CALIFORNIA COASTAL COMMISSION
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F22e

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Staff:	M. Troup-V
Staff Report:	03/26/2015
Hearing Date:	4/17/2015

STAFF REPORT: REGULAR CALENDAR

Application No.:	**4-14-1686**
Applicant:	**Los Angeles County Department of Public Works**
Agent:	Paul Maselbas
Location:	1718-1790 Topanga Skyline Drive (APNs 4438-016-014, 4438-016-013, 4438-015-010, 4438-015-011, 4438-015-012), and at Mile Marker 1.61, Santa Monica Mountains, Los Angeles County.
Project Description:	Remediation of roadway, shoulder, embankment, and culvert along approximately 140 feet of Topanga Skyline Drive . The project involves the construction of a 140 foot long, 7-28 foot high as-built concrete soldier pile retaining wall, installation of 18 soldier piles, removal and relocation of above and below-ground water lines with an underground 8" steel water main, repair and extension of an existing culvert at Mile Marker 1.61, placement of 150 tons of rip-rap, and 734 cu. yds. of grading (341 cu. yds of cut and 393 cu. yds of fill). The application is for permanent authorization of repairs already constructed pursuant to an emergency coastal development permit.
Staff Recommendation:	Staff recommends approval of the proposed development with two (2) special conditions regarding assumption of risk and site revegetation. The standard for review for the proposed project is the Santa Monica Mountains Local Coastal Program.

SUMMARY OF STAFF RECOMMENDATION:

Staff is recommending **approval** of the proposed coastal development permit with **two (2)** special conditions regarding: **1) assumption of risk and 2) revegetation plan.**

The proposed project consists of the remediation of an active slope failure along approximately 140 feet of Topanga Skyline Drive and repairing an existing culvert. The project includes construction of a 140 foot long, 7 to 28 foot high as-built concrete soldier pile retaining wall with 18 soldier piles. In addition to the soldier pile wall, revegetation, 734 cubic yards of grading (341 cubic yards of cut and 393 cubic yards of fill), removal of above and below-ground water lines, installation of an 8" underground steel water main, repair and extension of culvert, and placement of 150 tons of rip-rap at culvert outlet are associated with the project. The project site is designated as H3 habitat by the Santa Monica Mountains LCP Biological Resources Map but does support oak woodland habitat as reported by the reconnaissance-level biological survey.

During the January 2005 winter storm season, the outboard slope along Topanga Skyline Drive failed due to excessive soil saturation. With consultation from disaster inspectors from the Federal Emergency Management Agency (FEMA) and California Emergency Management Agency (Cal EMA), the applicant determined that a soldier pile retaining wall was the best alternative to stabilize the slope in order to restore the road. Topanga Skyline Drive serves as an access road for residents in addition as a fire and disaster route. Restoring the road is necessary to maintain the public's ability to use the road for vehicular and emergency access.

Although this remediation project constitutes repair and maintenance, the method by which this project is conducted is not exempt under Section 22.44.820 of the Santa Monica Mountains LIP due to the fact that the development includes grading and construction of a retaining wall. The construction of a new wall, in particular, is new development that does not constitute repair or maintenance. Thus, this project requires a coastal development permit.

Additionally, the project occurs in an area subject to an unusually high amount of geologic hazards including landslides and erosion. As such, Special Condition Two (2) requires the applicant to implement a revegetation plan that provides for the revegetation with native vegetation of all disturbed areas along the outboard slope and all areas of the project site temporarily disturbed by grading and construction activities. The Standard of Review for this application is the policies and provisions of the Santa Monica Mountains LCP. The proposed project as conditioned employs a method that is consistent with the applicable resource protection provisions of the Santa Monica Mountains LCP.

The Santa Monica Mountains Local Coastal Program was effectively certified by the Commission on October 10, 2014. Pursuant to Section 22.44.910 of the certified LCP, coastal development permit applications that were filed complete by the Commission on or before the certification date may, at the option of the applicant, remain with the Coastal Commission for completion of review. The standard of review for such an application is the policies and provisions of the certified LCP.

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APPENDICES

EXHIBITS

I. MOTION AND RESOLUTION

Motion:

*I move that the Commission **approve** Coastal Development Permit Application No. 4-14-1686 pursuant to the staff recommendation.*

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of a majority of the Commissioners present.

Resolution:

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of the Santa Monica Mountains Local Coastal Program. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS:

This permit is granted subject to the following standard conditions:

1. **Notice of Receipt and Acknowledgment**. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. **Expiration.** If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable period of time. Application for extension of the permit must be made prior to the expiration date.

3. **Interpretation.** Any questions of intent of interpretation of any condition will be resolved by the Executive Director or the Commission.

4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

III. SPECIAL CONDITIONS:

This permit is granted subject to the following special conditions:

1. **Assumption of Risk.** By acceptance of this permit, the applicant acknowledges and agrees (i) that the site may be subject to hazards from erosion and slope failure; (ii) to assume the risks to the applicant and the property that is the subject of this permit of injury and damage from such hazards in connection with this permitted development; (iii) to unconditionally waive any claim of damage or liability against the Commission, its officers, agents, and employees for injury or damage from such hazards; and (iv) to indemnify and hold harmless the Commission, its officers, agents, and employees with respect to the Commission's approval of the project against any and all liability, claims, demands, damages, costs (including costs and fees incurred in defense of such claims), expenses, and amounts paid in settlement arising from any injury or damage due to such hazards.

   Prior to issuance of the Coastal Development Permit, the applicant shall submit a written agreement, in a form and content acceptable to the Executive Director, incorporating all of the above terms of this condition.

2. **Revegetation Plan**

   Prior to issuance of the Coastal Development Permit, the applicant shall submit, for the review and approval of the Executive Director, a detailed Revegetation Plan and Monitoring Program, prepared by a biologist or environmental resource specialist with qualifications acceptable to the Executive Director, for all areas of the project site temporarily disturbed by grading and construction activities. Within 60 days of the issuance of this coastal development permit, the applicant shall commence implementation of the approved Revegetation Plan. The Executive Director may grant additional time for good cause. The plans shall identify the species, extent, and location of all plant materials to be removed or planted and shall incorporate the following criteria:

   a. Technical Specifications

   The Revegetation Plan shall provide for the following:

   Revegetation for all areas of the project site temporarily disturbed by grading and construction activities.

   Revegetation of disturbed oak woodland and chaparral habitat (at a ratio of 1:1 or greater) as mitigation for all areas temporarily disturbed due to the soldier pile retaining wall installation. All invasive and non-native plant species shall be removed from the revegetation area.

The plan shall include detailed documentation of conditions on site prior to the approved construction activity (including photographs taken from pre-designated sites annotated to a copy of the site plans) and specify revegetation goals and specific performance standards to judge the success of the revegetation effort.

The plan shall also provide information on removal methods for exotic species, salvage of existing vegetation, revegetation methods and vegetation maintenance. The plan shall further include details regarding the types, sizes, and location of plants to be placed within the mitigation area. Only native plant species appropriate for oak woodland and chaparral habitat and which are endemic to the Santa Monica Mountains shall be used, as listed by the California Native Plant Society - Santa Monica Mountains Chapter in their document entitled Recommended List of Native Plants for Landscaping in the Santa Monica Mountains, updated August 2007. All native plant species shall be of local genetic stock. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or by the State of California shall be employed or allowed to naturalize or persist on the site. No plant species listed as a 'noxious weed' by the State of California or the U.S. Federal Government shall be utilized or maintained within the property. Site revegetation shall be deemed successful if the revegetation of native plant species on site is adequate to provide 90% coverage by the end of the five (5) year monitoring period and is able to survive without additional outside inputs, such as supplemental irrigation. The plan shall also include a detailed description of the process, materials, and methods to be used to meet the approved goals and performance standards and specify the preferable time of year to carry out restoration activities and describe the interim supplemental watering requirements that will be necessary.

b. Monitoring Program

A monitoring program shall be implemented to monitor the project for compliance with the specified guidelines and performance standards. The applicant shall submit, upon completion of the initial planting, a written report prepared by a qualified resource specialist, for the review and approval of the Executive Director, documenting the completion of the initial planting/revegetation work. This report shall also include photographs taken from pre-designated sites (annotated to a copy of the site plans) documenting the completion of the initial planting/revegetation work.

Five years from the date of issuance of this coastal development permit, the applicant shall submit for the review and approval of the Executive Director, a Revegetation Monitoring Report, prepared by a qualified biologist or Resource Specialist that certifies whether the on-site revegetation is in conformance with the revegetation plan approved pursuant to this Special Condition. The monitoring report shall include photographic documentation of plant species and plant coverage.

If the monitoring report indicates the vegetation and restoration is not in conformance with or has failed to meet the performance standards specified in the restoration plan approved pursuant to this permit, the applicant, or successors in interest, shall submit a revised or supplemental restoration plan for the review and approval of the Executive Director and shall implement the approved version of the plan. The revised revegetation plan must be prepared

by a qualified biologist or Resource Specialist and shall specify measures to remediate those portions of the original plan that have failed or are not in conformance with the original approved plan.

IV. FINDINGS AND DECLARATIONS:

A. PROJECT LOCATION & DESCRIPTION

The project site is located along the east ridge of the road along Topanga Skyline Drive, north of Bookings Trail, south of Mt. Prospect, and northeast of Old Topanga Canyon Road adjacent to residential development at 1718-1790 Topanga Skyline and at mile marker (MM) 1.61 in the Santa Monica Mountains **(Exhibits 1, 2)**. The project site ranges from 1,050 to 1,100 feet in elevation. During the 2005 winter storm season, the outboard slope failed along a 140 ft. long section of Topanga Skyline Drive, damaging the road, shoulder, and embankment. Additionally, the culvert and embankment at MM 1.61 were also damaged.

