FORM APPROVED COUNTY COUNSEL
BY: GREGORY P. PRIAMOS DATE 4/12/16

Departmental Concurrence

SUBMITTAL TO THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

767 A

FROM: TLMA – Transportation Department

SUBMITTAL DATE: April 13, 2016

SUBJECT: Approval of the Engineering Services Agreements between the County of Riverside and NCM Engineering Corporation for the Temescal Canyon Road Widening Project on Dawson Canyon Road and the Temescal Canyon Road Widening Project on Dos Lagos Drive within the Unincorporated Community of Temescal Valley. 1st and 2nd District; [$1,881,236]; Local Funds 100%

RECOMMENDED MOTION: That the Board of Supervisors:

1. Approve the Engineering Services Agreement between the County of Riverside (County) and NCM Engineering Corporation in the amount of $955,897 for the Temescal Canyon Road Widening Project on Dawson Canyon Road; and
2. Approve the Engineering Services Agreement between the County and NCM Engineering Corporation in the amount of $754,318 for the Temescal Canyon Road Widening Project on Dos Lagos Drive; and

Patricia Romo
Assistant Director of Transportation

FINANCIAL DATA	Current Fiscal Year:	Next Fiscal Year:	Total Cost:	Ongoing Cost:	POLICY/CONSENT (Per Exec. Office)
COST	$ 200,000	$ 1,681,236	$ 1,881,236	$ 0	Consent ☐ Policy ☒
NET COUNTY COST	$ 0	$ 0	$ 0	$ 0	

SOURCE OF FUNDS: Ash Fee(42%) and Gas Tax/HUTA (30%). There are no General Funds used in this project. DIF Fund 30512 (28%)

Budget Adjustment: No

For Fiscal Year: 15/16-19/20

C.E.O. RECOMMENDATION:

APPROVE
BY: Tina Grande

County Executive Office Signature

MINUTES OF THE BOARD OF SUPERVISORS

On motion of Supervisor Jeffries, seconded by Supervisor Ashley and duly carried by unanimous vote, IT WAS ORDERED that the above matter is approved as recommended.

Ayes:	Jeffries, Tavaglione, Washington, Benoit and Ashley
Nays:	None
Absent:	None
Date:	May 24, 2016
xc:	Transp., E.O.

Kecia Harper-Ihem
Clerk of the Board
By: _____ Deputy

☐ Positions Added ☐ Change Order
☐ A-30 ☐ 4/5 Vote

Prev. Agn. Ref.: 10/6/15, Item 3-55; 04/07/15. Item 12-3C

District: 1, 2

Agenda Number: 3-21

RECEIVED RIVERSIDE COUNTY
CLERK/BOARD OF SUPERVISORS
2016 MAY 17 PM 4:52

RECEIVED RIVERSIDE COUNTY
CLERK/BOARD OF SUPERVISORS
2016 APR 26 PM 2:18

RCED MAY12'16 PM 1:46

RCED APR20'16 PM 3:09

RECOMMENDED MOTION: (Continued)

3. Authorize the use of Ash Fees in the amount of $800,000 for Preliminary Survey, Environmental, Design and Right of Way Engineering phases for the Dawson Canyon Road and Dos Lagos Drive roadway segment of the Temescal Canyon Road Improvement Program widening projects; and
4. Authorize the use of up to $525,000 from DIF Fund 30512 (Area Plan 6) Roads, Bridges, Major Improvement Fund for costs associated with the Temescal Canyon Road Improvements for segments between Dos Lagos Drive and Dawson Canyon Road; and
5. Direct the Executive Office to reimburse up to $525,000 from DIF Fund 30512 (Area Plan 6) Roads, Bridges, Major Improvement Fund to the Transportation and Land Management Agency for expenditures associated with the Temescal Canyon Road Improvements for segments between Dos Lagos Drive and Dawson Canyon Road; and
6. Authorize the Chairman of the Board to execute the two agreements; and
7. Authorize the Director of Transportation and Land Management, or his designee, to approve additional services as may be necessary up to an amount not to exceed 10% of the original contract amounts.

