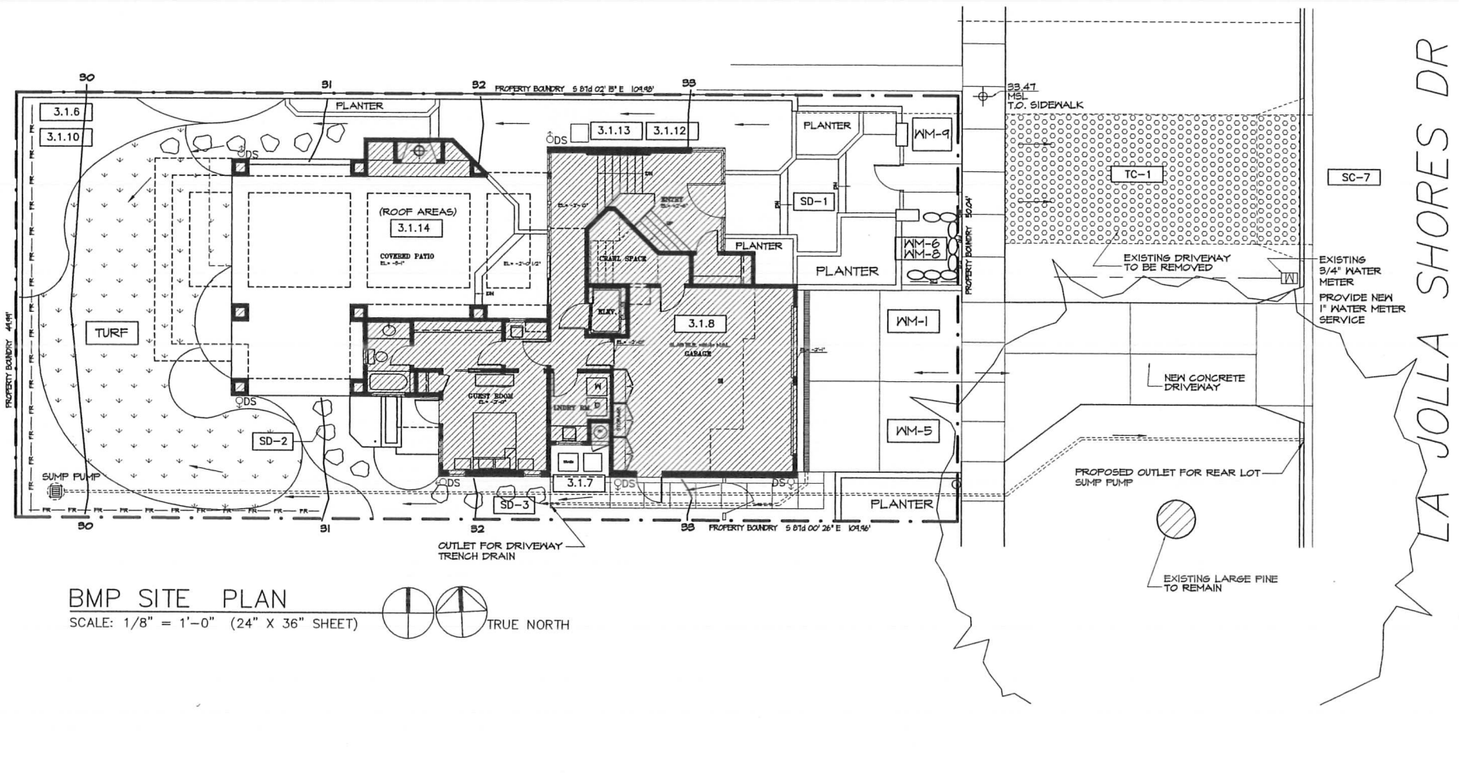
(3.1.12) Manage Fire Sprinkler System Discharges – A fire sprinkler system will be incorporated into the new home. Discharges from the sprinkler system will be conveyed to the sanitary sewer system through drains per the California Building Code.

(3.1.13) Manage Air Conditioning Condensate – Air conditioning condensate shall be directed to adjacent landscaping.

(3.1.14) Use Non-Toxic Roofing Materials Where Feasible – The roof will be constructed using non-toxic roofing materials.

(3.1.15) Other Source Control Requirements – Site shall be stabilized with landscaping wherever possible. Pet wastes (if any) shall be collected and disposed of in proper waste containers (trash cans).

Appendix A – Referenced Plan Sheets (Reduced)



BMP SITE PLAN

SCALE: 1/8" = 1'-0" (24" X 36" SHEET) TRUE NORTH

LEGEND

DESCRIPTION	STD DWG*	SYMBOL
PROPERTY LINE		N45°45'45"W
PRESERVATION OF EXISTING VEGETATION	SS-2	
SILT FENCE	SC-1	
GRAVEL BAG BERM/BARRIER	SC-6	
DIRECTION/COURSE OF FLOW		
STABILIZED CONSTRUCTION ENTRANCE	TC-1	
MATERIALS DELIVERY AND STORAGE AREA	WM-1	WM-1
TEMPORARY TRASH/SOLID WASTE	WM-5	WM-5
HAZARDOUS AND CONCRETE WASTE MANAGEMENT	WM-6, WM-8	WM-6 WM-8
SANITARY WASTE (PORTABLE TOILET)	WM-9	WM-9
STREET SWEEPING	SC-7	SC-7
ROOF DOWNSPOUTS	SD-11	DS
FIBER ROLLS	SC-5	FR FR
SUMP PUMP BELOW 18" X 20" CB W/ FILTER FGP-1820FB/KRISTAR		SUMP PUMP

* STANDARD DRAWINGS CAN BE FOUND IN THE CALTRANS STORM WATER QUALITY HANDBOOK

(SC) SOURCE CONTROL BMPs

SC5
SC3

3.1.6	3.1.6 EFFICIENT IRRIGATIONI
3.1.7	3.1.7 TRASH STORAGE
3.1.8	3.1.8 MATERIALS STORAGE
3.1.10	3.1.10 EMPLOY INTEGRATED PEST MANAGEMENT PRINCIPLES
3.1.12	3.1.12 MANAGE FIRE SPRINKLER SYSTEM DISCHARGES
3.1.13	3.1.13 MANAGE AIR CONDITIONING CONDENSATE
3.1.14	3.1.14 USE NON-TOXIC ROOFING MATERIALS WHERE FESIBLE
3.1.15	3.1.15 OTHER SOURCE CONTROL REQUIREMENTS

(SD) SITE DESIGN BMPs *

SD-1	OPTIMIZE SITE LAYOUT
SD-2	MINIMIZE IMPERVIOUS FOOTPRINT
SD-3	DISPERSE RUNOFF TO ADJACENT LANDSCAPE
SD-4	CONSTRUCTION CONSIDERATIONS

* REFER TO STORM WATER STANDARDS 2012 FOR DETAILS

xx-xx-xxxx	AK

RICHARD GOMBES ARCHITECT
P.O. BOX 192 LA JOLLA, CA 92038 (858) 456-4070

8352 MC CLELLAND
RESIDENCE
LA JOLLA, CALIFORNIA

BMP PLAN

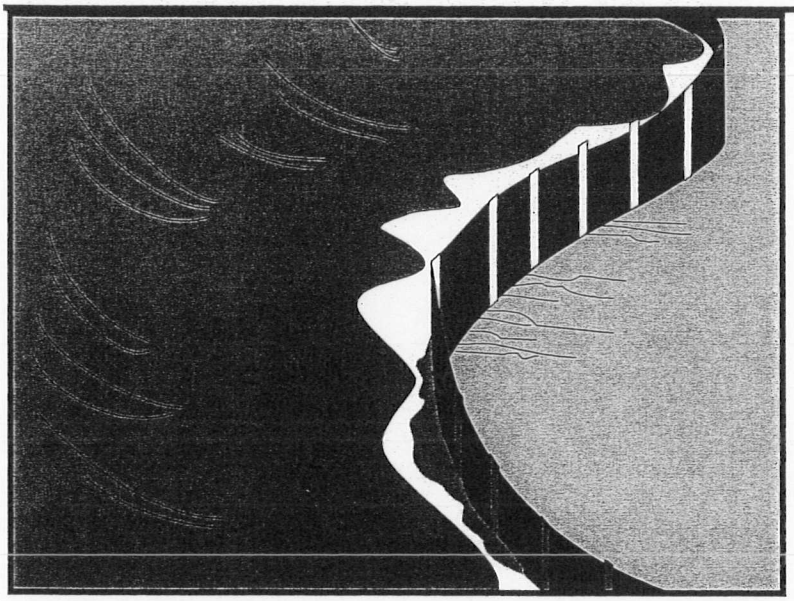
DATE 12-5-16
SCALE 1/8" = 1'-0"
DRAWN AK
APPROVED

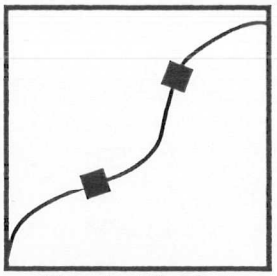
A1-3
- OF -

Appendix B – Caltrans Data Sheets

Silt Fence

SC-1





Standard Symbol

BMP Objectives

- ○ Soil Stabilization
- ● Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ○ Non-Storm Water Management
- ○ Materials and Waste Management

Definition and Purpose

A silt fence is a temporary linear sediment barrier of permeable fabric designed to intercept and slow the flow of sediment-laden sheet flow runoff. Silt fences allow sediment to settle from runoff before water leaves the construction site.

Appropriate Applications

Silt fences are placed:

- Below the toe of exposed and erodible slopes.
- Down-slope of exposed soil areas.
- Around temporary stockpiles.
- Along streams and channels.
- Along the perimeter of a project.

Limitations

- Not effective unless trenched and keyed in.
- Not intended for use as mid-slope protection on slopes greater than 1:4 (V:H).
- Must be maintained.
- Must be removed and disposed of.
- Don't use below slopes subject to creep, slumping, or landslides.
- Don't use in streams, channels, drain inlets, or anywhere flow is concentrated.
- Don't use silt fences to divert flow.

Standards and Specifications

Design and Layout

- The maximum length of slope draining to any point along the silt fence shall be 61 m (200 ft) or less.
- Slope of area draining to silt fence shall be less than 1:1 (V:H).
- Limit to locations suitable for temporary ponding or deposition of sediment.
- Fabric life span generally limited to between five and eight months. Longer periods may require fabric replacement.
- Silt fences shall not be used in concentrated flow areas.
- Lay out in accordance with Pages 5 and 6 of this BMP.
- For slopes steeper than 1:2 (V:H) and that contain a high number of rocks or large dirt clods that tend to dislodge, it may be necessary to install additional protection immediately adjacent to the bottom of the slope, prior to installing silt fence. Additional protection may be a chain link fence or a cable fence.
- For slopes adjacent to water bodies or Environmentally Sensitive Areas (ESAs), additional temporary soil stabilization BMPs shall be used.