The proposed project is designated as H3 habitat within a rural village in the Santa Monica Mountains **(Exhibit 3)**. H3 habitat consists of areas that would be designated as H2, but are disturbed. However, H3 habitat can support native vegetation and can be habitat areas that provide important biological functions. The vegetation identified by the Biological Reconnaissance Survey (referenced in the substantive file documents) for the sites includes oak woodland, ornamental landscaping, and ruderal vegetation, with a small amount of chaparral species present. Additionally, several commonly occurring wildlife species associated with the Santa Monica Mountains were detected including the hermit thrush (*Catharus gutatus*), red-tailed hawk (*Buteo jamaicensis*), house finch (*Carpodacus mexicanus*), house wren (*Troglodytes aedon*), oak titmouse (*Baelolphus inornatus*), Oregon junco (*Junco oregonus*), common raven (*Corvus corax*), Bewick's wren (*Thryomanes bewickii*), Nuttall's woodpecker (*Picoides nuttallii*), yellow-rumped warbler (*Dendroica coronata*), bushtit (Psaltriparus minimus), and northern flicker (*Colaptes auratus*).

This CDP application is a follow-up to Emergency Permit No. 4-06-038-G, which was issued to Los Angeles County Department of Public Works on March 29, 2006. This CDP represents the permanent authorization of the work approved pursuant to Emergency Permit No. 4-06-038-G. The work approved by the Commission in the emergency permit included construction of a 155 foot long and 15-25 foot high above finished grade soldier pile retaining wall with tie-backs in addition to slope remediation including 416 cu. yd. of grading (23 cu. yds. of cut and 393 cu. yds. of fill), repair and extension of the existing culvert, installation of approximately 150 yds. of rip rap at the culvert outlet, and reconstruction of the damaged roadbed in the same location **(Exhibit 4, 5)**.

There are a few differences between the work approved pursuant to Emergency Permit No. 4-06-038-G and the work requested for approval in the subject follow-up permit (CDP 4-14-1686). The subject application includes a retaining wall that is 15 feet shorter in length with a maximum height that is 3 feet greater than the emergency project, an increase in grading (318 additional yd. of cut), and the addition of the replacement of the existing above-ground water lines with an 8" underground steel water main.

Road Department representatives from Los Angeles County Department of Public Works met with disaster inspectors from the Federal Emergency Management Agency (FEMA) and California Emergency Management Agency, (Cal EMA) at the project site to assess the damage, consider repair alternatives, and to review and approve the recommended scope of work. The Engineering Memo (referenced in the substantive file documents) states that soldier pile retaining walls are a successful way to stabilize a slope and thus have become a preferred method. In this situation, stabilizing Topanga Skyline Drive with a soldier pile wall was deemed feasible by the engineer and required less excavation than grading the slope, thus it was chosen by the Los Angeles County Public Works Department staff as the preferred alternative.

Photographs of the completed work verify that all exposed surfaces of the approved soldier pile retaining wall include or mimic the native materials and appearance including color and texture of the natural environment, as required as a condition of the emergency CDP. As such, the potential impacts of the retaining wall on scenic resources in the area have been minimized.

The Santa Monica Mountains Local Coastal Program was effectively certified by the Commission on October 10, 2014. Pursuant to Section 22.44.910 of the certified LCP, coastal development permit applications that were filed complete by the Commission on or before the certification date may, at the option of the applicant, remain with the Coastal Commission for completion of review. The standard of review for such an application is conformity with the policies and provisions of the certified LCP.

Coastal Permit Required for Repair and Maintenance with additions and expansions

The proposed work is designed to maintain the existing road in a safe condition. The project constitutes repair and maintenance work. The Santa Monica Mountains LCP recognizes that certain types of repair and maintenance work related to roads are exempt from permit requirements pursuant to Section 22.44.820 of the Santa Monica Mountains LIP. However, the exemptions provided by the above referenced section are limited. Accordingly, Section 22.44.820 (b) of the SMM LIP states that repair or maintenance activities that do not result in an addition to, or enlargement or expansion of, the object of those repair or maintenance activities are exempt (subject to certain exceptions). Since this project includes the construction of a retaining wall for slope stabilization and the addition of l50 tons of rip rap to the culvert outlet, the method by which this project is conducted is not exempt and a permit is required.

B. GEOLOGIC HAZARDS

Chapter III of the Santa Monica Mountains LUP Safety and Noise Element states in part:

> ***SN-1: All new development shall be sized, designed, and sited to minimize risks to life and property from geologic hazard.***
>
> ***SN-9: Allow the remediation or stabilization of landslides or other slope instability that affect existing structures or that threatens public health or safety. Analyze alternative remediation or stabilization techniques to determine the least-environmentally-damaging alternative. Maximum feasible mitigation shall be incorporated into the project to minimize adverse impacts to natural resources.***

SN-11: New development shall assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

The Santa Monica Mountains LIP states in part:

22.44.2100, Subsection A: The applicant shall submit a site-specific report geologic/soils/geotechnical study report …that evaluates the nature of all hazards affecting the proposed development and shall identify the portions of the project site containing the hazards.
1. The report shall indicate how the proposed development avoids the hazard(s), protects the proposed development from the hazard(s) or reduces the hazard(s) to an acceptable level.

22.44.2102(F): Measures to remediate or stabilize landslides or unstable slopes that endanger existing structures or threaten public health shall be designed to be the least environmentally damaging feasible alternative, to minimize landform alteration, and to be visually compatible with the surrounding natural environment to the maximum feasible extent. Maximum feasible mitigation measures shall be incorporated into the design and construction of slope stabilization projects to minimize adverse impacts to sensitive resources to the maximum feasible extent.

The proposed development is located in the Santa Monica Mountains, an area which is generally considered to be subject to an unusually high amount of natural hazards. Geologic hazards common to the Santa Monica Mountains include landslides, erosion, and flooding. In addition, fire is an inherent threat to the indigenous chaparral community of the coastal mountains. Wild fires often denude hillsides in the Santa Monica Mountains of all existing vegetation, thereby contributing to an increased potential for erosion and landslides on property.

The 2005 winter storm season brought heavy rains to the area causing excessive soil saturation, which ultimately led to the outboard failure and road damage along 140 feet of Topanga Skyline Drive. The County determined that the proposed project to stabilize the damaged road and roadside slope is necessary in order to ensure the continued stability of Topanga Skyline Drive and to maintain the public's ability to use this road for vehicular access and emergency services for the nearby developed residential community.

The applicant proposes to construct a 140 foot long, 7-28 foot high concrete soldier pile retaining wall to stabilize the failed slope. The project includes reconstruction of approximately 140 feet of roadway, installation of 18 soldier piles, revegetation, and 734 cu. yds. of grading (341 cu. yds of cut and 393 cu. yds of fill). The applicant also proposes to repair damage to the culvert at MM 1.61 and to modify the culvert to minimize downslope erosion. This work includes, extending the culvert, and placing 150 tons of rip rap at the drain outlet to dissipate the energy of the water as it exits the culvert onto the slope. To prevent further erosion on the slope, the applicant also proposes to apply jute-mesh netting to all disturbed areas and plant with

native seed mix. Finally, the project includes replacing above and below-ground water lines in the project area with an 8" underground steel water main.

In addition to the CDP application, the applicant also submitted solder pile retaining wall recommendations prepared by the Geotechnical and Materials Engineering Division. The engineer concluded that constructing a soldier-pile retaining wall along the outside edge of the roadway to provide support for roadway fill and protection against future failures would be the most feasible repair alternative.

However, the Commission also notes that the proposed development, although necessary to remediate a hazardous eroding slope condition, will still not eliminate the potential for erosion of the steep slope on the subject site unless all disturbed areas are revegetated with native plant species. The Commission finds that minimization of site erosion will add to the stability of the site. Erosion can best be minimized by requiring the applicant to plant all disturbed areas of the site with native plants compatible with the surrounding habitat. Further, in past permit actions, the Commission has found that invasive and non-native plant species are typically characterized as having a shallow root structure in comparison with their high surface/foliage weight and/or require a greater amount of irrigation and maintenance than native vegetation. The Commission notes that non-native and invasive plant species with high surface/foliage weight and shallow root structures do not serve to stabilize steep slopes, such as the slopes on the subject site, and that such vegetation results in potential adverse effects to the geologic stability of the project site. In comparison, the Commission finds that native plant species are typically characterized not only by a well-developed and extensive root structure in comparison to their surface/foliage weight but also by their low irrigation and maintenance requirements. The applicant proposes such revegetation as part of the project. In order to ensure the stability and geologic safety of the site, **Special Condition No. Two (2)** specifically requires that all proposed disturbed areas on subject site be stabilized with native vegetation appropriate for a chaparral habitat area.

The proposed project, as conditioned to ensure that the disturbed slopes on site are revegetated with native vegetation, has been designed to ensure slope stability on site to the maximum extent feasible. However, the Santa Monica Mountains LCP recognizes that certain development projects located in geologically hazardous areas, such as the subject site, still involve the taking of some risk. When development in areas of identified hazards is proposed, the Commission considers the hazard associated with the project site and the potential cost to the public, as well as the individual's right to use his property. As such, the Commission finds that due to the foreseen possibility of erosion, flooding, and slope failure, the applicant shall assume these risks as a condition of approval. Therefore, **Special Condition No. One (1)** requires the applicant to waive any claim of liability against the Commission for damage to life or property which may occur as a result of the permitted development. The applicant's assumption of risk, will show that the applicant is aware of and appreciates the nature of the hazards which exist on the site, and which may adversely affect the stability or safety of the proposed development.

Therefore, for the reasons discussed above, the Commission finds that the proposed project, as conditioned, is consistent with the policies and provisions of the Santa Monica Mountains LCP with regard to geologic hazards.