BACKGROUND:

Summary

The Temescal Valley is a narrow, geographically constrained canyon that is served by one local transportation route, Temescal Canyon Road, as the only continuous alternative to Interstate 15 (I-15). As congestion has grown over the years on I-15, regional commuters increasingly use Temescal Canyon Road to bypass segments of the freeway, particularly during freeway accidents or maintenance activities. This has put an increasing strain of Temescal Canyon Road, which is primarily a two-lane road, to adequately serve the local transportation needs of Temescal Valley and El Cerrito residents, as well as carry an increasing share of regional traffic. Due to the limited capacity of Temescal Canyon Road, local traffic also often uses the freeway for short trips.

The County of Riverside Transportation Department (Transportation Department) has developed a plan in concept, the Temescal Canyon Road Improvement Program, which includes the widening of Temescal Canyon Road to four lanes to eliminate several bottlenecks between the Temescal Canyon/I-15 Interchange and El Cerrito Road, a distance of about five miles. This work will be pursued in three distinct project segments in order to build the improvements as soon as possible, recognizing that some segments may have greater environmental or right-of-way constraints, or require Federal funding due to their greater cost, which requires a longer lead time. The Three segments are:

- From the Wildrose Business Park south limit to Dawson Canyon Road. This segment will include a realignment of the existing curve.
- From Dos Lagos Drive southerly to the Wildrose Business Park north limit
- From El Cerrito Road southerly to Tom Barnes Street

The Riverside County Board of Supervisors (Board) endorsed the concept of creating a Temescal Canyon Road Improvement Program at its regular meeting on October 6, 2015 (Agenda Item 3-55).

The Transportation Department intends to retain NCM Engineering Corporation to perform engineering and environmental services for the Dawson Canyon Segment and the Dos Lagos Segment as noted above. A contract for engineering and environmental services for the El Cerrito Segment will be presented to the Board separately at a future date.

The Transportation Department advertised a Request for Qualifications in 2015 for bridge and roadway engineering work. Ten firms submitted Statements of Qualifications (SOQ) and NCM Engineering Corporation was one of the four firms pre-qualified to perform this work for the County.

The County negotiated the scope of work and fees with NCM Engineering Corporation for the total contract amounts. No General Funds will be used for these projects.

Project No's: C5-0072 (Dawson Canyon) and C6-0066 (Dos Lagos)

Impact on Residents and Businesses

The increasing congestion on the Interstate-15 (I-15) freeway has significantly impacted residents and businesses within the Temescal Valley and El Cerrito communities. Motorists wanting to avoid congestion created by peak hour traffic, accidents, and construction closures on the I-15 freeway use Temescal Canyon Road as a bypass. As a result, Temescal Canyon Road is frequently over-burdened by local and non-local traffic.

The majority of Temescal Canyon Road between El Cerrito Road and the Temescal Canyon Road/I-15 freeway interchange consists of one travel lane in each direction. The proposed improvements will increase the number to two lanes in each direction. This will improve traffic flow, access, and safety through the five mile Temescal Canyon Road corridor until the future expansion of the I-15 freeway between Cajalco Road and the City of Lake Elsinore can be completed.

The proposed improvements will reduce the curvature at several locations along Temescal Canyon Road, which will further improve traffic flow and safety.

The Transportation Department will work closely with the Temescal Valley community to obtain public feedback on the specific scope of these projects.

SUPPLEMENTAL:

Additional Fiscal Information

On April 7, 2015 (Agenda Item 12-3C), the Board directed the one-time $700,000 payment and the on-going $2 per ton additional fee for non-hazardous incinerator ash fees (Ash Fees) be used by the Transportation and Land Management Agency to facilitate future road improvements on Temescal Canyon Road. To date receipts exceed $800,000.

Engineering services up to the amount of $1,881,236 ($1,710,215 plus a 10% contingency) will be funded through DIF, Ash fee, and Gas Tax/HUTA. Engineering services are anticipated to begin in FY 2015/16 and end in FY 2019/20. There are no General Funds used in this project.