Materials

- Silt fence fabric shall be woven polypropylene with a minimum width of 900 mm (36 inches) and a minimum tensile strength of 0.45-kN. The fabric shall conform to the requirements in ASTM designation D4632 and shall have an integral reinforcement layer. The reinforcement layer shall be a polypropylene, or equivalent, net provided by the manufacturer. The permittivity of the fabric shall be between 0.1 sec^{-1} and 0.15 sec^{-1} in conformance with the requirements in ASTM designation D4491. Contractor must submit certificate of compliance in accordance with Standard Specifications Section 6-1.07.
- Wood stakes shall be commercial quality lumber of the size and shape shown on the plans. Each stake shall be free from decay, splits or cracks longer than the thickness of the stake or other defects that would weaken the stakes and cause the stakes to be structurally unsuitable.
- Bar reinforcement may be used, and its size shall be equal to a number four (4) or greater. End protection shall be provided for any exposed bar reinforcement.
- Staples used to fasten the fence fabric to the stakes shall be not less than 45 mm (1.75 inches) long and shall be fabricated from 1.57 mm (0.06 inch) or heavier wire. The wire used to fasten the tops of the stakes together when

joining two sections of fence shall be 3.05 mm (0.12 inch) or heavier wire. Galvanizing of the fastening wire is not required.

Installation

- Generally, silt fences shall be used in conjunction with soil stabilization source controls up slope to provide effective erosion and sediment control.
- Bottom of the silt fence shall be keyed-in a minimum of 150 mm (12 inches).
- Trenches shall not be excavated wider and deeper than necessary for proper installation of the temporary linear sediment barriers.
- Excavation of the trenches shall be performed immediately before installation of the temporary linear sediment barriers.
- Construct silt fences with a set-back of at least 1m (3 ft) from the toe of a slope. Where a silt fence is determined to be not practical due to specific site conditions, the silt fence may be constructed at the toe of the slope, but shall be constructed as far from the toe of the slope as practical.
- Construct the length of each reach so that the change in base elevation along the reach does not exceed 1/3 the height of the barrier; in no case shall the reach exceed 150 meters (490 ft).
- Cross barriers shall be a minimum of 1/3 and a maximum of 1/2 the height of the linear barrier.
- Install in accordance with Pages 5 and 6 of this BMP.

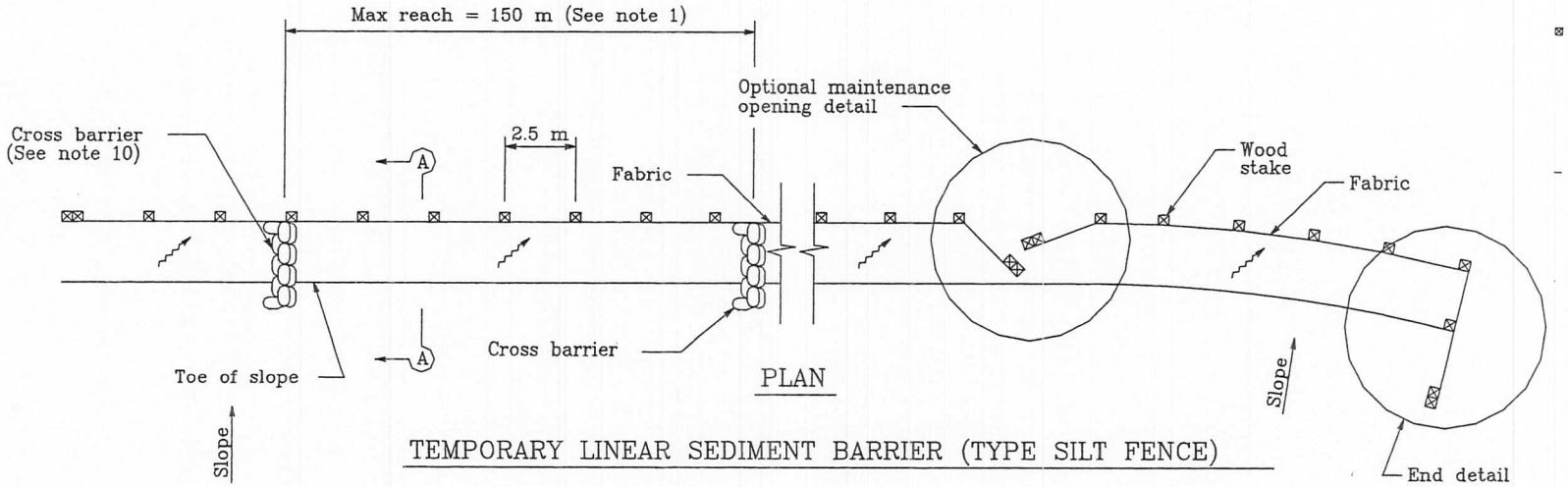
Maintenance and Inspection

- Repair undercut silt fences.
- Repair or replace split, torn, slumping, or weathered fabric.
- Inspect silt fence when rain is forecast. Perform necessary maintenance, or maintenance required by the Resident Engineer (RE).
- Inspect silt fence following rainfall events. Perform maintenance as necessary, or as required by the RE.
- Maintain silt fences to provide an adequate sediment holding capacity. Sediment shall be removed when the sediment accumulation reaches one-third (1/3) of the barrier height. Removed sediment shall be incorporated in the project at locations designated by the RE or disposed of outside the right-of-way in conformance with the Standard Specifications.
- Silt fences that are damaged and become unsuitable for the intended purpose, as determined by the RE, shall be removed from the site of work, disposed of outside the highway right-of-way in conformance with the Standard Specifications, and replaced with new silt fence barriers.

- Holes, depressions or other ground disturbance caused by the removal of the temporary silt fences shall be backfilled and repaired in conformance with the Standard Specifications.

- Remove silt fence when no longer needed or as required by the RE. Fill and compact post holes and anchorage trench, remove sediment accumulation, and grade fence alignment to blend with adjacent ground.

Silt Fence



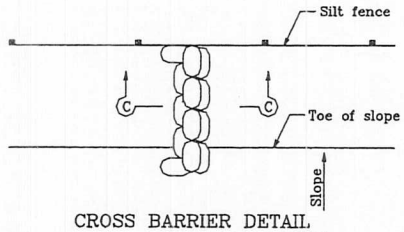
TEMPORARY LINEAR SEDIMENT BARRIER (TYPE SILT FENCE)

NOTES

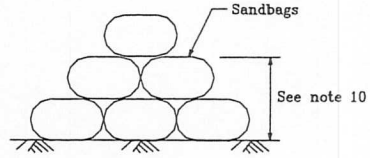
1. Construct the length of each reach so that the change in base elevation along the reach does not exceed 1/3 the height of the linear barrier, in no case shall the reach length exceed 150m.
2. The last 2.5 m of fence shall be turned up slope.
3. Stake dimensions are nominal.
4. Dimension may vary to fit field condition.
5. Stakes shall be spaced at 2.5 m maximum and shall be positioned on downstream side of fence.
6. Stakes to overlap and fence fabric to fold around each stake one full turn. Secure fabric to stake with 4 staples.
7. Stakes shall be driven tightly together to prevent potential flow-through of sediment at joint. The tops of the stakes shall be secured with wire.
8. For end stake, fence fabric shall be folded around two stakes one full turn and secured with 4 staples.
9. Minimum 4 staples per stake. Dimensions shown are typical.
10. Cross barriers shall be a minimum of 1/3 and a maximum of 1/2 the height of the linear barrier.
11. Maintenance openings shall be constructed in a manner to ensure sediment remains behind silt fence.
12. Joining sections shall not be placed at sump locations.
13. Sandbag rows and layers shall be offset to eliminate gaps.

LEGEND

- Tamped backfill
- Slope direction
- Direction of flow



CROSS BARRIER DETAIL



SECTION C-C

STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

TEMPORARY LINEAR SEDIMENT BARRIER
(TYPE SILT FENCE)

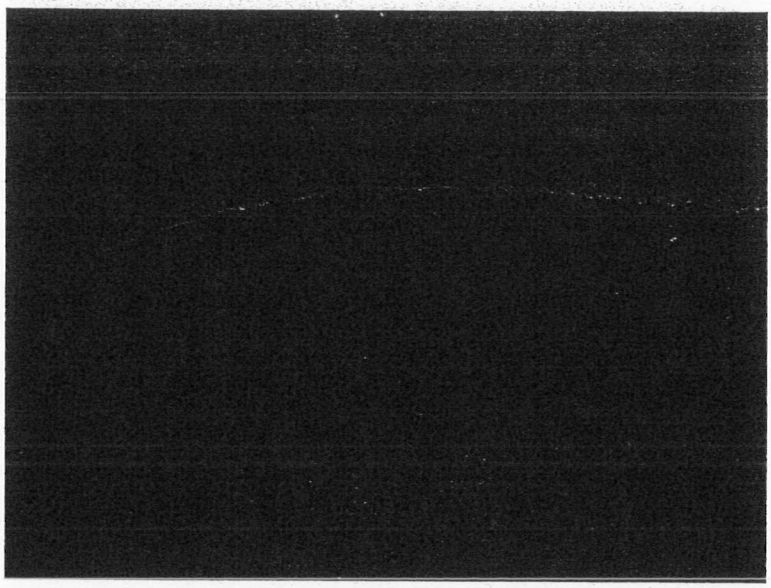
NO SCALE

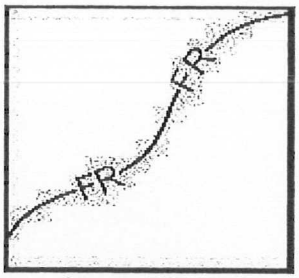
ALL DIMENSIONS ARE IN
MILLIMETERS UNLESS OTHERWISE SHOWN

SC-1

Fiber Rolls

SC-5





Standard Symbol

BMP Objectives

- ● Soil Stabilization
- ● Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ○ Non-Storm Water Management
- ○ Materials and Waste Management

Definition and Purpose

A fiber roll consists of wood excelsior, rice or wheat straw, or coconut fibers that is rolled or bound into a tight tubular roll and placed on the toe and face of slopes to intercept runoff, reduce its flow velocity, release the runoff as sheet flow and provide removal of sediment from the runoff. Fiber rolls may also be used for inlet protection and as check dams under certain situations.