C. SCENIC RESOURCES

Chapter II of the Santa Monica Mountains LUP Conservation and Open Space Element states in part:

> ***CO-124: The Santa Monica Mountains contain scenic resources of regional and national importance. The scenic and visual qualities of these resources shall be protected and, where feasible, enhanced.***
>
> ***CO-128: New development must be subordinate to the character of its setting.***
>
> ***CO-131: Site and design new development to minimize adverse impacts on scenic resources to the maximum extent possible….development shall be designed to minimize impacts on scenic areas through…designing structures to blend into the natural hillside setting….***
>
> ***CO-138: New development shall minimize removal of native vegetation.***
>
> ***CO-153: Public works projects along scenic routes that include hardscape elements such as retaining walls, cut-off walls, abutments, bridges, and culverts shall incorporate veneers, texturing, and colors that blend with the surrounding landscape.***

The Santa Monica Mountains LIP states in part:

> ***22.44.2040 Subsection A. (4): Public Works Projects, including but not limited to retaining walls, abutments, bridges, and culverts, shall be constructed of materials, textures, veneers, and colors compatible with the surrounding natural landscapes and in keeping with a rural character.***

In order to improve the stability of the damaged roadway, the applicant was granted Emergency Permit 4-06-038-G to construct a soldier pile retaining wall along an approximately a 140 foot long stretch of Topanga Skyline Drive. To ensure that any adverse effects to public views resulting from the proposed development are minimized, this Emergency Permit was granted with the condition that all exposed surfaces of the retaining wall located above finished grade would be designed to include, or mimic, the native materials and appearances (including color and texture) of the natural environment (such as the appearance of natural rock facing).

Photographs of the project site, documenting conditions on September 20, 2007 after completion of the project, provide evidence that the design and material condition as specified in Emergency Permit 4-06-038-G was met. The above grade portions of the wall are sand colored. Thus, the project as proposed (and as-built project pursuant to 4-06-038-G) will minimize impacts to scenic resources to the extent feasible. The Commission finds that the proposed project is consistent with the scenic and visual resources policies and provisions of the SMM LCP.

D. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

Section 13096(a) of the Commission's administrative regulations requires Commission approval of a Coastal Development Permit application to be supported by a finding showing the application, as conditioned by any conditions of approval, to be consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse effect that the activity may have on the environment.

The County of Los Angeles found that the proposed project was statutorily exempt pursuant to Section 21080 (b) (3) of the California Environmental Quality Act in October 2005.

The Commission incorporates its findings on the project's consistency with the Santa Monica Mountains LCP at this point as if set forth in full. These findings address and respond to all public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report. As discussed above, the proposed development, as conditioned, is consistent with the policies of the Santa Monica Mountains LCP. Feasible mitigation measures which will minimize all adverse environmental effects have been required as special conditions. As conditioned, there are no feasible alternatives or feasible mitigation measures available, beyond those required, which would substantially lessen any significant adverse impact that the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, can be found to be consistent with the requirements of the Santa Monica Mountains LCP to conform to CEQA.

Appendix A - Substantive File Documents

Los Angeles County Department of Public Works (LACDPW) Task Order EP06-008 2006 Biological Reconnaissance Survey Results for the Topanga Skyline Drive Repair Project Site at Mile Marker (MM) 1.61, prepared by URS, dated July 10, 2006; *Los Angeles County Department of Public Works (LACDPW) Task Order EP06-008 2006 Biological Reconnaissance Survey Results for the Topanga Skyline Drive Repair Project Site at HN 1718*-1790, prepared by URS, dated July 10, 2006; Topanga Skyline Drive – HN 1718-1790 Retaining Wall Recommendations RDC0014710, prepared by Geotechnical and Materials, dated July 21, 2005; Engineering Memo prepared by Los Angeles County Department of Public Works; Certified Santa Monica Mountains Land Use Plan and Local Implementation Plan.

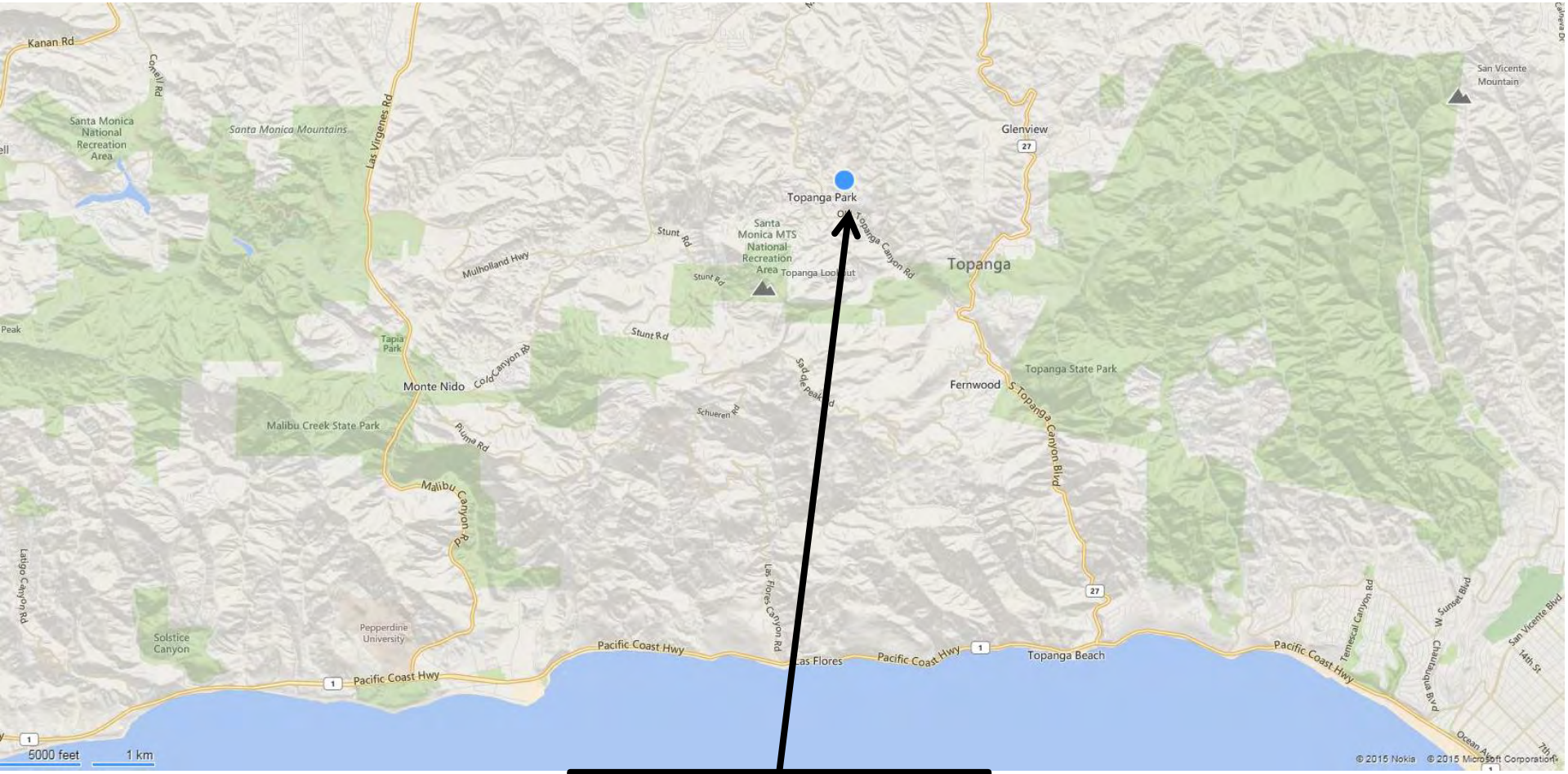
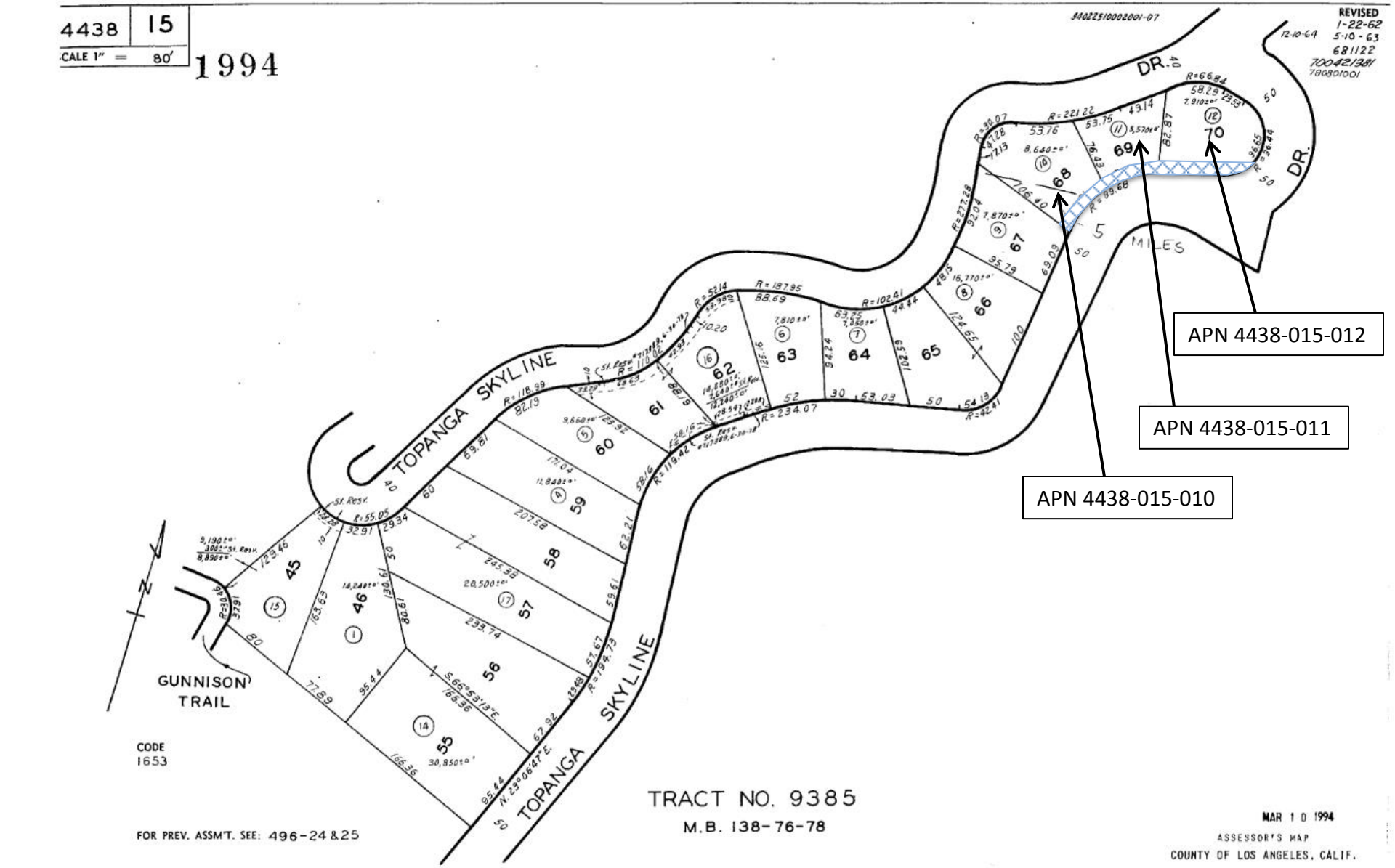
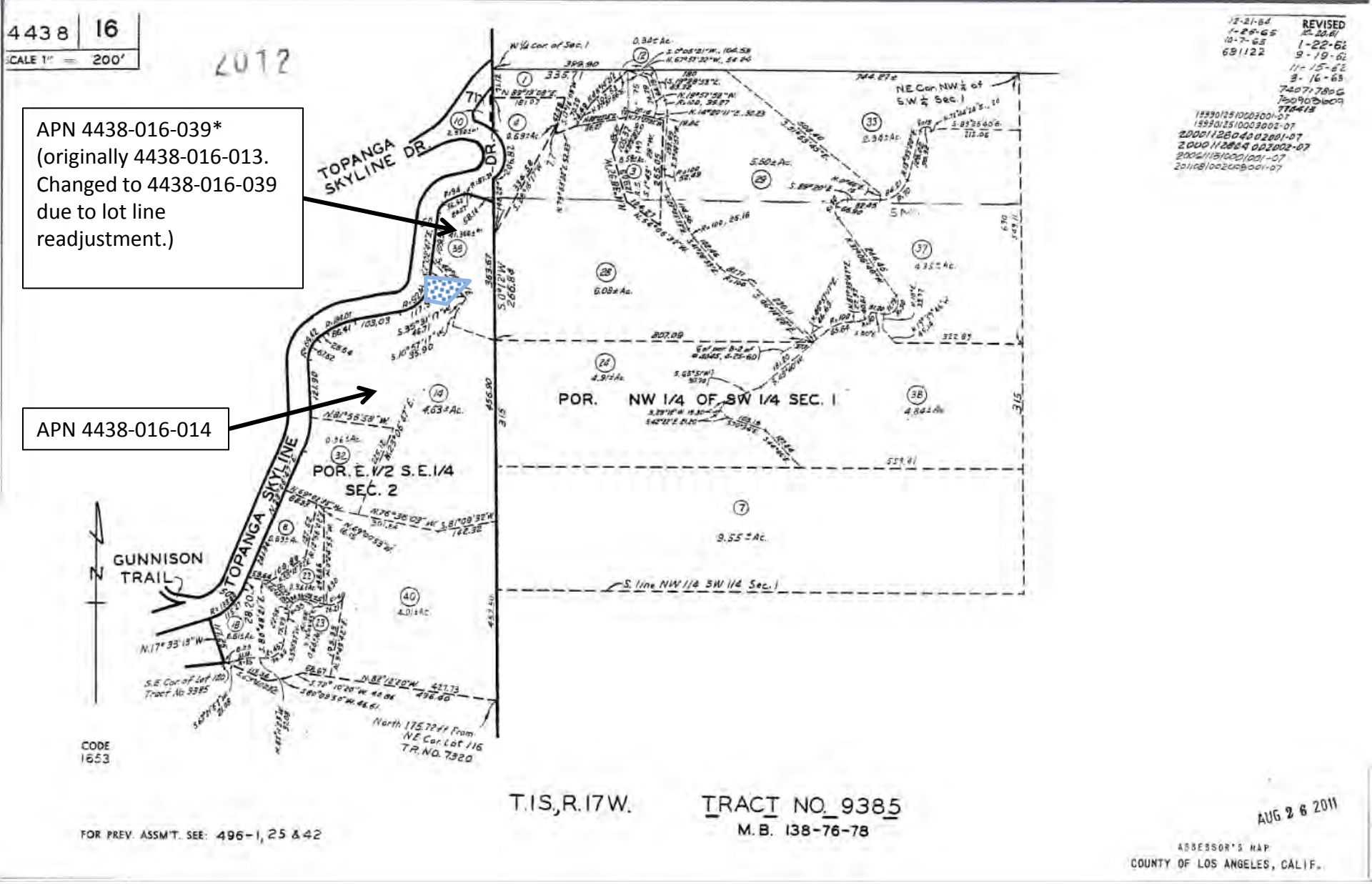