	Funding ($1000s)			
Project	Ash	DIF	Gas Tax/HUTA	**Total**
Dawson Canyon Segment	430	525	96	1,051
Dos Lagos Segment	370		460	830
Subtotal	800	525	556	1,881
	42%	28%	30%	100%

The Transportation Department will work with the Riverside County Transportation Commission (RCTC) to develop a funding strategy that includes local, regional, State, and Federal funds in order to fully fund the construction of this regionally significant widening projects.

Contract History and Price Reasonableness

The County negotiated the scope of work and billing rates with NCM Engineering Corporation to arrive at the resulting contract fee.

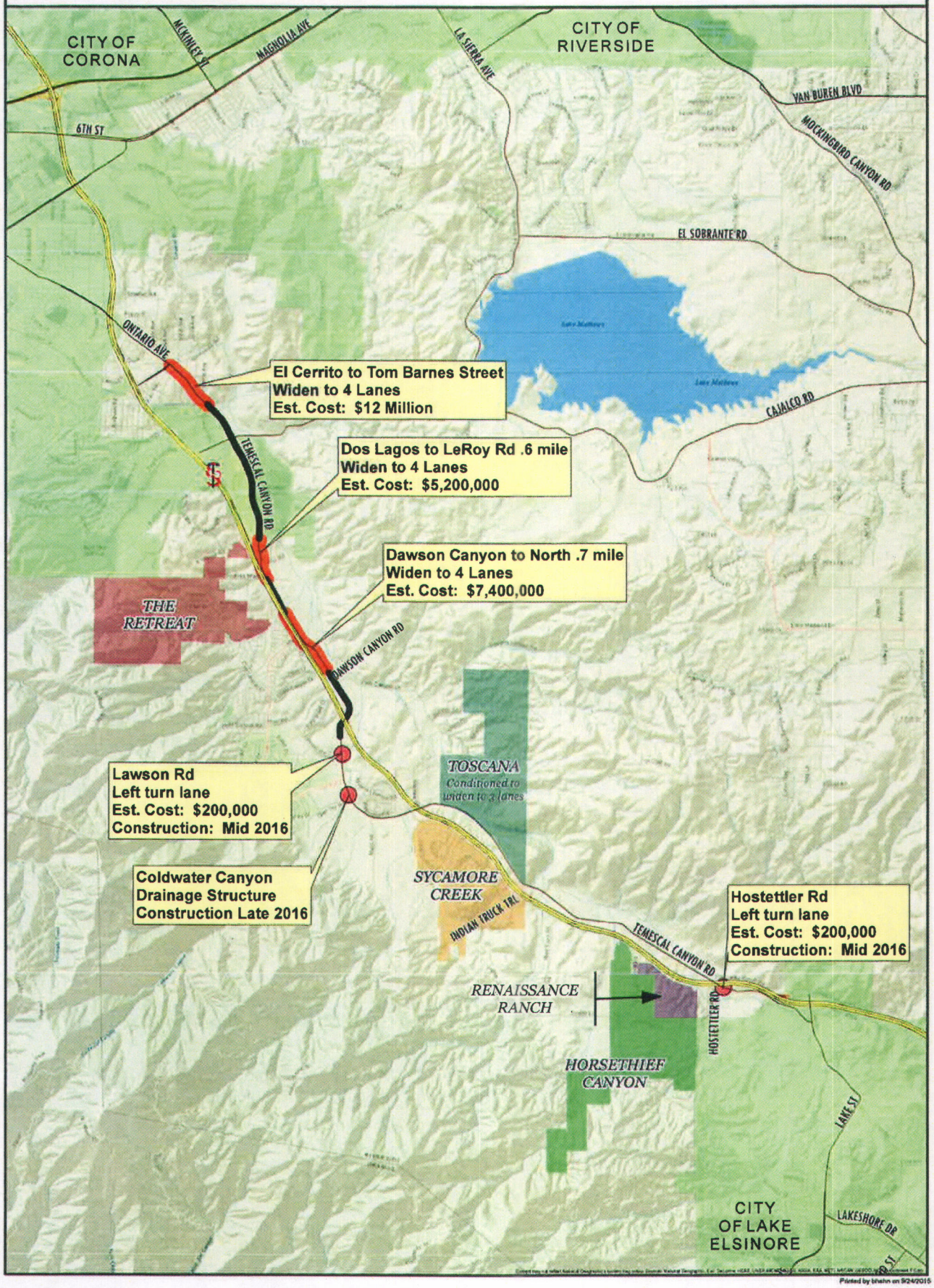
ATTACHMENTS

Vicinity Map
Temescal Canyon Improvement Program Map
Engineering Services Agreement- Dawson Canyon
Engineering Services Agreement- Dos Lagos