Appropriate Applications

- This BMP may be implemented on a project-by-project basis with other BMPs when determined necessary and feasible by the RE.
- Along the toe, top, face, and at grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.
- Below the toe of exposed and erodible slopes.
- Fiber rolls may be used as check dams in unlined ditches if approved by the Resident Engineer (RE) or the District Construction Storm Water Coordinator (refer to SC-4 "Check Dams").
- Fiber rolls may be used for drain inlet protection if approved by the RE or the District Construction Storm Water Coordinator (refer to SC-10 "Storm Drain Inlet Protection").
- Down-slope of exposed soil areas.
- Around temporary stockpiles.
- Along the perimeter of a project.

Fiber Rolls

SC-5

Limitations

- Runoff and erosion may occur if fiber roll is not adequately trenched in.
- Fiber rolls at the toe of slopes greater than 1:5 may require the use of 500 mm (20" diameter) or installations achieving the same protection (i.e., stacked smaller diameter fiber rolls, etc.).
- Fiber rolls may be used for drainage inlet protection if they can be properly anchored.
- Difficult to move once saturated.
- Fiber rolls could be transported by high flows if not properly staked and trenched in.
- Fiber rolls have limited sediment capture zone.
- Do not use fiber rolls on slopes subject to creep, slumping, or landslide.

Standards and Specifications

Fiber Roll Materials

- Fiber rolls shall be either:

  (1) Prefabricated rolls.

  (2) Rolled tubes of erosion control blanket.

Assembly of Field Rolled Fiber Roll

- Roll length of erosion control blanket into a tube of minimum 200 mm (8 in) diameter.
- Bind roll at each end and every 1.2 m (4 ft) along length of roll with jute-type twine.

Installation

- Slope inclination of 1:4 or flatter: fiber rolls shall be placed on slopes 6.0 m apart.
- Slope inclination of 1:4 to 1:2: fiber rolls shall be placed on slopes 4.5 m apart.
- Slope inclination 1:2 or greater: fiber rolls shall be placed on slopes 3.0 m apart.
- Stake fiber rolls into a 50 to 100 mm (2 to 4 in) trench.

- Drive stakes at the end of each fiber roll and spaced 600 mm (2 ft) apart if Type 2 installation is used (refer to Page 4). Otherwise, space stakes 1.2 m (4 ft) maximum on center if installed as shown on Pages 5 and 6.
- Use wood stakes with a nominal classification of 19 by 19 mm (3/4 by 3/4 in), and minimum length of 600 mm (24 in).
- If more than one fiber roll is placed in a row, the rolls shall be overlapped; not abutted.

Removal

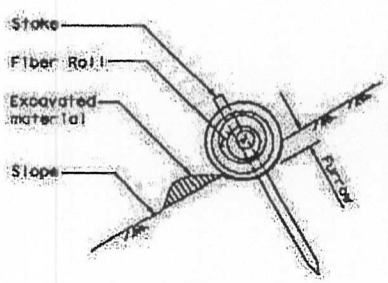
- Fiber rolls are typically left in place.
- If fiber rolls are removed, collect and dispose of sediment accumulation, and fill and compact holes, trenches, depressions or any other ground disturbance to blend with adjacent ground.

Maintenance and Inspection

- Repair or replace split, torn, unraveling, or slumping fiber rolls.
- Inspect fiber rolls when rain is forecast. Perform maintenance as needed or as required by the RE.
- Inspect fiber rolls following rainfall events and a least daily during prolonged rainfall. Perform maintenance as needed or as required by the RE.
- Maintain fiber rolls to provide an adequate sediment holding capacity. Sediment shall be removed when the sediment accumulation reaches three quarters (3/4) of the barrier height. Removed sediment shall be incorporated in the project at locations designated by the RE or disposed of outside the highway right-of-way in conformance with the Standard Specifications.

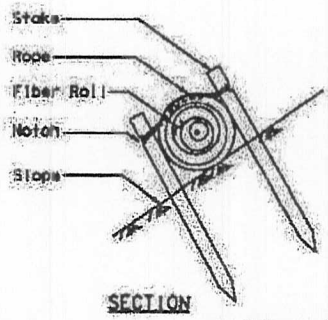
Fiber Rolls

SC-5



SECTION

TEMPORARY FIBER ROLL (TYPE 1)



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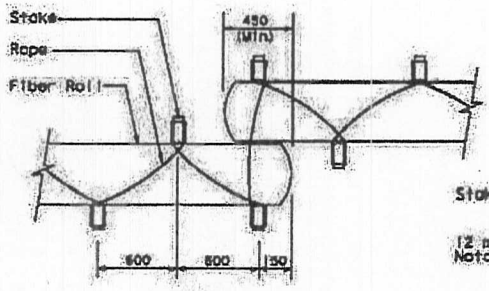
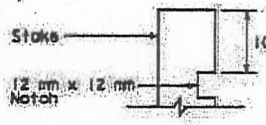


PLAN

TEMPORARY FIBER ROLL (TYPE 2)

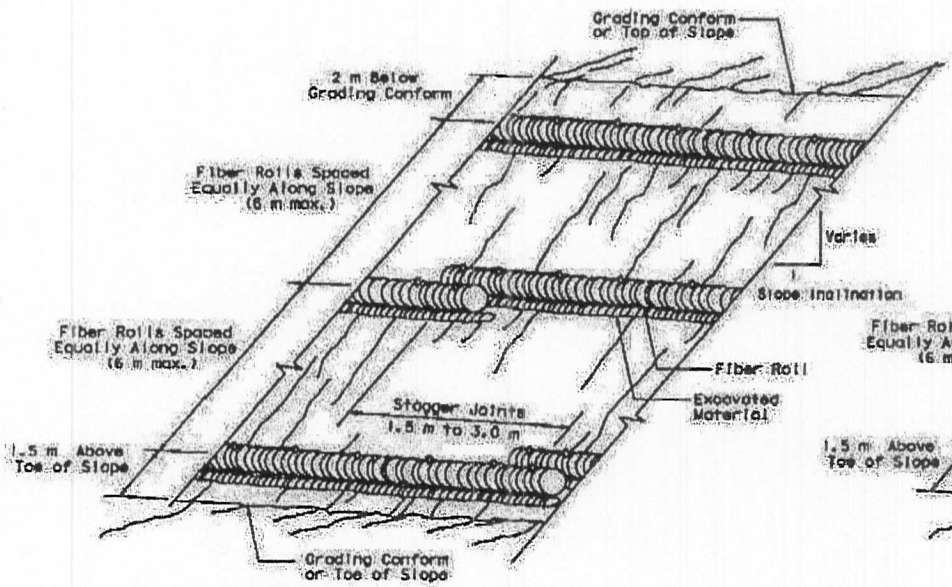


ELEVATION

NOTCH DETAIL

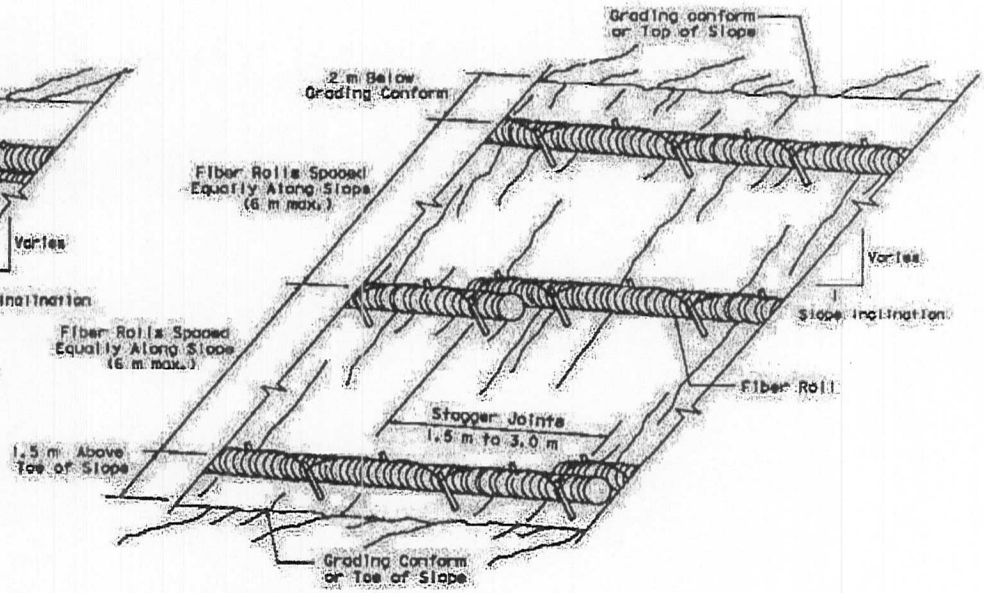
NOTE

1. Temporary fiber roll spacing varies depending upon slope inclination.



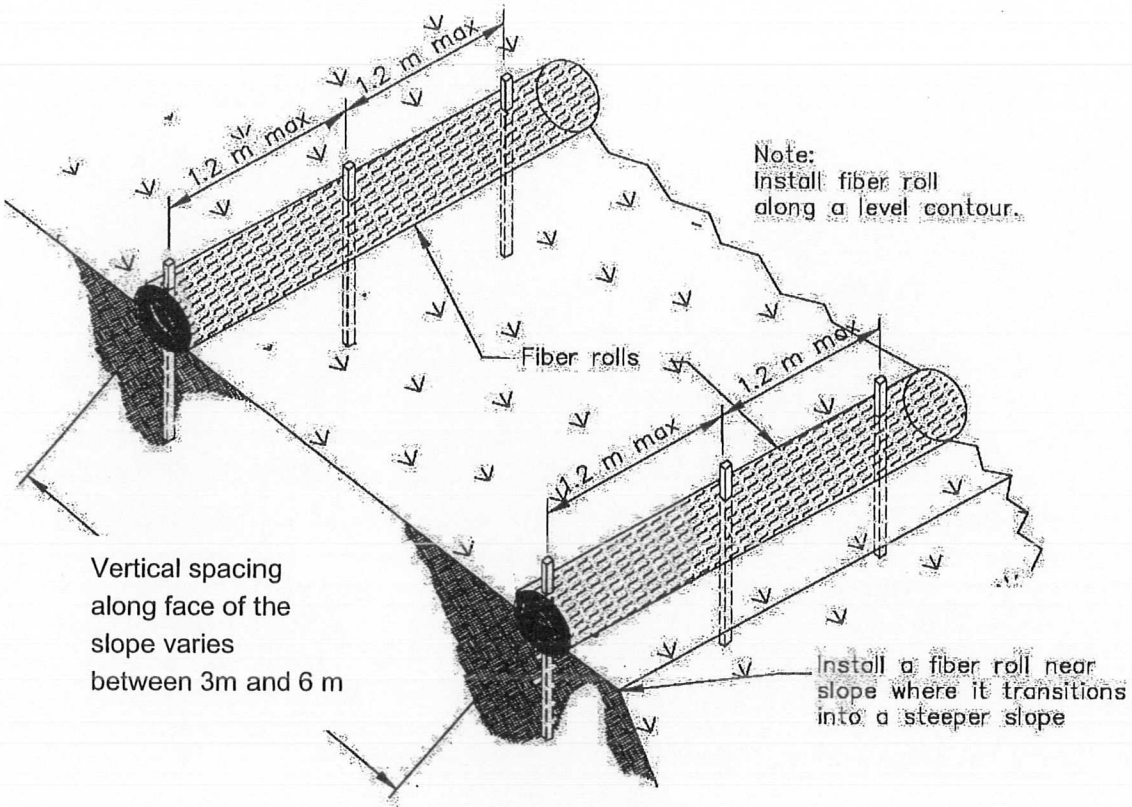
PERSPECTIVE

TEMPORARY FIBER ROLL (TYPE 1)