Exhibit 1
4-14-1686
Vicinity Map



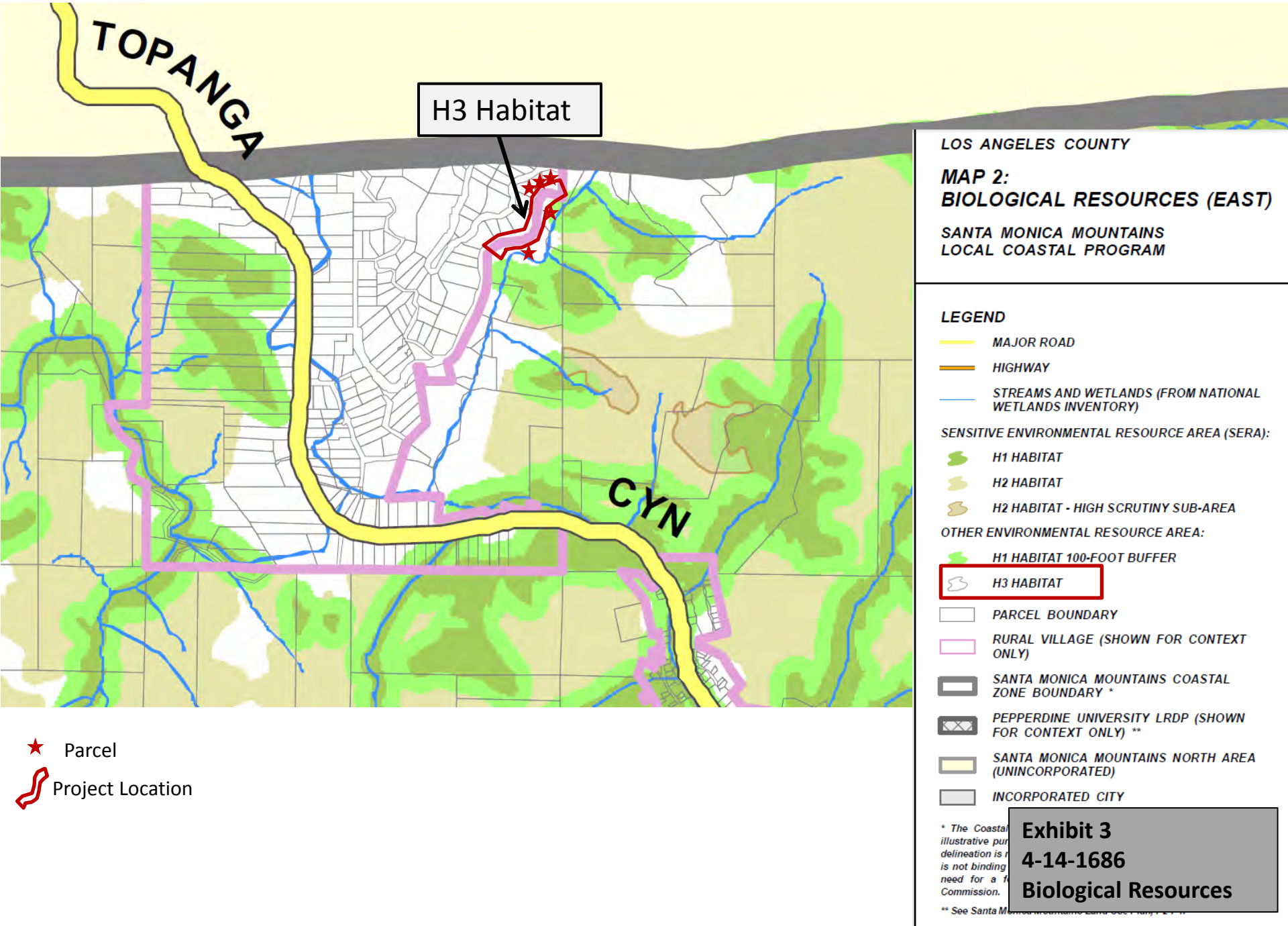
Soldier Pile
Retaining Wall

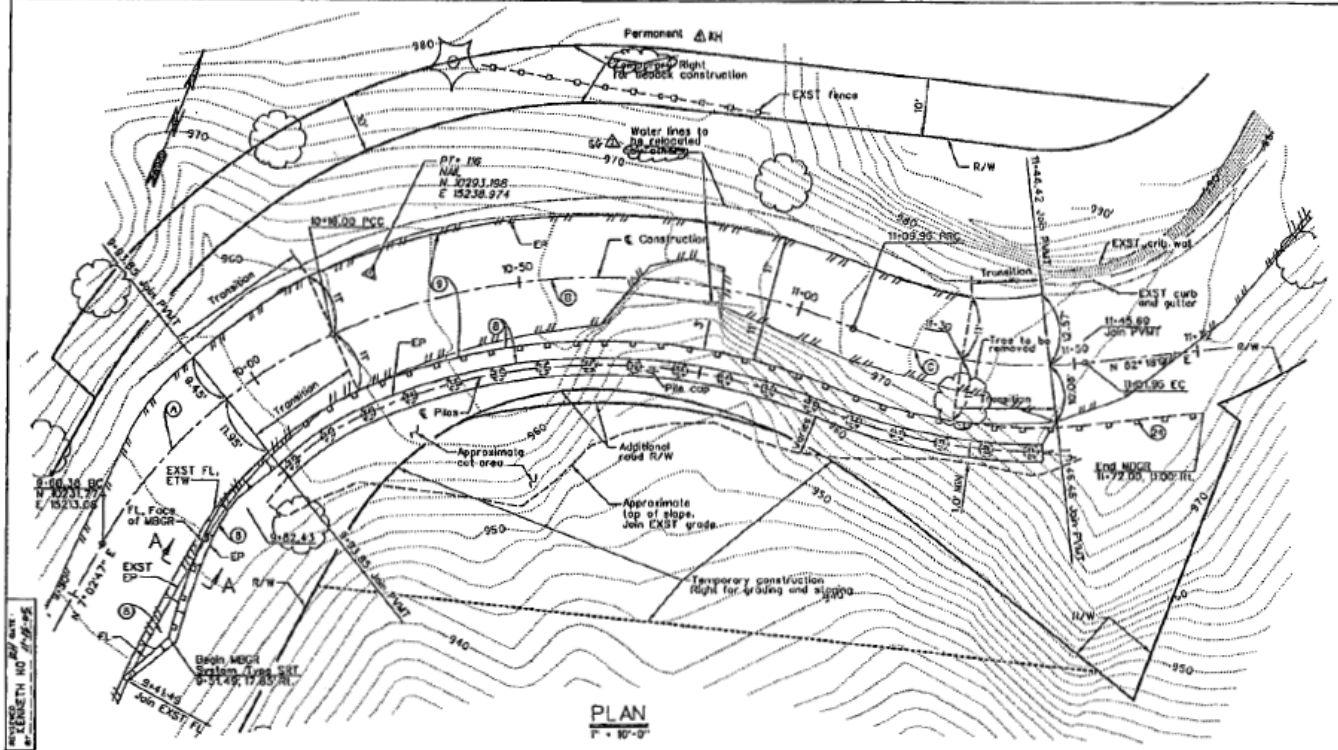
Exhibit 2a
4-14-1686
Parcel Map



Culvert repair and extension and rip-rap placement

Exhibit 2b
4-14-1686
Parcel Map


TOPANGA
H3 Habitat
CYN
LOS ANGELES COUNTY
MAP 2:
BIOLOGICAL RESOURCES (EAST)
SANTA MONICA MOUNTAINS
LOCAL COASTAL PROGRAM
LEGEND
MAJOR ROAD
HIGHWAY
STREAMS AND WETLANDS (FROM NATIONAL WETLANDS INVENTORY)
SENSITIVE ENVIRONMENTAL RESOURCE AREA (SERA):
H1 HABITAT
H2 HABITAT
H2 HABITAT - HIGH SCRUTINY SUB-AREA
OTHER ENVIRONMENTAL RESOURCE AREA:
H1 HABITAT 100-FOOT BUFFER
H3 HABITAT
PARCEL BOUNDARY
RURAL VILLAGE (SHOWN FOR CONTEXT ONLY)
SANTA MONICA MOUNTAINS COASTAL ZONE BOUNDARY *
PEPPERDINE UNIVERSITY LRDP (SHOWN FOR CONTEXT ONLY) **
SANTA MONICA MOUNTAINS NORTH AREA (UNINCORPORATED)
INCORPORATED CITY
Parcel
Project Location
Exhibit 3
4-14-1686
Biological Resources



PLAN
1" = 10'-0"

BENCH MARK

PWFD1509 pages 443-445, 463
Vertical Datum is assumed
Pt. 116
NAIL
N 30293.198
E 15238.974
EL 961.08

LEGEND

- Oak Trees
- Trees
- Survey Point

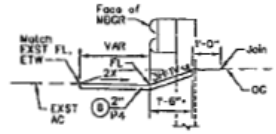
CURVE DATA						