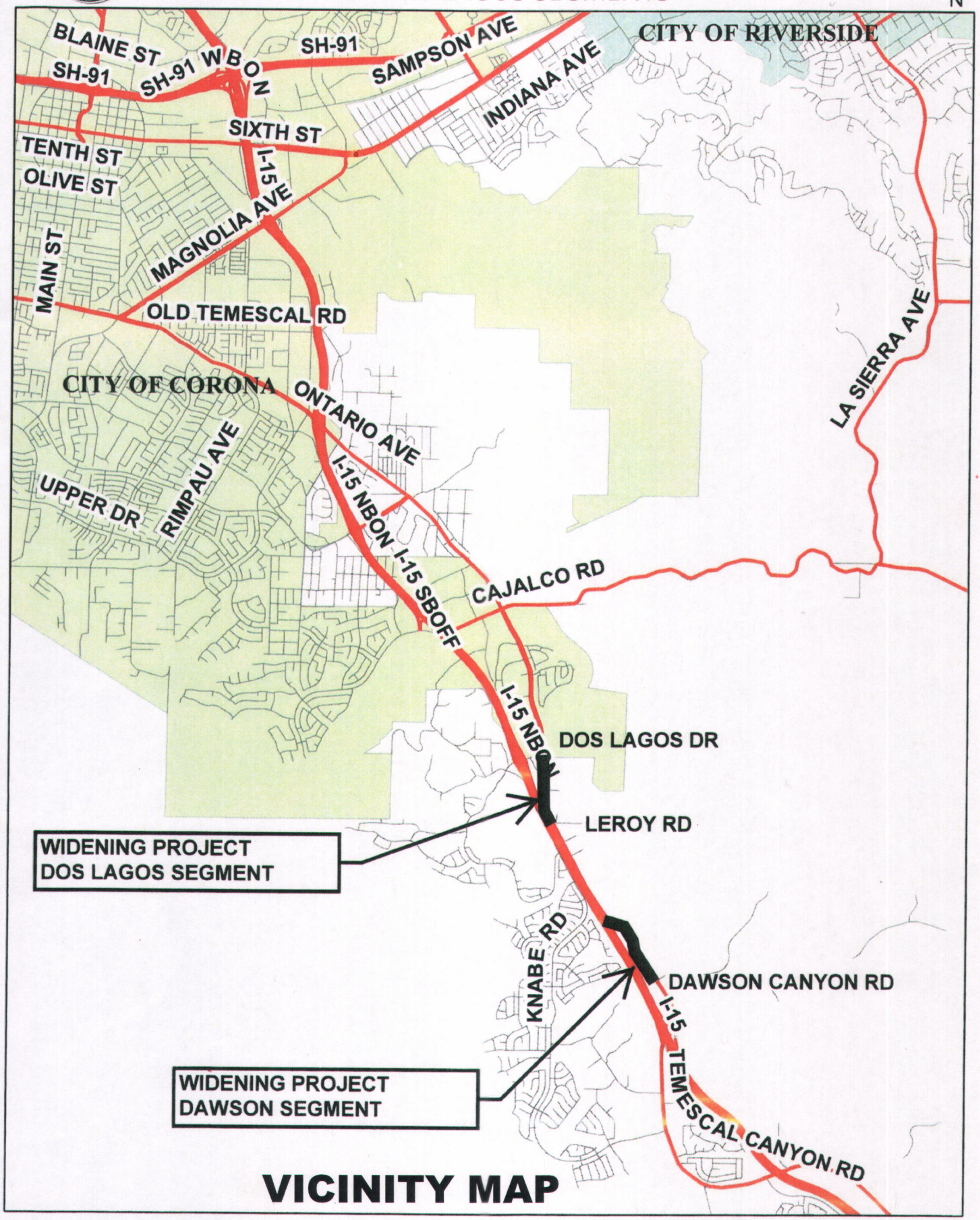
Temescal Canyon Improvement Program

PROJECT -- Proposed

-- Existing 4 Lanes



TEMESCAL CANYON WIDENING PROJECTS
DAWSON AND DOS LAGOS SEGMENTS



VICINITY MAP

Contract No. 16-03-004
Riverside County Transportation Dept.