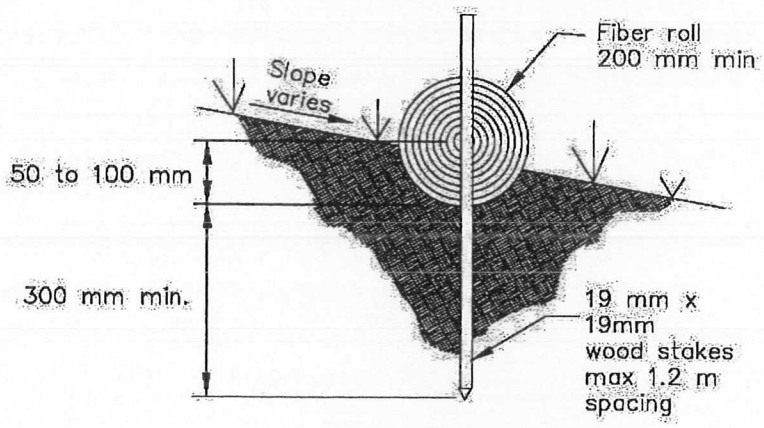
PERSPECTIVE

TEMPORARY FIBER ROLL (TYPE 2)



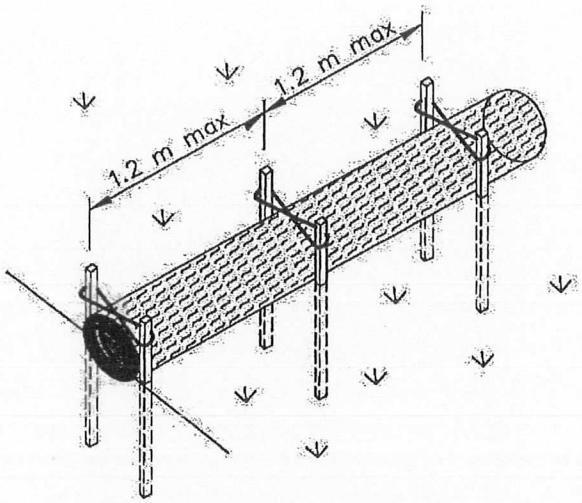
TYPICAL FIBER ROLL INSTALLATION

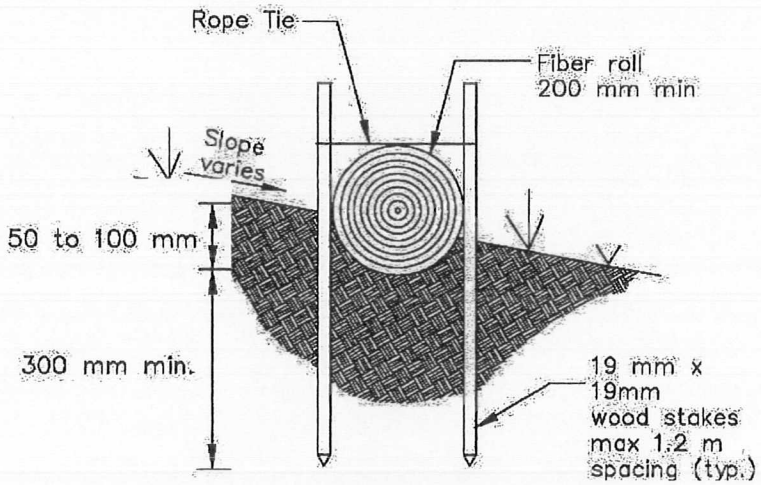
N.T.S.



ENTRENCHMENT DETAIL

N.T.S.



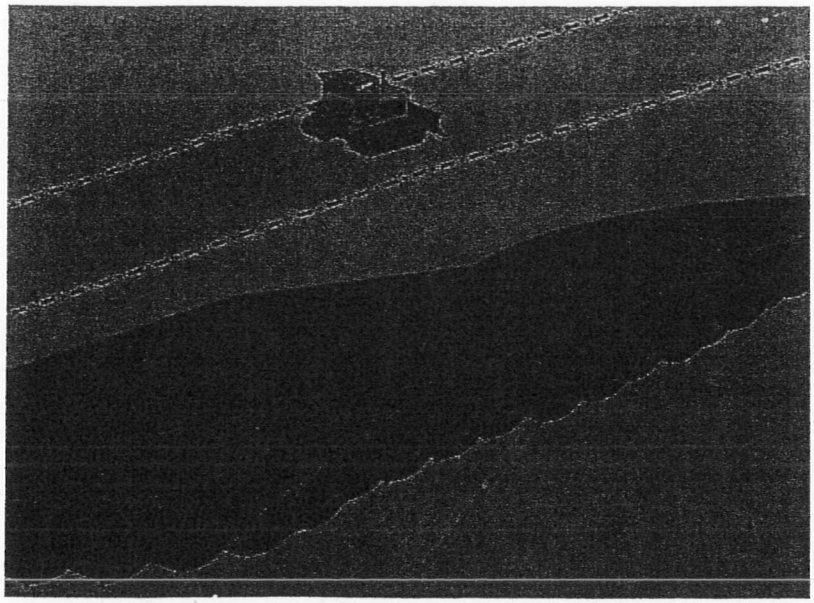


OPTIONAL ENTRENCHMENT DETAIL

N.T.S.

Gravel Bag Berm

SC-6



Standard Symbol

BMP Objectives

- ○ Soil Stabilization
- ● Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ○ Non-Storm Water Management
- ○ Materials and Waste Management

Definition and Purpose

A gravel bag berm consists of a single row of gravel bags that are installed end to end to form a barrier across a slope to intercept runoff, reduce its flow velocity, release the runoff as sheet flow and provide some sediment removal. Gravel bags can be used where flows are moderately concentrated, such as ditches, swales, and storm drain inlets (see BMP SC-10, Storm Drain Inlet Protection) to divert and/or detain flows.

Appropriate Applications

- BMP may be implemented on a project-by-project basis with other BMPs when determined necessary and feasible by the RE.
- Along streams and channels.
- Below the toe of exposed and erodible slopes.
- Down slope of exposed soil areas.
- Around stockpiles.
- Across channels to serve as a barrier for utility trenches or provide a temporary channel crossing for construction equipment, to reduce stream impacts.
- Parallel to a roadway to keep sediment off paved areas.
- At the top of slopes to divert roadway runoff away from disturbed slopes.
- Along the perimeter of a site.
- To divert or direct flow or create a temporary sediment basin.
- During construction activities in stream beds when the contributing drainage

area is less than 2 ha (5 ac).

- When extended construction period limits the use of either silt fences or straw bale barriers.
- When site conditions or construction sequencing require adjustments or relocation of the barrier to meet changing field conditions and needs during construction.
- At grade breaks of exposed and erodible slopes to shorten slope length and spread runoff as sheet flow.

Limitations

- Degraded gravel bags may rupture when removed, spilling contents.
- Installation can be labor intensive.
- Limited durability for long term projects.
- When used to detain concentrated flows, maintenance requirements increase.

Standards and Specifications

Materials

- Bag Material: Bags shall be woven polypropylene, polyethylene or polyamide fabric, minimum unit weight 135 g/m2 (four ounces per square yard), mullen burst strength exceeding 2,070 kPa (300 psi) in conformance with the requirements in ASTM designation D3786, and ultraviolet stability exceeding 70% in conformance with the requirements in ASTM designation D4355.
- Bag Size: Each gravel-filled bag shall have a length of 450 mm (18 in), width of 300 mm (12 in), thickness of 75 mm (3 in), and mass of approximately 15 kg (33 lb). Bag dimensions are nominal, and may vary based on locally available materials. Alternative bag sizes shall be submitted to the RE for approval prior to deployment.
- Fill Material: Gravel shall be between 10 mm and 20 mm (0.4 and 0.8 inch) in diameter, and shall be clean and free from clay balls, organic matter, and other deleterious materials. The opening of gravel-filled bags shall be between 13 kg and 22 kg (28 and 48 lb) in mass. Fill material is subject to approval by the RE.

Installation

- When used as a linear control for sediment removal:
  - Install along a level contour.
  - Turn ends of gravel bag row up slope to prevent flow around the ends.
  - Generally, gravel bag barriers shall be used in conjunction with temporary soil stabilization controls up slope to provide effective erosion and sediment

control.

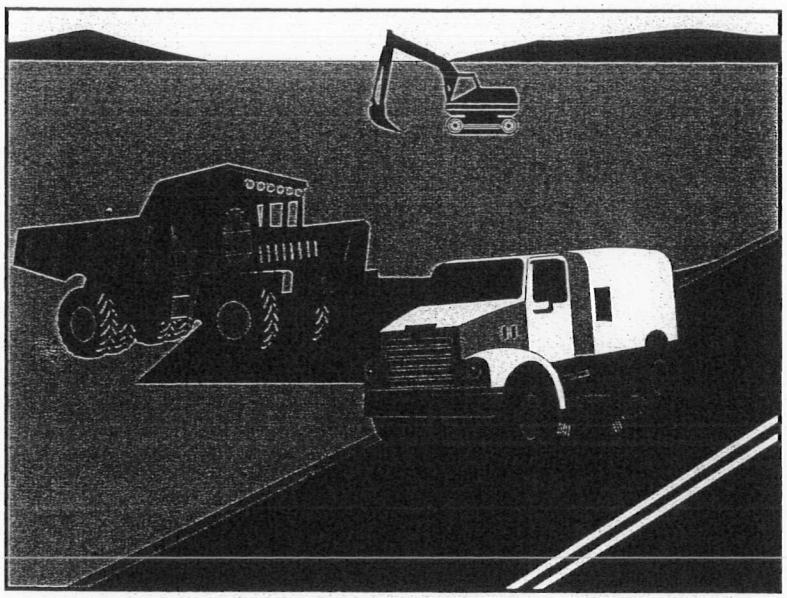
- When used for concentrated flows:
  - Stack gravel bags to required height using a pyramid approach.
  - Upper rows of gravel bags shall overlap joints in lower rows.
- Construct gravel bag barriers with a set-back of at least 1m from the toe of a slope. Where it is determined to be not practicable due to specific site conditions, the gravel bag barrier may be constructed at the toe of the slope, but shall be constructed as far from the toe of the slope as practicable.
- Requires Certificate of Compliance per Standard Specifications 6-1.07.