CURVE	RADIUS FT.	CENTRAL ANGLE DEG.	MIN.	SEC.	LENGTH FT.	TANGENT FT.
(A)	85	37	29	30	55.62	28.85
(B)	118	46	24	35	93.96	49.73
(C)	84	28	38	52	42	21.45

CONSTRUCTION LEGEND

(5) Asphalt concrete curb
(8) Asphalt concrete pavement
(9) Asphalt concrete pavement on base material
(24) Metal beam guard rail(MBGR)

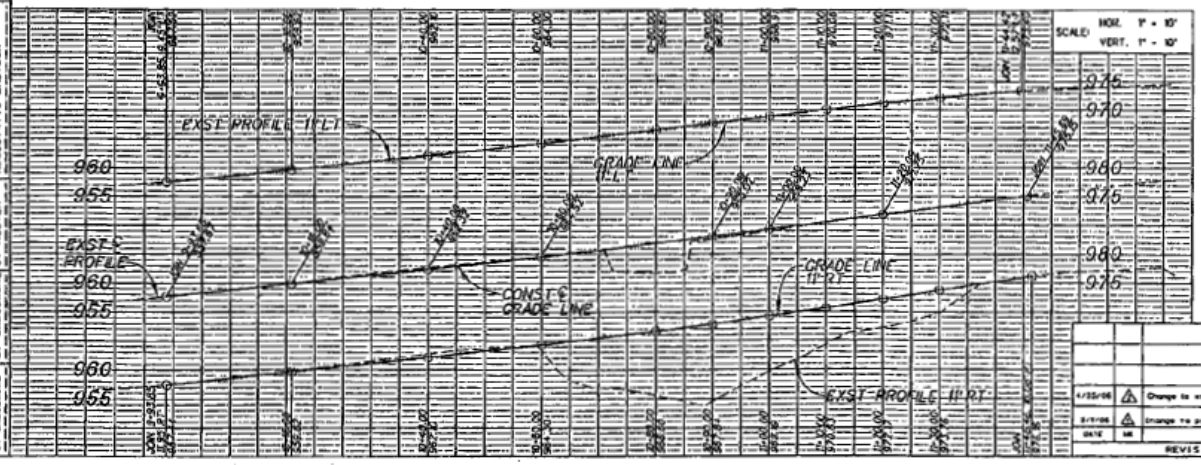
ASPHALT CONCRETE PAVEMENT LEGEND

P1	Surface course	C2-AR-4000
	Base course	B-AR-4000
P4		C2-AR-4000



SECTION A-A
Not to scale

* Varies from 1'-0" at Sta. 9+41.49 to 1'-6" at Sta. 9+51.49
Varies from 1'-6" at Sta. 9+82.43 to 3'-0" at Sta. 9+93.85
** Varies from 3:1 at Sta. 9+82.43 to match slope of AC at Sta. 9+93.85



THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DATE	BY	DESCRIPTION
4/25/96		Change to water line relocation
5/17/96		Change to permanent right

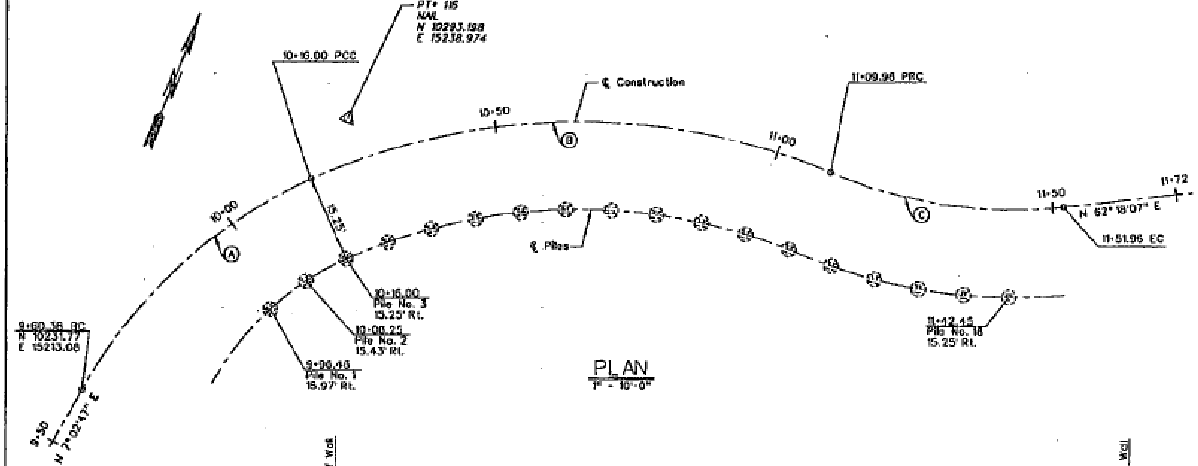
REVISIONS

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

GENERAL PLAN
TOPANGA SKYLINE DRIVE
AT
HOUSE NOS. 1718 TO 1790
PROJECT ID NO. RDC0014710

APP. 3996 | JOB R831336096 | DWG PB619852 | SHEET 1 OF 1

Exhibit 4
4-14-1686
Project Plans



PLAN

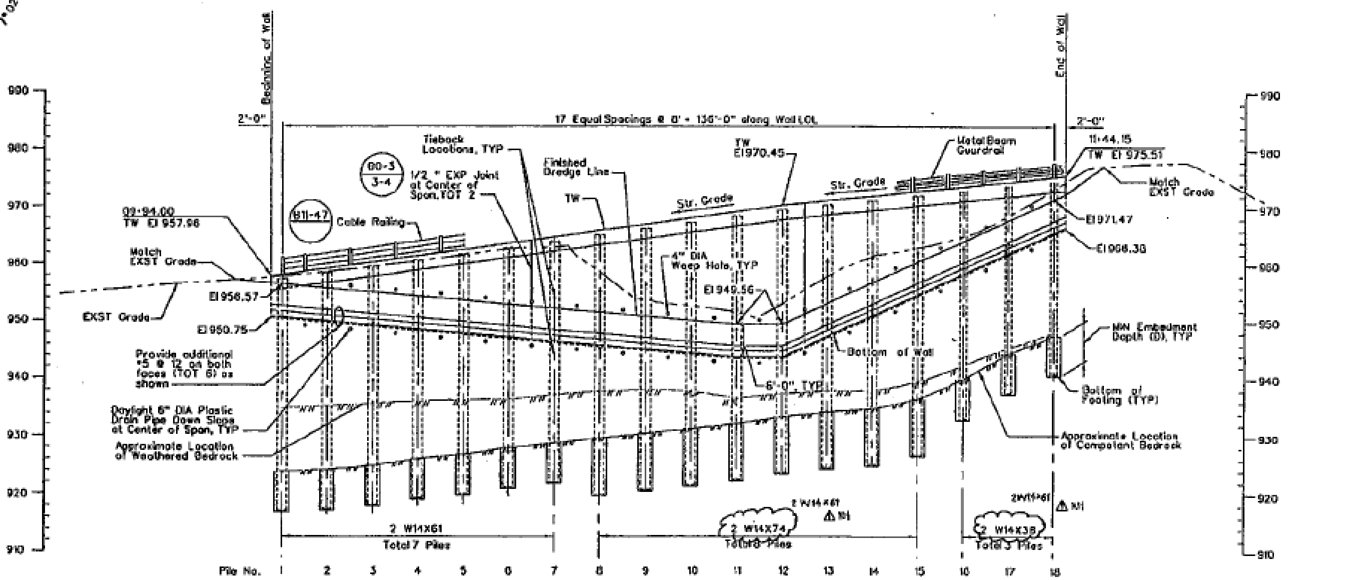
1" = 10'-0"