ENGINEERING SERVICES AGREEMENT

for

Temescal Canyon Road Widening – Dawson Canyon Segment

(C5-0072)

between

County of Riverside • Transportation Department

and

NCM Engineering Corporation

MAY 24 2016 3.21

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APPENDICES

ENGINEERING SERVICES AGREEMENT

COUNTY OF RIVERSIDE, hereinafter referred to as "COUNTY", and NCM Engineering Corporation, hereinafter referred to as "ENGINEER", located at the following addresses:

County of Riverside • Transportation Department	NCM Engineering Corporation
4080 Lemon Street, 8th Floor	4740 Green River Road, Suite 218
Riverside, CA 92502	Corona, CA 92880

do hereby agree as follows:

ARTICLE I • DESIGNATED CONTACTS

Coordination of ENGINEER and COUNTY activities shall be accomplished through an ENGINEERING PROJECT MANAGER, and a COUNTY PROJECT MANAGER.

The ENGINEERING PROJECT MANAGER for ENGINEER shall be:

Ed Ng

The COUNTY PROJECT MANAGER for COUNTY shall be:

Cathy Wampler

ARTICLE II • PROJECT DEFINITION

ENGINEER shall furnish all technical and professional services including labor, material, equipment, transportation, supervision, and expertise to fully and adequately perform and complete the covenants set forth in Appendix A, Scope of Services, which is attached hereto and incorporated herein by reference. All services and deliverables associated with the performance and accomplishment of the covenants described in the Scope of Services is hereinafter collectively referred to as the "PROJECT".

ARTICLE III • COOPERATIVE AGENCIES

A. Lead Agency

COUNTY is designated as the lead agency for PROJECT and is working cooperatively with other agencies in the effort to complete PROJECT.

B. Cooperative Agencies

The cooperating agencies are listed below and will hereinafter be collectively referred to as the "AGENCIES".

Federal Highway Administration (FHWA)

CALTRANS

Other Riverside County Departments

Utility Companies

City of Corona

Riverside County Flood Control & Water Conservation District (RCFC&WCD)

Regulatory Agencies including:

U.S. Army Corps of Engineers (USACE)

U.S. Fish and Wildlife Service (USFWS)

California Department of Fish and Game (CDFG)

Regional Water Quality Control Board (RWQCB)

Riverside County Flood Control & Water Conservation District (RCFC & WCD)

C. COUNTY/AGENCIES Standards

All deliverables shall be prepared in accordance with the current COUNTY and AGENCIES practices, regulations, policies, procedures, manuals and standards where applicable. All deliverables are subject to review and approval by COUNTY.

ARTICLE IV • CONDITIONS

A. Notifications

All notices hereunder and communications regarding interpretation of the terms of this contract and changes thereto shall be effected by the mailing thereof by registered or certified mail, return receipt requested, postage prepaid and addressed to the attention of the ENGINEERING PROJECT MANAGER or the COUNTY PROJECT MANAGER at the respective addresses provided on page one of this contract.

B. Assignment

Without written consent of COUNTY, this contract is not assignable by ENGINEER either in whole or in part.

C. Subcontracts

1. ENGINEER shall perform the services contemplated with resources available within its own organization. No portion of the services pertinent to this contract shall be subcontracted without written authorization by the COUNTY PROJECT MANAGER, except that which is expressly identified in this contract.
2. In the event ENGINEER subcontracts any portion of ENGINEER's duties under this contract, ENGINEER

shall require its subcontractors to comply with the terms of this contract in the same manner as required of ENGINEER including, but not limited to; indemnification of the COUNTY, requiring the same insurance of Subcontractors as required of ENGINEER, and having Subcontractor's insurance name the COUNTY as Additional Insured for each type of insurance where this Agreement requires ENGINEER's insurance to name COUNTY as Additional Insured.