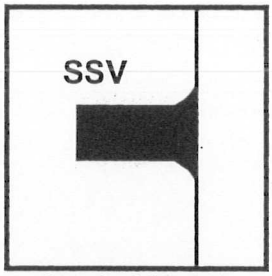
Maintenance and Inspection

- Inspect gravel bag berms before and after each rainfall event, and weekly throughout the rainy season.
- Reshape or replace gravel bags as needed, or as directed by the RE.
- Repair washouts or other damages as needed, or as directed by the RE.
- Inspect gravel bag berms for sediment accumulations and remove sediments when accumulation reaches one-third of the berm height. Removed sediment shall be incorporated in the project at locations designated by the RE or disposed of outside the highway right-of-way in conformance with the Standard Specifications.
- Remove gravel bag berms when no longer needed. Remove sediment accumulations and clean, re-grade, and stabilize the area.

Street Sweeping and Vacuuming

SC-7





Standard Symbol

BMP Objectives

- ● Soil Stabilization
- ● Sediment Control
- ● Tracking Control
- ○ Wind Erosion Control
- ○ Non-Storm Water Management
- ○ Materials and Waste Management

Definition and Purpose

Practices to remove tracked sediment to prevent the sediment from entering a storm drain or watercourse.

Appropriate Applications

These practices are implemented anywhere sediment is tracked from the project site onto public or private paved roads, typically at points of ingress/egress.

Limitations

Sweeping and vacuuming may not be effective when soil is wet or muddy.

Standards and Specifications

- Kick brooms or sweeper attachments shall not be used.
- Inspect potential sediment tracking locations daily.
- Visible sediment tracking shall be swept and/or vacuumed daily.
- If not mixed with debris or trash, consider incorporating the removed sediment back into the project.

Maintenance and Inspection

- Inspect ingress/egress access points daily and sweep tracked sediment as needed, or as required by the Resident Engineer (RE).
- Be careful not to sweep up any unknown substance or any object that may be potentially hazardous.
- Adjust brooms frequently; maximize efficiency of sweeping operations.
- After sweeping is finished, properly dispose of sweeper wastes at an approved dumpsite in conformance with the provisions in Standard Specifications Section 7-1.13 .

- Fence posts shall be either wood or metal, at the Contractor's discretion, as appropriate for the intended purpose. The post spacing and depth shall be adequate to completely support the fence in an upright position.

- Minimize the disturbed areas by locating temporary roadways to avoid stands of trees and shrubs and to follow existing contours to reduce cutting and filling.

- Consider the impact of grade changes to existing vegetation and the root zone.

Installation

- Construction materials, equipment storage, and parking areas shall be located where they will not cause root compaction.

- Keep equipment away from trees to prevent trunk and root damage.

- Maintain existing irrigation systems.

- Employees and subcontractors shall be instructed to honor protective devices. No heavy equipment, vehicular traffic, or storage piles of any construction materials shall be permitted within the drip line of any tree to be retained. Removed trees shall not be felled, pushed, or pulled into any retained trees. Fires shall not be permitted within 30 m (100 ft) of the drip line of any retained trees. Any fires shall be of limited size, and shall be kept under continual surveillance. No toxic or construction materials (including paint, acid, nails, gypsum board, chemicals, fuels, and lubricants) shall be stored within 15 m (50 ft) of the drip line of any retained trees, nor disposed of in any way which would injure vegetation.

Trenching and Tunneling

- Trenching shall be as far away from tree trunks as possible, usually outside of the tree drip line or canopy. Curve trenches around trees to avoid large roots or root concentrations. If roots are encountered, consider tunneling under them. When trenching and/or tunneling near or under trees to be retained, tunnels shall be at least 450 mm (18 in) below the ground surface, and not below the tree center to minimize impact on the roots.

- Tree roots shall not be left exposed to air; they shall be covered with soil as soon as possible, protected, and kept moistened with wet burlap or peat moss until the tunnel and/or trench can be completed.

- The ends of damaged or cut roots shall be cut off smoothly.

- Trenches and tunnels shall be filled as soon as possible. Careful filling and tamping will eliminate air spaces in the soil which can damage roots.

- Remove any trees intended for retention if those trees are damaged seriously enough to affect their survival. If replacement is desired or required, the new tree shall be of similar species, and at least 50 mm (2 in) caliper, unless

otherwise required by the contract documents.

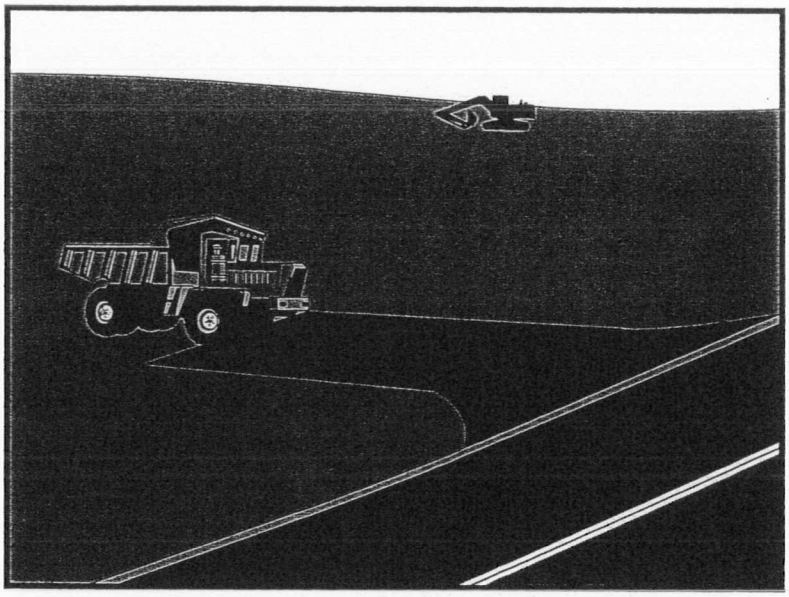
- After all other work is complete, fences and barriers shall be removed last. This is because protected trees may be destroyed by carelessness during the final cleanup and landscaping.

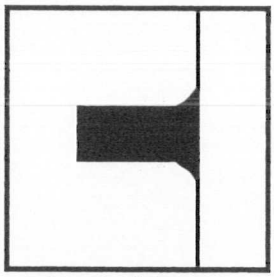
Maintenance and Inspection

During construction, the limits of disturbance shall remain clearly marked at all times. Irrigation or maintenance of existing vegetation shall conform to the requirements in the landscaping plan. If damage to protected trees still occurs, maintenance guidelines described below shall be followed:

- Serious tree injuries shall be attended to by an arborist.
- During construction, District Environmental shall be contacted to ensure that ESAs are protected.

Stabilized Construction Entrance/Exit TC-1





Standard Symbol

BMP Objectives

- ● Soil Stabilization
- ○ Sediment Control
- ● Tracking Control
- ● Wind Erosion Control
- ○ Non-Storm Water Management
- ○ Materials and Waste Management

Definition and Purpose

A stabilized construction access is defined by a point of entrance/exit to a construction site that is stabilized to reduce the tracking of mud and dirt onto public roads by construction vehicles.

Appropriate Applications

- Use at construction sites:
  - Where dirt or mud can be tracked onto public roads.
  - Adjacent to water bodies.
  - Where poor soils are encountered.
  - Where dust is a problem during dry weather conditions.
- This BMP may be implemented on a project-by-project basis in addition to other BMPs when determined necessary and feasible by the Resident Engineer (RE).

Limitations

- Site conditions will dictate design and need.

Standards and Specifications

- Limit the points of entrance/exit to the construction site.
- Limit speed of vehicles to control dust.
- Properly grade each construction entrance/exit to prevent runoff from leaving the construction site.
- Route runoff from stabilized entrances/exits through a sediment-trapping device before discharge.
- Design stabilized entrance/exit to support the heaviest vehicles and equipment that will use it.

- Select construction access stabilization (aggregate, asphaltic concrete, concrete) based on longevity, required performance, and site conditions. The use of asphalt concrete (AC) grindings for stabilized construction access/roadway is not allowed.
- Use of constructed/manufactured steel plates with ribs for entrance/exit access is allowed with written approval from the RE.
- If aggregate is selected, place crushed aggregate over geotextile fabric to at least 300 mm (12 in) depth, or place aggregate to a depth recommended by the RE. Crushed aggregate greater than 75 mm (3 inches) and smaller than 150 mm (6 inches) shall be used.
- Designate combination or single purpose entrances and exits to the construction site.
- Implement BMP SC-7, "Street Sweeping and Vacuuming" as needed and as required.
- Require all employees, subcontractors, and suppliers to utilize the stabilized construction access.
- All exit locations intended to be used continuously and for a period of time shall have stabilized construction entrance/exit BMPs (TC-1 "Stabilized Construction Entrance/Exit" or TC-3 "Entrance/Outlet Tire Wash").

Maintenance and Inspection

- Inspect routinely for damage and assess effectiveness of the BMP. Remove aggregate, separate and dispose of sediment if construction entrance/exit is clogged with sediment or as directed by the RE.
- Keep all temporary roadway ditches clear.
- Inspect for damage and repair as needed.

-
- Bagged and boxed materials shall be stored on pallets and shall not be allowed to accumulate on the ground. To provide protection from wind and rain, throughout the rainy season, bagged and boxed materials shall be covered during non-working days and prior to rain events.
- Stockpiles shall be protected in accordance with BMP WM-3, "Stockpile Management."
- Minimize the material inventory stored on-site (e.g., only a few days supply).
- Have proper storage instructions posted at all times in an open and conspicuous location.
- Do not store hazardous chemicals, drums, or bagged materials directly on the ground. Place these items on a pallet and when possible, under cover in secondary containment.
- Keep hazardous chemicals well labeled and in their original containers.
- Keep ample supply of appropriate spill clean up material near storage areas.
- Also see BMP WM-6, "Hazardous Waste Management", for storing of hazardous materials.