PILE DATA

PILE NO.	CONST. € STA	HOLE DIA (in)	OFFSET (ft)	TYPE OF PILE	Fy (ksi)	MIN Embedment Depth-D, (ft)	Bottom of Footing El. (ft)
1	9+96.48	30	Rt. 15.97	2 W14X61	50	7	916.9
2	10+06.25	30	Rt. 15.43	2 W14X61	50	7	917.3
3	10+16.00	30	Rt. 15.25	2 W14X61	50	7	918.0
4	10+25.21	30	Rt. 15.25	2 W14X61	50	7	929.1 (918.[illegible])
5	10+34.42	30	Rt. 15.25	2 W14X61	50	7	929.9 (919.[illegible])
6	10+43.63	30	Rt. 15.25	2 W14X61	50	7	921.0
7	10+52.84	30	Rt. 15.25	2 W14X61	50	7	921.9
8	10+62.05	30	Rt. 15.25	2 W14X74	50	10	919.7
9	10+71.27	30	Rt. 15.25	2 W14X74	50	10	920.6
10	10+80.48	30	Rt. 15.25	2 W14X74	50	10	921.4
11	10+89.69	30	Rt. 15.25	2 W14X74	50	10	922.3
12	10+98.90	30	Rt. 15.25	2 W14X74	50	10	923.5
13	11+08.11	30	Rt. 15.25	2 W14X74	50	10	924.3
14	11+15.37	30	Rt. 15.25	2 W14X74	50	10	924.9
15	11+22.14	30	Rt. 15.25	2 W14X74	50	10	926.5
16	11+28.91	30	Rt. 15.25	2 W14X38	50	7	933.0
17	11+35.08	30	Rt. 15.25	2 W14X38	50	7	939.1
18	11+42.45	30	Rt. 15.25	2 W14X38	50	7	940.6

Note: Design height of a pile is the depth from the pile cut-off elevation to the competent bedrock

2 W14X61
△ KH



WALL ELEVATION

1" = 10'-0"

THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DATE	MK	DESCRIPTION
3/7/06	△	Change elevation
3/7/06	△	Change pile size

REVISIONS

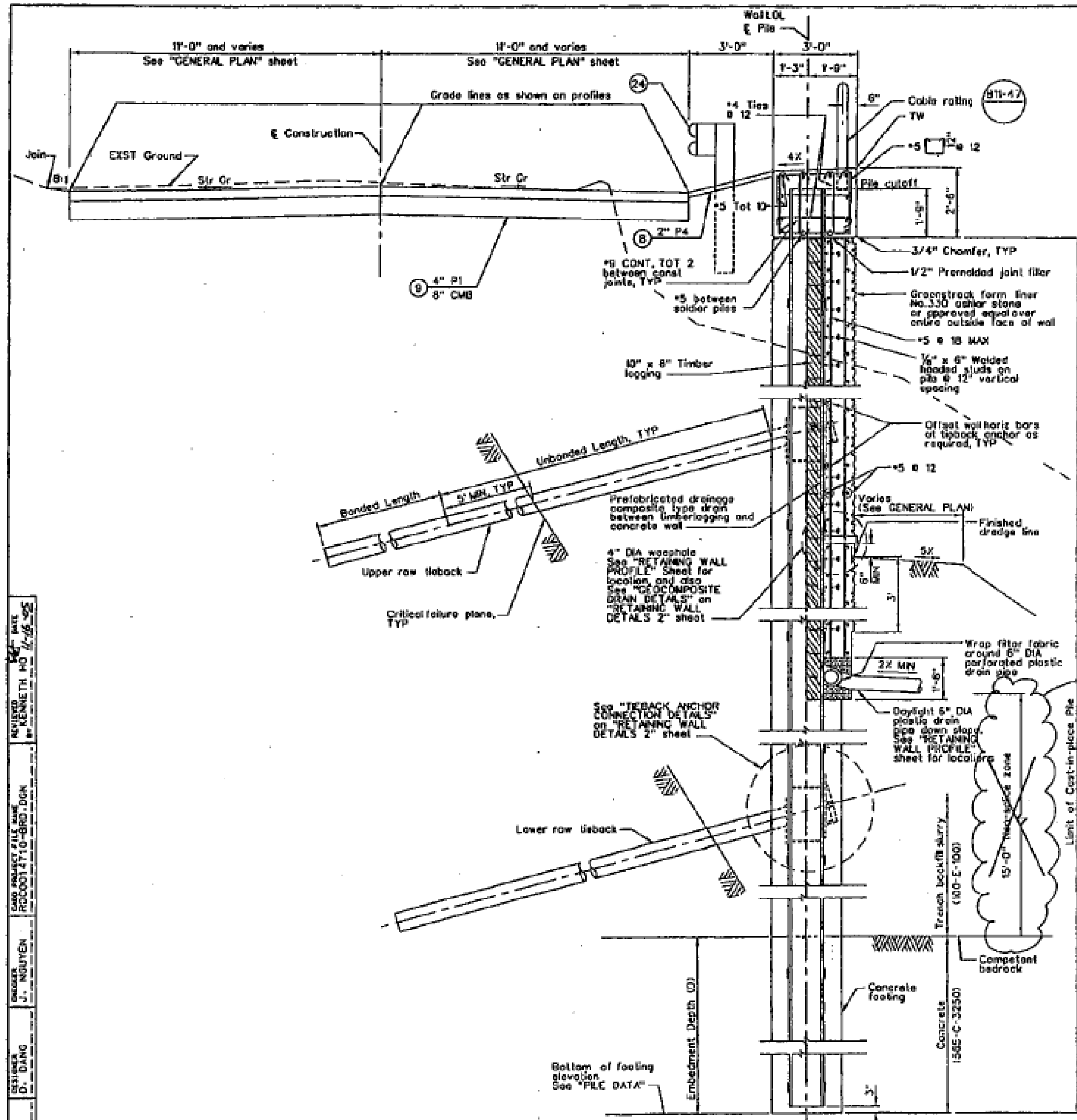
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

RETAINING WALL PROFILE
TOPANGA SKYLINE DRIVE
AT
HOUSE NOS. 1718 TO 1790
PROJECT ID NO. RDC0014710

DR 3996 | JOB R831336096 | DWG P8619053 | SHEET 4 OF 8

DRAFTER D. DANG | DESIGNER D. DANG | CHECKER J. NGUYEN | CADD PROJECT FILE NAME RDC0014710-SRD.DGN | REVIEWED BY KENNETH HO

Exhibit 4
4-14-1686
Project Plans



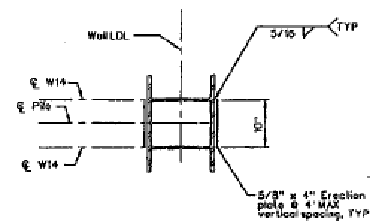
TYPICAL SECTION

1/2" = 1'-0"

PILE NO.	UPPER ROW ELEV (ft)	UPPER ROW DESIGN FORCE (k)	UPPER ROW UNBONDED LENGTH (ft)	UPPER ROW BONDED LENGTH* (ft)	LOWER ROW ELEV (ft)	LOWER ROW DESIGN FORCE (k)	LOWER ROW UNBONDED LENGTH (ft)	LOWER ROW BONDED LENGTH* (ft)
1	947.5	115	19	23	937.5	135	15	27
2	948.6	115	19	23	938.5	135	15	27
3	949.7	115	19	23	939.7	135	15	27
4	950.8	115	19	23	940.8	135	15	27
5	951.9	115	20	23	941.9	135	15	27
6	953.0	115	20	23	943.0	135	15	27
7	954.1	115	20	23	944.1	135	15	27
8	955.3	105	20	21	945.3	185	15	37
9	956.4	105	20	21	946.4	185	15	37
10	957.5	105	20	21	947.5	185	15	37
11	958.6	105	20	21	948.6	185	15	37
12	959.7	105	20	21	949.7	185	15	37
13	960.5	105	20	21	950.5	185	15	37
14	961.3	105	20	21	951.3	185	15	37
15	962.1	105	20	21	952.1	185	15	37
16	962.9	115	18	23	952.9	90	15	18
17	963.8	115	18	23	953.8	90	15	18
18	964.6	115	18	23	954.6	90	15	18

Table: TIEBACK DATA

* See Special Provisions regarding bonded length



TIEBACK SOLDIER BEAM

1" = 1'-0"

* The contractor shall place upper row tieback anchors and achieve anchor required tensile strength as indicated in the Special Provisions before excavating existing grade in front of the wall to the lower row tieback anchor level and placing tieback anchors.

** See Special Provisions subsection 303-3.4.2 regarding assumed bonded length.

THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.

DATE	BY	DESCRIPTION
3/7/06	△	Remove nonspilce zone
3/7/06	△	Revise tieback data

REVISIONS

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

RETAINING WALL DETAILS 1

TOPANGA SKYLINE DRIVE
AT
HOUSE NOS. 1718 TO 1790
PROJECT ID NO. RDC0014710

BR 3996 | JOB R031336096 | DWG PB619854 | SHEET 5 OF 89

DRAFTER D. DANG | DESIGNER D. DANG | CHECKER J. NGUYEN | CADD PROJECT FILE NAME RDC0014710-BRD.DGN | REVIEWED BY KENNETH HO

Exhibit 4
4-14-1686
Project Plans

PROJECT TOPANGA SKYLINE
LOCATION 10.5' S/O OLD WATER LINE
2' W/O EAST EDGE OF ROAD FAILURE
ELEVATION ±954 FT.
DATE DRILLED 06/06/05

BORING NO. B-1
LOGGED BY: C.E.