D. Modifications

1. This contract may be amended or modified only by mutual written agreement of the parties. No alteration or variation of the terms of this contract will be valid unless made in writing and signed by the parties hereto and no oral understanding or agreement not incorporated herein, will be binding on any of the parties hereto.
2. Minor modifications are changes that do not substantially affect the Scope of Service. Minor modifications may be: a shift of funds between tasks within a budget category; the shifting of work and/or funding from one phase to another; use of contingency pursuant to Article VI.B.1. All requests for minor modifications must be approved in writing by the Director of Transportation, or his designee, prior to implementing the change.
3. There shall be no change in the ENGINEERING PROJECT MANAGER or key members of the PROJECT team without prior written approval by the COUNTY PROJECT MANAGER.
4. All modifications that do not fit within the definition of a minor modification to the contract shall be considered a major change and must be approved in writing by the ENGINEER and COUNTY Board of Supervisors prior to implementing the major change.

E. COUNTY Directives

ENGINEER shall receive contract directions and interpretations from the COUNTY PROJECT MANAGER.

F. Liability

1. ENGINEER has total responsibility for the accuracy and completeness of all data, reports, plans, specifications and estimates prepared for this PROJECT and shall check all such material accordingly. COUNTY will review all work product deliverables. The responsibility for accuracy and completeness of such items remains solely that of ENGINEER. Neither COUNTY'S review or approval shall give rise to any liability or responsibility on the part of COUNTY, or waive any of

COUNTY'S rights, or relieve ENGINEER of its professional responsibilities or obligations under this contract.

2. The plans, designs, estimates, calculations, reports and other documents furnished in accordance with the Scope of Services shall meet the criteria for acceptance and be a product of neat appearance, well organized, technically and grammatically correct, checked and having the preparer and checker identified. The minimum standard of appearance, organization and contents shall be of similar types produced by COUNTY and AGENCIES. If any work product submitted is not complete and ready for use by COUNTY, it shall be marked "Draft" or similar designation to indicate it is not ready for use by COUNTY. COUNTY expects that all work product not so designated is ready for and can be used on PROJECT.
3. The page identifying preparers of engineering reports, the title sheet for specifications and each sheet of plans, shall bear the professional seal, certificate number, registration classification, expiration date of the certificate, and signature of the professional engineer(s) responsible for their preparation.
4. COUNTY and ENGINEER agree that plans, drawings or other work products prepared by ENGINEER are for the exclusive use of COUNTY and will be used by COUNTY for the project for which they were specifically designed. ENGINEER shall not be responsible for use of such plans, drawings or other work products if used on a different project without the written authorization or approval by ENGINEER.
5. ENGINEER acknowledges that the plans, drawings and/or other work products may be used by COUNTY for the PROJECT regardless of any disputes that may develop between ENGINEER and COUNTY. All plans, drawings, or other work product shall be deemed the sole and exclusive property of COUNTY and ownership thereof is irrevocably vested in COUNTY whether the PROJECT is executed or not.
6. ENGINEER, and the agents and employees of ENGINEER, in the performance of this contract, shall act in an independent capacity and not as officers, employees or agents of COUNTY.

G. Indemnification and Defense

1. The ENGINEER agrees to and shall indemnify and hold harmless the County of Riverside, its Agencies, Districts, Departments and Special Districts, their respective directors, officers, Board of Supervisors, elected and appointed officials, employees, agents and representatives (hereinafter individually and

collectively referred to as "Indemnitees") from all liability, including, but not limited to loss, suits, claims, demands, actions, or proceedings caused by any alleged or actual negligence, recklessness, willful misconduct, errors or omissions of ENGINEER, its directors, officers, partners, employees, agents or representatives or any person or organization for whom ENGINEER is responsible, arising out of or from the performance of services under this Agreement. To the extent a loss, suit, claim, demand, action, or proceeding is based on actual or alleged acts or omissions of ENGINEER which are not design professional services, ENGINEER shall indemnify Indemnitees whether or not ENGINEER is negligent.