Material Delivery Practices

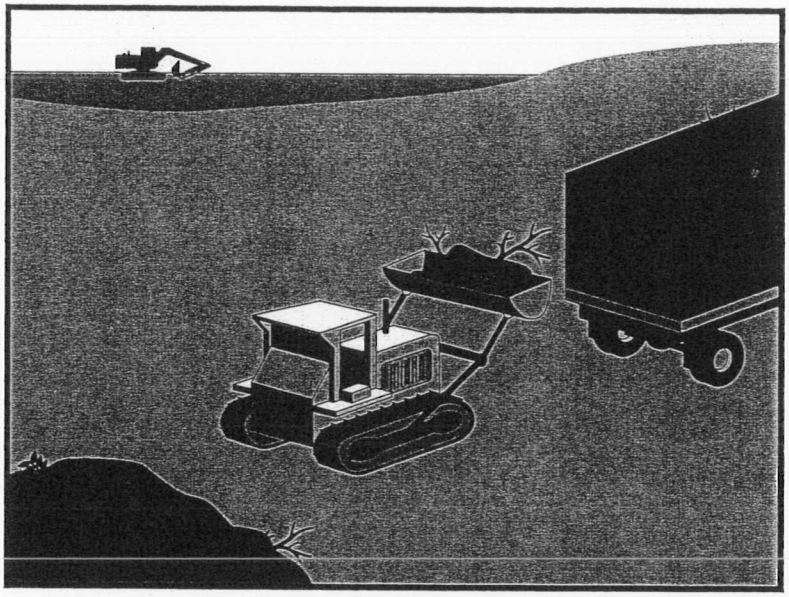
- Keep an accurate, up-to-date inventory of material delivered and stored on-site.
- Employees trained in emergency spill clean-up procedures shall be present when dangerous materials or liquid chemicals are unloaded.

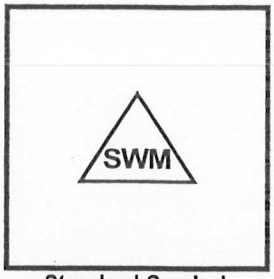
Spill Clean-up

- Contain and clean up any spill immediately.
- If significant residual materials remain on the ground after construction is complete, properly remove and dispose any hazardous materials or contaminated soil.
- See BMP WM-4, "Spill Prevention and Control", for spills of chemicals and/or hazardous materials.

Solid Waste Management

WM-5





Standard Symbol

BMP Objectives

- ○ Soil Stabilization
- ○ Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ● Non-Storm Water Management
- ● Materials and Waste Management

Definition and Purpose

Solid waste management procedures and practices are designed to minimize or eliminate the discharge of pollutants to the drainage system or to watercourses as a result of the creation, stockpiling, or removal of construction site wastes.

Appropriate Applications

Solid waste management procedures and practices are implemented on all construction projects that generate solid wastes.

Solid wastes include but are not limited to:

- Construction wastes including brick, mortar, timber, steel and metal scraps, sawdust, pipe and electrical cuttings, non-hazardous equipment parts, styrofoam and other materials used to transport and package construction materials.
- Highway planting wastes, including vegetative material, plant containers, and packaging materials.
- Litter, including food containers, beverage cans, coffee cups, paper bags, plastic wrappers, and smoking materials, including litter generated by the public.

Limitations

- Temporary stockpiling of certain construction wastes may not necessitate stringent drainage related controls during the non-rainy season or in desert areas with low rainfall.

Standards and Specifications

Education

- The Contractor's Water Pollution Control Manager (WPCM) shall oversee and enforce proper solid waste procedures and practices.
- Instruct employees and subcontractors on identification of solid waste and hazardous waste.
- Educate employees and subcontractors on solid waste storage and disposal procedures.
- Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings).
- Require that employees and subcontractors follow solid waste handling and storage procedures.
- Prohibit littering by employees, subcontractors, and visitors.
- Wherever possible, minimize production of solid waste materials.

Collection, Storage, and Disposal

- Dumpsters of sufficient size and number shall be provided to contain the solid waste generated by the project and properly serviced.
- Littering on the project site shall be prohibited.
- To prevent clogging of the storm drainage system litter and debris removal from drainage grates, trash racks, and ditch lines shall be a priority.
- Trash receptacles shall be provided in the Contractor's yard, field trailer areas, and at locations where workers congregate for lunch and break periods.
- Construction debris and litter from work areas within the construction limits of the project site shall be collected and placed in watertight dumpsters at least weekly regardless of whether the litter was generated by the Contractor, the public, or others. Collected litter and debris shall not be placed in or next to drain inlets, storm water drainage systems or watercourses.
- Full dumpsters shall be removed from the project site and the contents shall be disposed of outside the highway right-of-way in conformance with the provisions in the Standard Specifications Section 7-1.13.
- Litter stored in collection areas and containers shall be handled and disposed of by trash hauling contractors.
- Construction debris and waste shall be removed from the site every two weeks or as directed by the RE.

- Construction material visible to the public shall be stored or stacked in an orderly manner to the satisfaction of the RE.
- Storm water run-on shall be prevented from contacting stored solid waste through the use of berms, dikes, or other temporary diversion structures or through the use of measures to elevate waste from site surfaces.
- Solid waste storage areas shall be located at least 15 m (50 ft) from drainage facilities and watercourses and shall not be located in areas prone to flooding or ponding.
- Except during fair weather, construction and highway planting waste not stored in watertight dumpsters shall be securely covered from wind and rain by covering the waste with tarps or plastic sheeting or protected in conformance with the applicable Disturbed Soil Area protection section.
- Dumpster washout on the project site is not allowed.
- Notify trash hauling contractors that only watertight dumpsters are acceptable for use on-site.
- Plan for additional containers during the demolition phase of construction.
- Plan for more frequent pickup during the demolition phase of construction.
- Construction waste shall be stored in a designated area approved by the RE.
- Segregate potentially hazardous waste from non-hazardous construction site waste.
- Keep the site clean of litter debris.
- Make sure that toxic liquid wastes (e.g., used oils, solvents, and paints) and chemicals (e.g., acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for construction debris.
- Dispose of non-hazardous waste in accordance with Standard Specification 7-1.13, Disposal of Material Outside the Highway Right of Way.
- For disposal of hazardous waste, see BMP WM-6, "Hazardous Waste Management." Have hazardous waste hauled to an appropriate disposal and/or recycling facility.
- Salvage or recycle useful vegetation debris, packaging and/or surplus building materials when practical. For example, trees and shrubs from land clearing can be converted into wood chips, then used as mulch on graded areas. Wood pallets, cardboard boxes, and construction scraps can also be recycled.

- Temporary containment facility shall be impervious to the materials stored there for a minimum contact time of 72 hours.
- Temporary containment facilities shall be maintained free of accumulated rainwater and spills. In the event of spills or leaks accumulated rainwater and spills shall be placed into drums after each rainfall. These liquids shall be handled as a hazardous waste unless testing determines them to be non-hazardous. Non-hazardous liquids shall be sent to an approved disposal site.
- Sufficient separation shall be provided between stored containers to allow for spill cleanup and emergency response access.
- Incompatible materials, such as chlorine and ammonia, shall not be stored in the same temporary containment facility.
- Throughout the rainy season, temporary containment facilities shall be covered during non-working days, and prior to rain events. Covered facilities may include use of plastic tarps for small facilities or constructed roofs with overhangs. A storage facility having a solid cover and sides is preferred to a temporary tarp. Storage facilities shall be equipped with adequate ventilation.

- Drums shall not be overfilled and wastes shall not be mixed.
- Unless watertight, containers of dry waste shall be stored on pallets.
- Paint brushes and equipment for water and oil based paints shall be cleaned within a contained area and shall not be allowed to contaminate site soils, watercourses or drainage systems. Waste paints, thinners, solvents, residues, and sludges that cannot be recycled or reused shall be disposed of as hazardous waste. When thoroughly dry, latex paint and paint cans, used brushes, rags, absorbent materials, and drop cloths shall be disposed of as solid waste.
- Ensure that adequate hazardous waste storage volume is available.
- Ensure that hazardous waste collection containers are conveniently located.
- Designate hazardous waste storage areas on site away from storm drains or watercourses and away from moving vehicles and equipment to prevent accidental spills.
- Minimize production or generation of hazardous materials and hazardous waste on the job site.
- Use containment berms in fueling and maintenance areas and where the potential for spills is high.

- Segregate potentially hazardous waste from non-hazardous construction site debris.
- Keep liquid or semi-liquid hazardous waste in appropriate containers (closed drums or similar) and under cover.
- Clearly label all hazardous waste containers with the waste being stored and the date of accumulation.
- Place hazardous waste containers in secondary containment.
- Do not allow potentially hazardous waste materials to accumulate on the ground.
- Do not mix wastes.

Disposal Procedures

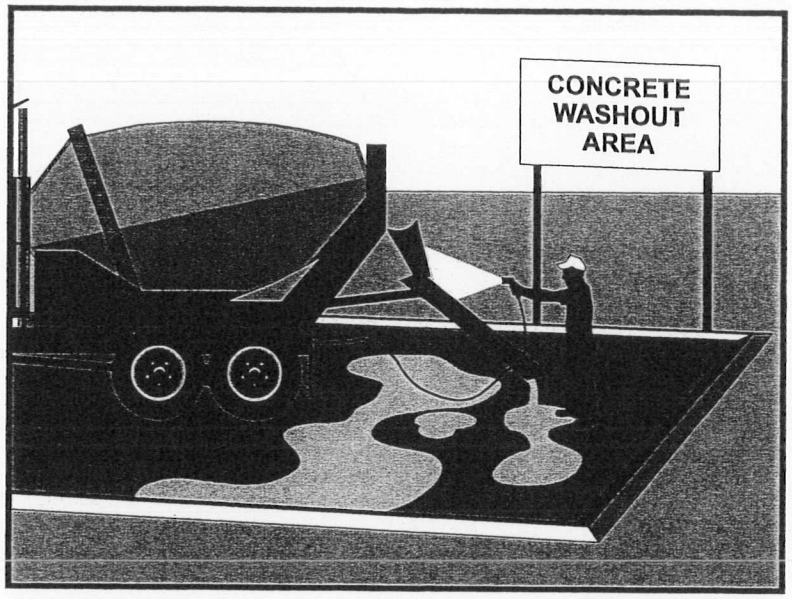
- Waste shall be disposed of outside the highway right-of-way within 90 days of being generated, or as directed by the Resident Engineer (RE). In no case shall hazardous waste storage exceed requirements in Title 22 CCR, Section 66262.34.
- Waste shall be disposed of by a licensed hazardous waste transporter at an authorized and licensed disposal facility or recycling facility utilizing properly completed Uniform Hazardous Waste Manifest forms.
- A Department of Health Services (DHS) certified laboratory shall sample waste and classify it to determine the appropriate disposal facility.
- Make sure that toxic liquid wastes (e.g., used oils, solvents, and paints) and chemicals (e.g., acids, pesticides, additives, curing compounds) are not disposed of in dumpsters designated for solid waste construction debris.
- Properly dispose of rainwater in secondary containment that may have mixed with hazardous waste.
- Recycle any useful material such as used oil or water-based paint when practical.
- Attention is directed to "Hazardous Material", "Contaminated Material", and "Aerially Deposited Lead" of the contract documents regarding the handling and disposal of hazardous materials.