Depth (ft)	Soil Classification, Description	Dry Unit Wt. pcf	Moisture Content %	% Passing No. 4	% Passing No. 200
0	SM, SILTY SAND loose, moist, medium brown				
5	SC, CLAYEY SAND medium dense, moist, grey-brown	103.0	8.3	93.7	48.4
10	CL, LEAN CLAY WITH SAND stiff, moist, grey @ 12', orange-brown, increase in sand content @ 14', seepage			94.5	75.9
15	@ 15', weathered rock	106.2	13.8	87.1	53.1
	SM, SILTY SAND dense, moist grey				
20	BEDROCK (SILTSTONE/SANDSTONE) @ 24', seepage	117.6	7.6	99.7	23.0
25		115.1	11.6		
30		110.7	14.3		
35		111.0	11.7		

End of boring @ 36.5 ft.
Groundwater encountered @ 25 ft.
No caving encountered
Bedrock encountered @ 20 ft.

PROJECT TOPANGA SKYLINE
LOCATION 5' S/O NORTH EDGE OF ROAD
5' W/O EAST EDGE OF ROAD FAILURE
ELEVATION ±967 FT.
DATE DRILLED 06/07/05

BORING NO. B-2
LOGGED BY: C.E.

Depth (ft)	Soil Classification, Description	Dry Unit Wt. pcf	Moisture Content %	% Passing No. 4	% Passing No. 200
0	6" AC / SM, SILTY SAND loose, moist, brown				
5	@ 8', grey, increase clay content	97.1	8.3	96.3	27.1
10	CL, LEAN CLAY WITH SAND firm, moist, grey @ 11', weathered bedrock	107.8	14.9	100.0	78.4
15	ML, SANDY SILT firm, moist, grey	106.1	13.9		
20	BEDROCK (SILTSTONE/SANDSTONE)	118.6	10.6	89.0	42.9
25	@ 25', seepage to 26'	127.1	5.0		
	@ 28', caving to 31'				
30	@ 30.5', seepage	111.3	15.5		
35		114.2	13.3		
40		124.3	7.0		

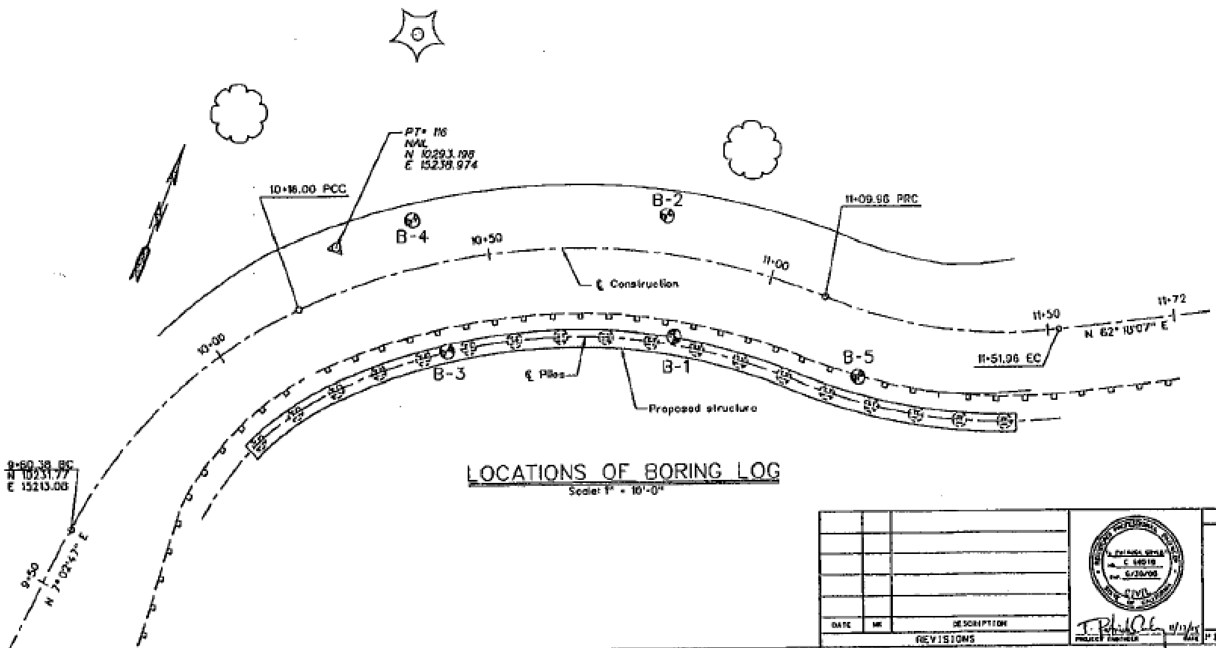
End of boring @ 41.5 ft.
Groundwater encountered @ 25 ft.
Caving encountered @ 31 ft.
Bedrock encountered @ 19 ft.

NOTES

1. Soils were classified based on ASTM D2487 and ASTM D2488.
2. Group symbols and soil descriptions are based on the Unified Soil Classified System. (Standard Plan No. 3093-1).
3. Borings were drilled with a Lo-Drill rig using a 24-inch O.D. flight auger.
4. Groundwater was encountered at various depths in all borings.
5. Bedrock was encountered at various depths in all borings.
6. Caving was encountered at various depths in Boring Nos. B-2 to B-4.
7. Soil conditions in exploratory borings are applicable at the specified locations using above drilling equipment on the date drilled. No warranty is made as to varying soil conditions between and beyond boring locations during excavation operations.

SYMBOLS

▽ Depth to groundwater



LOCATIONS OF BORING LOG
Scale: 1" = 10'-0"

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

LOGS OF BORINGS 1
TOPANGA SKYLINE DRIVE
AT
HOUSE NOS. 1718 TO 1790
PROJECT ID NO. RDC0014710

DATE	MK	DESCRIPTION

REVISIONS

PID FCC0000927 | JOB F7059143 | DWG - P8619856 | SHEET 7 OF 9

DRAFTER MARIA ECHEVERRIA | DESIGNER | CHECKER T.P. COWLEY | CADD PROJECT FILE NAME | REVIEWED BY | DATE

Exhibit 4
4-14-1686
Project Plans

PROJECT TOPANGA SKYLINE
LOCATION 5' S/O SOUTH EDGE OF ROAD
23' W/O WEST EDGE OF ROAD FAILURE
ELEVATION ±902 FT.
DATE DRILLED 06/06/05

BORING NO. B-3
LOGGED BY: C.E.

Depth (ft.)	Soil Classification, Description	Dry Unit Wt. pcf	Moisture Content %	% Passing No. 4	% Passing No. 200
0	SM, SILTY SAND medium dense, moist, dark brown				
5	@ 6', very moist	105.0	12.7	97.2	29.8
	SP, POORLY GRADED SAND medium dense, very moist, orange-brown				
10	@ 10', trace clay	100.5	13.5		
	SM, SILTY SAND dense, moist, medium brown				
15		107.7	11.8	99.8	31.4
20	SP, POORLY GRADED SAND dense, moist, light brown	123.0	10.7		
	@ 22', seepage @ 24', caving				
25	ML, SILT WITH SAND dense, moist, gray-brown @ 26', 1' clay layer				
30		111.2	13.7	100.0	77.5
35	@ 35', caving				
	BEDROCK (SILTSTONE/SANDSTONE)	103.6	19.3		
40					
45					

End of boring @ 47 ft.
Groundwater encountered @ 22 ft.
Caving encountered @ 24 and 35 ft.
Bedrock encountered @ 35 ft.

PROJECT TOPANGA SKYLINE
LOCATION 3' S/O NORTH EDGE OF ROAD
38' W/O WEST EDGE OF ROAD FAILURE
ELEVATION ±902 FT.
DATE DRILLED 06/09/05

BORING NO. B-4
LOGGED BY: C.E.

Depth (ft.)	Soil Classification, Description	Dry Unit Wt. pcf	Moisture Content %	% Passing No. 4	% Passing No. 200
0	SM, SILTY SAND loose, moist, medium brown				
5	@ 5', dense	116.2	10.0	90.1	21.7
	SP, POORLY GRADED SAND dense, moist, light brown				
10		112.3	9.6		
15	SM, SILTY SAND dense, moist, light brown @ 14', weathered rock @ 16', seepage @ 18', groundwater	116.5	9.0	99.2	20.4
20		113.0	10.0	97.5	27.4
	BEDROCK (SILTSTONE/SANDSTONE)				
25					
	@ 28.5', minor caving to 31'				
30	@ 30.5', seepage	123.7	9.7		
35					
40		112.7	10.5		
45					

End of boring @ 44 ft.
Groundwater encountered @ 18 ft.
Caving encountered @ 28.5 to 31 ft.
Bedrock encountered @ 21 ft.

PROJECT TOPANGA SKYLINE
LOCATION 6' S/O SOUTH EDGE OF ROAD
32' E/O EAST EDGE OF ROAD FAILURE
ELEVATION ±907 FT.
DATE DRILLED 06/10/05

BORING NO. B-5
LOGGED BY: C.E.

Depth (ft.)	Soil Classification, Description	Dry Unit Wt. pcf	Moisture Content %	% Passing No. 4	% Passing No. 200
0	SM, SILTY SAND loose, moist, tan				
5	CL, SANDY LEAN CLAY very stiff, dry, orange-brown	115.9	7.9	99.5	67.6
10	CL, LEAN CLAY WITH SAND firm, moist, gray	103.7	15.3		
15		104.4	14.2	99.5	80.3
20	@ 19', very stiff, orange-brown	117.2	14.4	96.7	79.4
25	SP, POORLY GRADED SAND dense, moist, tan, weathered rock	117.2	6.8		
30	BEDROCK (SANDSTONE)	121.7	10.1		
	@ 33', seepage				
35	@ 36', seepage				
40	@ 40', very dense				
45					
50					
55					

End of boring @ 57 ft.
Groundwater encountered @ 33 ft.
No Caving encountered
Bedrock encountered @ 27 ft.