2. The duty to indemnify does not include loss, suits, claims, demands, actions, or proceedings caused by actual negligence of Indemnitees; however, any actual negligence of Indemnitees will only affect the duty to indemnify for the specific act found to be negligence, and will not preclude a duty to indemnify for any act or omission of ENGINEER.
3. ENGINEER shall defend and pay, at its sole expense, all costs and fees, including but not limited to attorney fees, cost of investigation, and defense, in any loss, suits, claims, demands, actions, or proceedings based or alleged to be based on any act or omission of ENGINEER arising out of or from the performance of services under this contract. The duty to defend applies to any alleged or actual negligence, recklessness, willful misconduct, error or omission of ENGINEER. The duty to defend shall apply whether or not ENGINEER is a party to the lawsuit, and shall apply whether or not ENGINEER is directly liable to the plaintiffs in the lawsuit. The duty to defend applies even if Indemnitees are alleged or found to be actively negligent, unless the act or omission at issue was caused by the sole active negligence of Indemnitees.
4. The specified insurance provisions and limits required in this contract shall in no way limit or circumscribe ENGINEER'S obligations to indemnify and hold harmless Indemnitees from third party claims.
5. In the event there is conflict between the indemnity and defense provisions and California Civil Code Sections 2782 and 2782.8, the indemnity and defense provisions shall be interpreted to comply with Civil Code sections 2782 and 2782.8.

H. Quality Control

ENGINEER shall implement and maintain the following quality control procedures during the preparation of the plans and documents relating to PROJECT. ENGINEER shall have a quality control plan in effect during the entire time services are being performed under this contract. The plan shall establish a

process whereby calculations are independently checked, plans checked, corrected and back-checked, and all job related correspondence and memoranda routed and received by affected persons and then bound in appropriate job files. Where several drawings show different work in the same area, means shall be provided to avoid conflicts and misalignment in both new and existing improvements. Evidence that the quality control plan is functional may be requested by the COUNTY PROJECT MANAGER. All plans, calculations documents and other items submitted to the COUNTY PROJECT MANAGER for review shall be marked clearly as being fully checked and that the preparation of the material followed the quality control plan established for the work.

I. Value Engineering

1. Elements of PROJECT may be considered for Value Engineering Studies. To this end, the COUNTY PROJECT MANAGER may direct the ENGINEER to examine the various elements of a design segment and submit an informal written statement or memorandum addressing those elements where it appears significant savings and other advantages can be realized. The statement shall be sufficiently informative to enable COUNTY to determine whether to direct a detailed Value Engineering Study or possibly direct immediate design changes where the value of the change is apparent without the need of detailed study and analysis.
2. ENGINEER or its subcontractors shall not incorporate in the design materials or equipment of single or sole source origin without written approval of COUNTY. Proprietary names of material or equipment shall not be used in the plans and specifications.

J. Extra Work

1. ENGINEER shall not perform Extra Work until receiving written authorization from the COUNTY PROJECT MANAGER.
2. In the event that COUNTY directs ENGINEER to provide services constituting Extra Work, COUNTY shall provide extra compensation to the ENGINEER. Allowable compensation for approved extra work will be based on the provisions of Appendix C, Budget, which is attached hereto and incorporated herein by reference.
3. An amendment to this contract providing for such compensation for Extra Work shall be issued by COUNTY to ENGINEER. Such Amendment shall not be effective until executed by both parties.

K. Disputes

1. In the event ENGINEER considers any work demanded of him to be outside the requirements of the contract, or if he considers any order, instruction, or decision of COUNTY to be unfair, he shall promptly upon receipt of such order, instruction or decision, ask for a written confirmation of the same whereupon he shall proceed without delay to perform the work or to conform to the order, instruction, or decision; but unless ENGINEER finds such order, instruction, or decision satisfactory, he shall within 20 days after receipt of same, file a written protest with COUNTY stating clearly and in detail his objections and reasons therefore. Except for such protests or objections as are made of record in the manner specified and within the time stated herein, and except for such instances where the basis of a protest could not reasonably have been foreseen by ENGINEER within the time limit specified for protest, ENGINEER hereby waives all grounds for protests or objections to the orders, instruction, or decisions of COUNTY and hereby agrees that, as to all matters not included in such protests, the orders, instructions and decisions of COUNTY will be limited to matters properly falling within COUNTY's authority.
2. Any controversy or claim arising out of or relating to this contract which cannot be resolved by mutual agreement may be settled by arbitration in accordance with the rules of the American Arbitration Association, provided that the parties mutually agree to submit to arbitration.
3. Neither the pendency of a dispute nor its consideration by arbitration will excuse ENGINEER from full and timely performance in accordance with the terms of the contract.