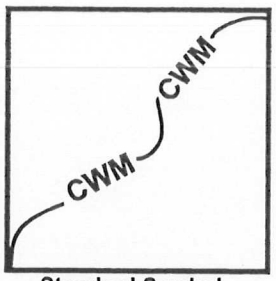
Maintenance and Inspection

- A foreman and/or construction supervisor shall monitor on-site hazardous waste storage and disposal procedures.
- Waste storage areas shall be kept clean, well organized, and equipped with ample clean-up supplies as appropriate for the materials being stored.
- Storage areas shall be inspected in conformance with the provisions in the contract documents.
- Perimeter controls, containment structures, covers, and liners shall be repaired or replaced as needed to maintain proper function.
- Hazardous spills shall be cleaned up and reported in conformance with the applicable Material Safety Data Sheet (MSDS) and the instructions posted at the project site.
- The National Response Center, at (800) 424-8802, shall be notified of spills of Federal reportable quantities in conformance with the requirements in 40 CFR parts 110, 117, and 302.
- Copy of the hazardous waste manifests shall be provided to the RE.

Concrete Waste Management

WM-8





Standard Symbol

BMP Objectives

- ○ Soil Stabilization
- ○ Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ● Non-Storm Water Management
- ● Materials and Waste Management

Definition and Purpose

These are procedures and practices that are designed to minimize or eliminate the discharge of concrete waste materials to the storm drain systems or watercourses.

Appropriate Applications

- Concrete waste management procedures and practices are implemented on construction projects where concrete is used as a construction material or where concrete dust and debris result from demolition activities.
- Where slurries containing portland cement concrete (PCC) or asphalt concrete (AC) are generated, such as from sawcutting, coring, grinding, grooving, and hydro-concrete demolition.
- Where concrete trucks and other concrete-coated equipment are washed on site, when approved by the Resident Engineer (RE). See also NS-8, "Vehicle and Equipment Cleaning."
- Where mortar-mixing stations exist.

Limitations

- None identified.

Standards and Specifications

Education

- Educate employees, subcontractors, and suppliers on the concrete waste management techniques described herein.
- The Contractor's Water Pollution Control Manager (WPCM) shall oversee and enforce concrete waste management procedures.

Concrete Slurry Wastes

- PCC and AC waste shall not be allowed to enter storm drains or watercourses.

- PCC and AC waste shall be collected and properly disposed of outside the highway right-of-way in conformance with Standard Specifications Section 7-1.13 or placed in a temporary concrete washout facility as shown in the figures on Pages 5 and 6.

- Disposal of hardened PCC and AC waste shall be in conformance with Standard Specifications Section 15-3.02.

- A sign shall be installed adjacent to each temporary concrete washout facility to inform concrete equipment operators to utilize the proper facilities as shown on Page 6.

- A foreman and/or construction supervisor shall monitor onsite concrete working tasks, such as saw cutting, coring, grinding and grooving to ensure proper methods are implemented.

- Do not allow saw-cut PCC slurry to enter storm drains or watercourses. See also BMP NS-3, "Paving and Grinding Operations;" and BMP WM-10, "Liquid Waste Management." Residue from grinding operations shall be picked up by means of a vacuum attachment to the grinding machine. Saw cutting residue shall not be allowed to flow across the pavement, and shall not be left on the surface of the pavement.

- Vacuum slurry residue and dispose in a temporary facility (as described in Onsite Temporary Concrete Washout Facility, Concrete Transit Truck Washout Procedures, below) and allow slurry to dry. Dispose of dry slurry residue in accordance with BMP WM-5, "Solid Waste Management", or, for on-site disposal, in accordance with Standard Specification 15-3.02, Removal Methods.

- Collect and dispose of residue from grooving and grinding operations in accordance with Standard Specifications Section 42-1.02 and 42-2.02.

Onsite Temporary Concrete Washout Facility, Concrete Transit Truck Washout Procedures

- Temporary concrete washout facilities shall be located a minimum of 15 m (50 ft) from storm drain inlets, open drainage facilities, and watercourses, unless determined infeasible by the RE. Each facility shall be located away from construction traffic or access areas to prevent disturbance or tracking.

- A sign shall be installed adjacent to each washout facility to inform concrete equipment operators to utilize the proper facilities. The sign shall be installed as shown on the plans and in conformance with the provisions in Standard Specifications Section 56-2, Roadside Signs.

- Temporary concrete washout facilities shall be constructed above grade or below grade at the option of the Contractor. Temporary concrete washout facilities shall be constructed and maintained in sufficient quantity and size to contain all liquid and concrete waste generated by washout operations.
- Temporary washout facilities shall have a temporary pit or bermed areas of sufficient volume to completely contain all liquid and waste concrete materials generated during washout procedures.
- Perform washout of concrete mixer trucks in designated areas only.
- Wash concrete only from mixer truck chutes into approved concrete washout facility. Washout may be collected in an impermeable bag for disposal.
- Pump excess concrete in concrete pump bin back into concrete mixer truck.
- Concrete washout from concrete pumper bins can be washed into concrete pumper trucks and discharged into designated washout area or properly disposed offsite.
- Once concrete wastes are washed into the designated area and allowed to harden, the concrete shall be broken up, removed, and disposed of per BMP WM-5, "Solid Waste Management", and in conformance with the provisions in Standard Specifications Section 15-3.02, "Removal Methods."

Temporary Concrete Washout Facility Type "Above Grade"

- Temporary concrete washout facility Type "Above Grade" shall be constructed as shown on Page 5 or 6, with a recommended minimum length and minimum width of 3 m (10 ft), but with sufficient quantity and volume to contain all liquid and concrete waste generated by washout operations. The length and width of a facility may be increased, at the Contractor's expense, upon approval from the RE.
- Straw bales, wood stakes, and sandbag materials shall conform to the provisions in BMP SC-9, "Straw Bale Barrier."
- Plastic lining material shall be a minimum of 10-mil polyethylene sheeting and shall be free of holes, tears or other defects that compromise the impermeability of the material.
- Portable delineators shall conform to the provisions in Standard Specifications Section 12-3.04, "Portable Delineators.". The delineator bases shall be cemented to the pavement in the same manner as provided for cementing pavement markers to pavement in Standard Specifications Section 85-1.06, "Placement." Portable delineators shall be applied only to a clean, dry surface.

Temporary Concrete Washout Facility (Type Below Grade)

- Temporary concrete washout facility Type "Below Grade" shall be constructed as shown on page 6, with a recommended minimum length and minimum width of 3m (10 ft). The quantity and volume shall be sufficient to contain all liquid and concrete waste generated by washout operations. The length and width of a facility may be increased, at the Contractor's expense, upon approval of the RE. Lath and flagging shall be commercial type.

- Plastic lining material shall be a minimum of 10-mil polyethylene sheeting and shall be free of holes, tears or other defects that compromise the impermeability of the material.

- The soil base shall be prepared free of rocks or other debris that may cause tears or holes in the plastic lining material.

Removal of Temporary Concrete Washout Facilities

- When temporary concrete washout facilities are no longer required for the work, as determined by the RE, the hardened concrete shall be removed and disposed of in conformance with the provisions in Standard Specifications Section 15-3.02. Disposal of PCC slurries or liquid waste shall be disposed of outside the highway right-of-way in conformance with provisions of Standard Specifications Section 7-1-13. Materials used to construct temporary concrete washout facilities shall become the property of the Contractor, shall be removed from the site of the work, and shall be disposed of outside the highway right-of-way in conformance with the provisions of the Standard Specifications, Section 7-1.13.

- Holes, depressions or other ground disturbance caused by the removal of the temporary concrete washout facilities shall be backfilled and repaired in conformance with the provisions in Standard Specifications Section 15-1.02, "Preservation of Property."

Maintenance and Inspection

- The Contractor's Water Pollution Control Manager (WPCM) shall monitor on site concrete waste storage and disposal procedures at least weekly or as directed by the RE.

- The WPCM shall monitor concrete working tasks, such as saw cutting, coring, grinding and grooving daily to ensure proper methods are employed or as directed by the RE.

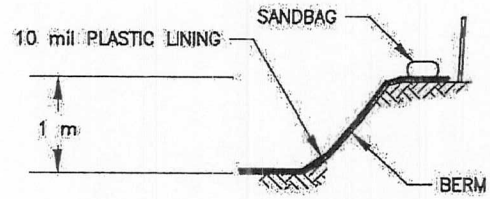
- Temporary concrete washout facilities shall be maintained to provide adequate holding capacity with a minimum freeboard of 100 mm (4 inches) for above grade facilities and 300 mm (12 inches) for below grade facilities. Maintaining temporary concrete washout facilities shall include removing and disposing of hardened concrete and returning the facilities to a functional condition. Hardened concrete materials shall be removed and disposed of in conformance with the provisions in Standard Specifications Section 15-3.02, "Removal Methods."

- Existing facilities must be cleaned, or new facilities must be constructed and ready for use once the washout is 75% full.

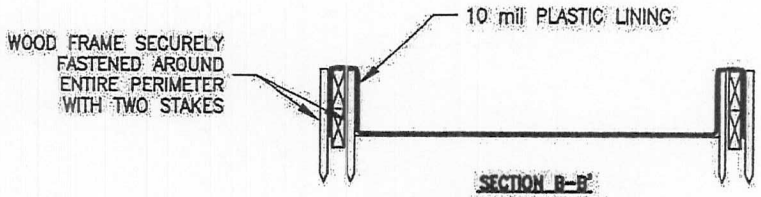
- Temporary concrete washout facilities shall be inspected for damage (i.e. tears in PVC liner, missing sand bags, etc.). Damaged facilities shall be repaired.