DATE	MK	DESCRIPTION

REVISIONS

PROJECT ENGINEER — DATE

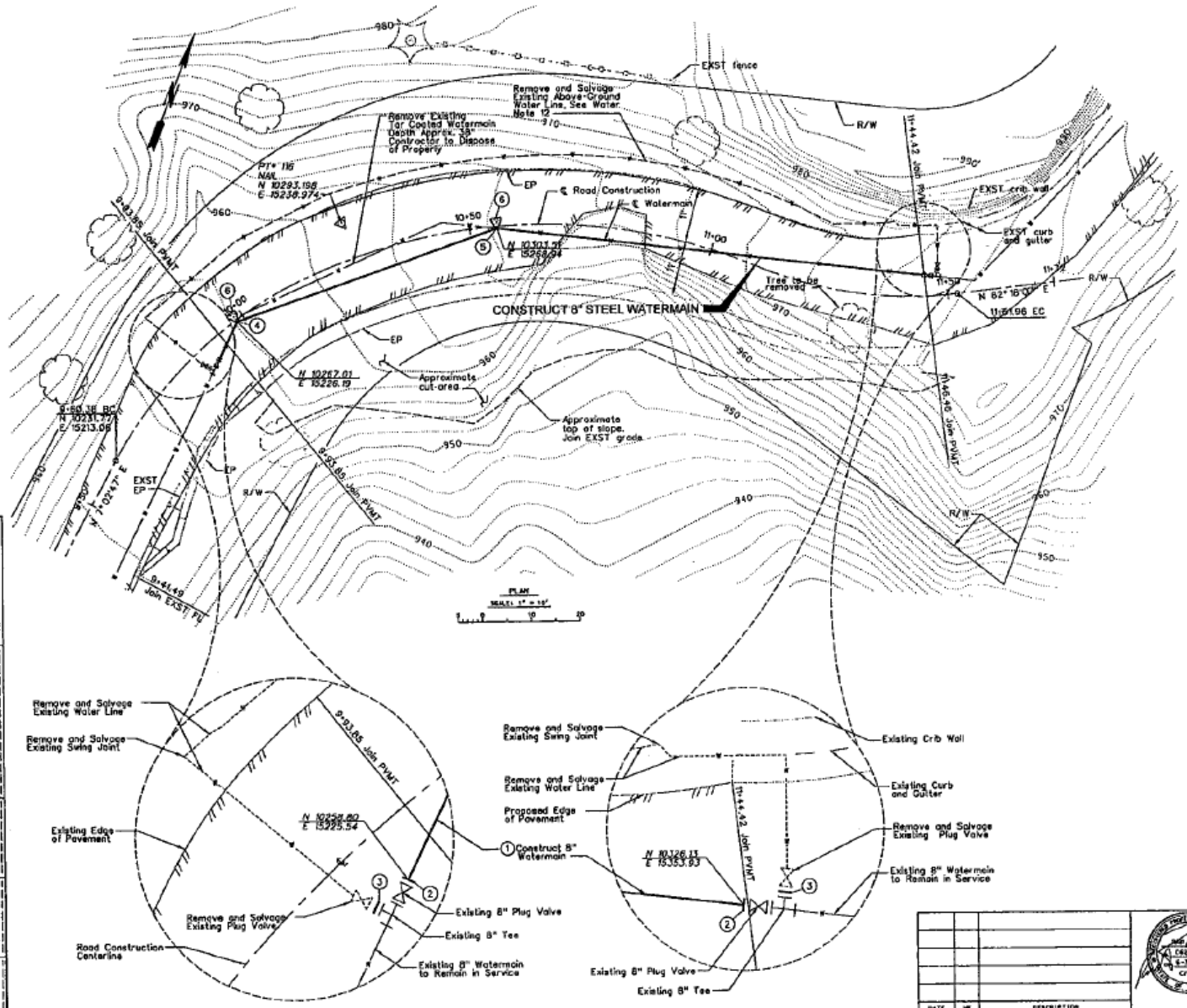
COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

LOGS OF BORINGS 2
TOPANGA SKYLINE DRIVE AT HOUSE NOS. 1718 TO 1790
PROJECT ID NO. RDC0014710

PID FCC0000927 | JOB F7059143 | DWG - PB619857 | SHEET 8 OF 49

DRAFTER MARIA ECHEVERRIA | DESIGNER | CHECKER T.P. COWLEY | CADD PROJECT FILE NAME | REVIEWED BY | DATE

Exhibit 4
4-14-1686
Project Plans



STATISTICS

FEET OF 8" WATERMAIN	160 ±
MAX STATIC PRESSURE	287 PSI
HWL OF PRESSURE ZONE	1615 FT
DISTRIBUTION SHEET	JT-7 & JT-8

BENCH MARK

PWF81500 pages 443-449, 463
Vertical Datum is assumed
PT.116
NAIL
N 10293.198
E 15238.974
EL 981.08

LEGEND

- Oak Trees
- Trees
- Survey Point
- Existing Watermain
- Proposed Watermain
- Water Line to be Removed

MATERIALS LIST (THIS SHEET ONLY)

1. 8" STEEL PIPE, 10 GAUGE, CML & CMC, WELDED JOINTS
2. 8" STEEL FLANGE, CLASS 300
3. 8" STEEL BLIND FLANGE, CLASS 300, CML
4. 8" STEEL 45° ELBOW, PE X PE, CML & CMC
5. 8" STEEL ELBOW, PE X PE, ANGLE TO BE FIELD DETERMINED, CML & CMC
6. THRUST BLOCK PER STD W-21

THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL

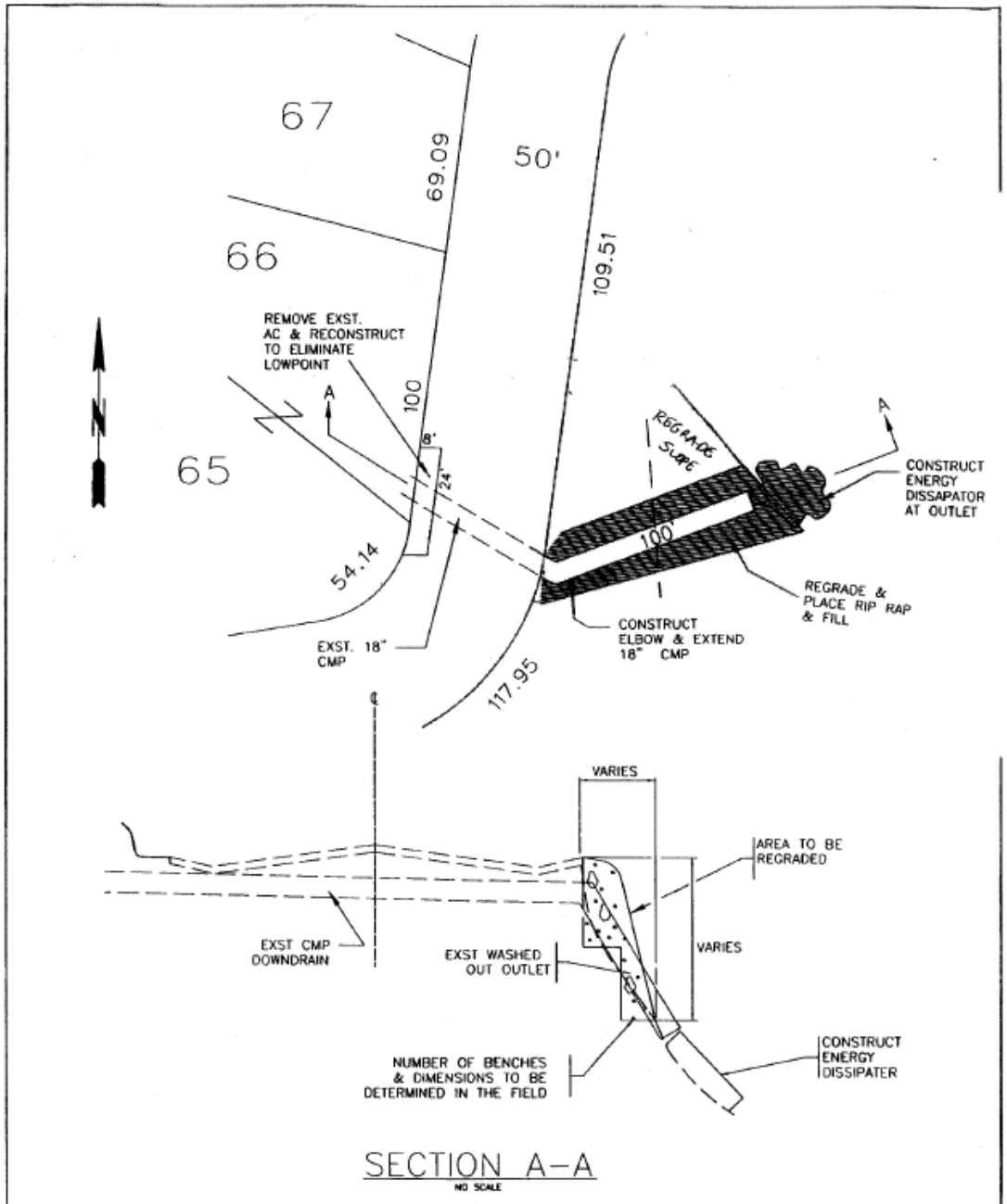
DATE	BY	DESCRIPTION
REVISIONS		

COUNTY OF LOS ANGELES DEPARTMENT OF PUBLIC WORKS

WATER LINE PLAN
TOPANGA SKYLINE DRIVE
AT
HOUSE NOS. 1718 TO 1790
PROJECT ID NO. RDC0014710

BR 3996 | JOB R831336096 | DWG P8640289 | SHEET 9 OF 9

Exhibit 4
4-14-1686
Project Plans



SECTION A–A

NO SCALE

NOTE: ALL DIMENSIONS SUJECT TO CHANGE IN THE FIELD

R831336040 T.G. 589–H3

TOPANGA SKYLINE @ MM 1.61

FEMA–1577–DR–CA
37–00000
DSR:
PAGE OF

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Exhibit 5
4-14-1686
Culvert
Replacement