Concrete Waste Management

WM-8



SECTION A–A'
NOT TO SCALE



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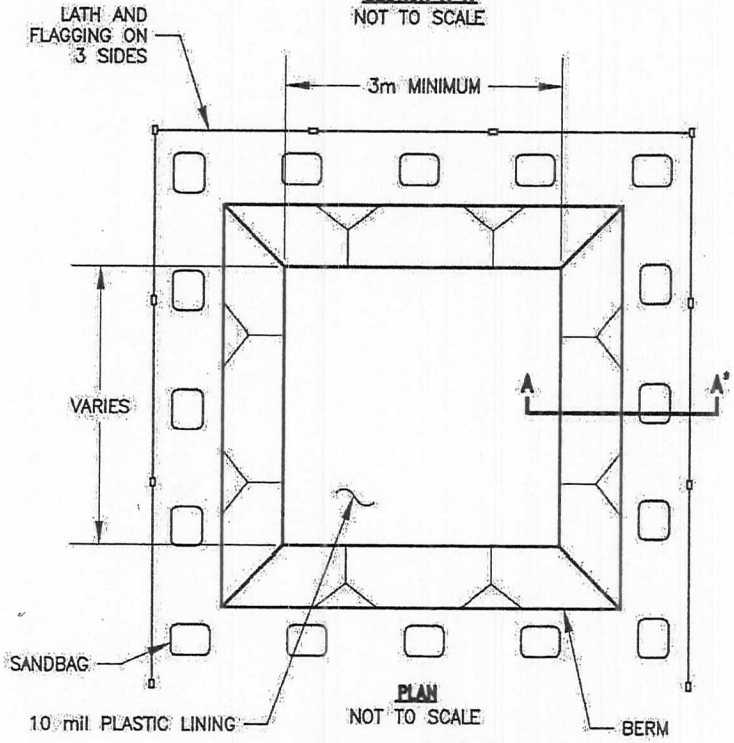
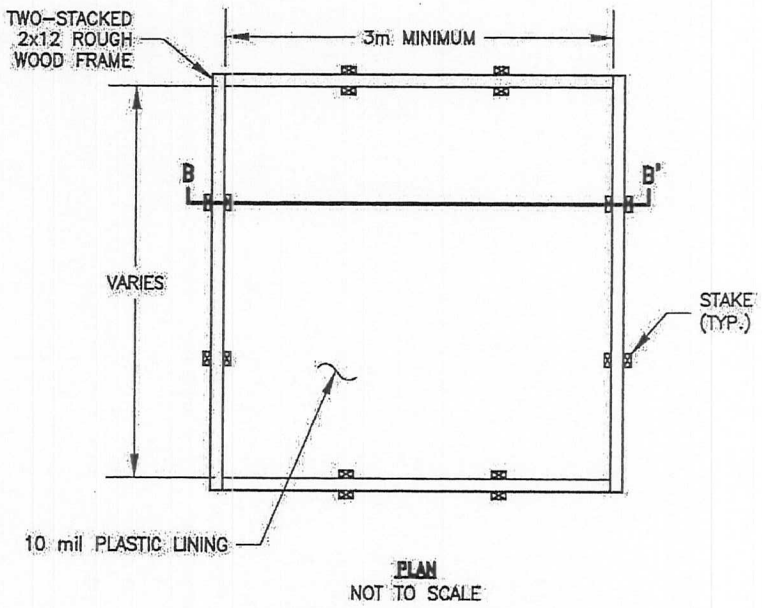


PLAN
NOT TO SCALE

TYPE "BELOW GRADE"

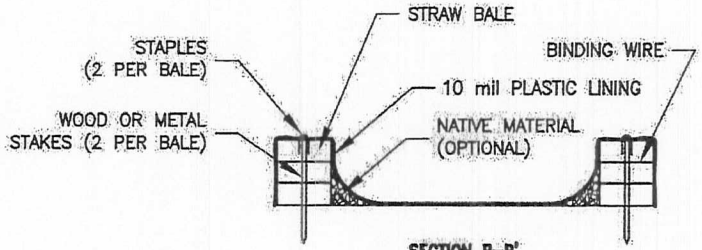


PLAN
NOT TO SCALE

TYPE "ABOVE GRADE" WITH WOOD PLANKS

NOTES:

1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN (SEE PAGE 6) SHALL BE INSTALLED WITHIN 10 m OF THE TEMPORARY CONCRETE WASHOUT FACILITY.



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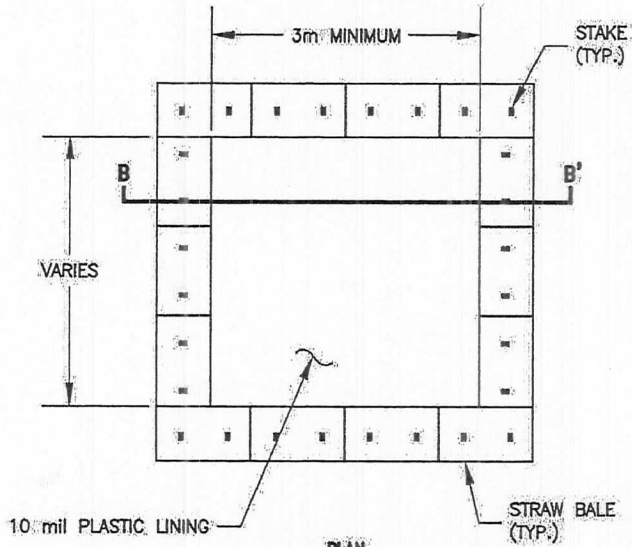
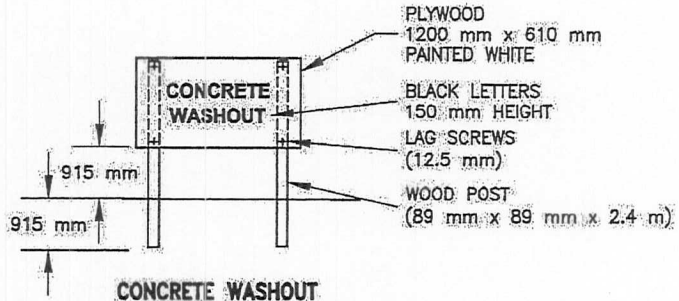
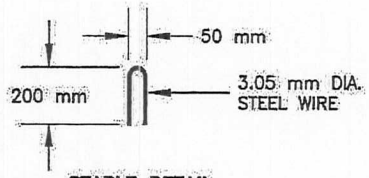


PLAN
NOT TO SCALE

TYPE "ABOVE GRADE" WITH STRAW BALES



CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)



STAPLE DETAIL

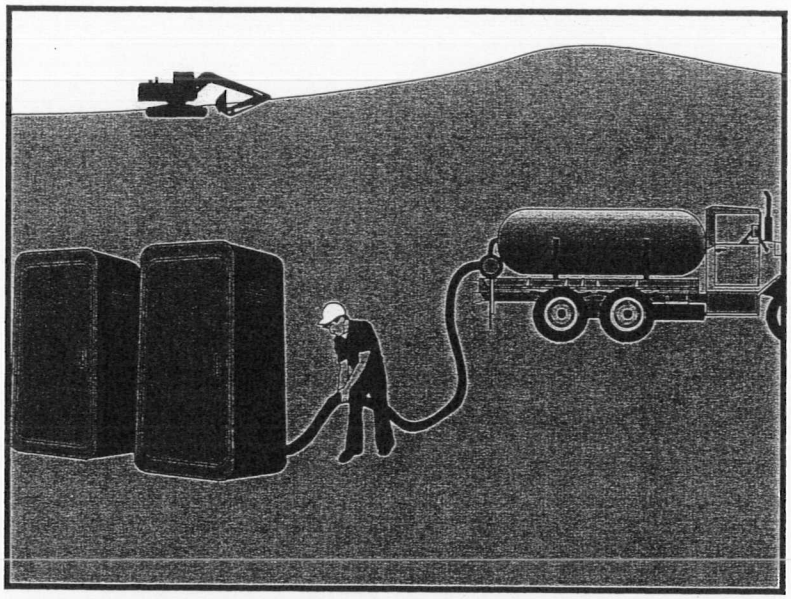
NOTES:

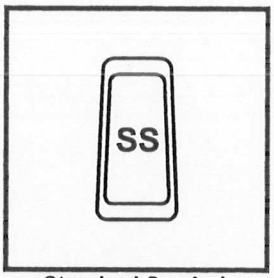
1. ACTUAL LAYOUT DETERMINED IN THE FIELD.
2. THE CONCRETE WASHOUT SIGN (SEE FIG. 4–15) SHALL BE INSTALLED WITHIN 10 m OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

CALTRANS/FIG4–14.DWG SAC 8–14–02

Sanitary/Septic Waste Management

WM-9





Standard Symbol

BMP Objectives

- ○ Soil Stabilization
- ○ Sediment Control
- ○ Tracking Control
- ○ Wind Erosion Control
- ● Non-Storm Water Management
- ● Materials and Waste Management

Definition and Purpose

Procedures and practices to minimize or eliminate the discharge of construction site sanitary/septic waste materials to the storm drain system or to watercourses.

Appropriate Applications

Sanitary/septic waste management practices are implemented on all construction sites that use temporary or portable sanitary/septic waste systems.

Limitations

- None identified.

Standards and Specifications

Education

- Educate employees, subcontractors, and suppliers on sanitary/septic waste storage and disposal procedures.
- Educate employees, subcontractors, and suppliers of potential dangers to humans and the environment from sanitary/septic wastes.
- Instruct employees, subcontractors, and suppliers in identification of sanitary/septic waste.
- Hold regular meetings to discuss and reinforce disposal procedures (incorporate into regular safety meetings).
- Establish a continuing education program to indoctrinate new employees.

Storage and Disposal Procedures

- Temporary sanitary facilities shall be located away from drainage facilities, watercourses, and from traffic circulation. When subjected to high winds or risk.

- Wastewater shall not be discharged or buried within the highway right-of-way.
- Sanitary and septic systems that discharge directly into sanitary sewer systems, where permissible, shall comply with the local health agency, city, county, and sewer district requirements.
- If using an on site disposal system, such as a septic system, comply with local health agency requirements.
- Properly connect temporary sanitary facilities that discharge to the sanitary sewer system to avoid illicit discharges.
- Ensure that sanitary/septic facilities are maintained in good working order by a licensed service.
- Use only reputable, licensed sanitary/septic waste haulers.

Maintenance and Inspection

- The Contractor's Water Pollution Control Manager (WPCM) shall monitor onsite sanitary/septic waste storage and disposal procedures at least weekly.