L. Termination Without Cause

1. COUNTY reserves the right to terminate this contract at COUNTY's discretion and without cause, upon thirty (30) calendar days written notice to ENGINEER.
2. In the event of termination of the Agreement, upon demand, ENGINEER shall deliver to COUNTY all field notes, surveys, studies, reports, plans, drawings, specifications, and all other materials and documents prepared by or provided to ENGINEER in the performance of this contract. All such documents and materials shall be property of COUNTY.
3. In the event that this contract is terminated, ENGINEER is entitled to full payment for all services performed up to the time written notice of contract cancellation is received by ENGINEER. Payment shall be made for services performed to date based upon the percentage ratio that the basic services performed bear to the services contracted for, less payments made to date; plus any amount for

authorized, but unpaid, extra work performed and costs incurred.

M. Termination for Lack of Performance

COUNTY may terminate this contract and be relieved of the payment of any consideration to ENGINEER should ENGINEER fail to perform the covenants herein contained at the time and in the manner herein provided. In the event of such termination, COUNTY may proceed with the work in any manner deemed proper by COUNTY. In such event, ENGINEER shall be paid only for work completed and delivered to COUNTY in a timely and successful manner.

N. Insurance

Without limiting or diminishing the ENGINEER'S obligation to indemnify or hold the COUNTY harmless, ENGINEER shall procure and maintain or cause to be maintained, at its sole cost and expense, the following insurance coverage's during the term of this Agreement. As respects to the insurance section only, the COUNTY herein refers to the County of Riverside, its Agencies, Districts, Special Districts, and Departments, their respective directors, officers, Board of Supervisors, employees, elected or appointed officials, agents or representatives as Additional Insureds.

1. Workers' Compensation:

   If the ENGINEER has employees as defined by the State of California, the ENGINEER shall maintain statutory Workers' Compensation Insurance (Coverage A) as prescribed by the laws of the State of California. Policy shall include Employers' Liability (Coverage B) including Occupational Disease with limits not less than $1,000,000 per person per accident. The policy shall be endorsed to waive subrogation in favor of The County of Riverside.

2. Commercial General Liability:

   Commercial General Liability insurance coverage, including but not limited to, premises liability, unmodified contractual liability, products and completed operations liability, personal and advertising injury, and cross liability coverage, covering claims which may arise from or out of ENGINEER'S performance of its obligations hereunder. Policy shall name the COUNTY as Additional Insured. Policy's limit of liability shall not be less than $1,000,000 per occurrence combined single limit. If such insurance contains a general aggregate limit, it shall apply separately to this agreement or be no less than two (2) times the occurrence limit.

3. Vehicle Liability:

If vehicles or mobile equipment are used in the performance of the obligations under this Agreement, then ENGINEER shall maintain liability insurance for all owned, non-owned or hired vehicles so used in an amount not less than $1,000,000 per occurrence combined single limit. If such insurance contains a general aggregate limit, it shall apply separately to this agreement or be no less than two (2) times the occurrence limit. Policy shall name the COUNTY as Additional Insureds.

4. Professional Liability

ENGINEER shall maintain Professional Liability Insurance providing coverage for the ENGINEER's performance of work included within this Agreement, with a limit of liability of not less then $1,000,000 per occurrence and $2,000,000 annual aggregate. If ENGINEER's Professional Liability Insurance is written on a claims made basis rather than an occurrence basis, such insurance shall continue through the term of this Agreement and ENGINEER shall purchase at his sole expense either 1) an Extended Reporting Endorsement (also, known as Tail Coverage); or 2) Prior Dates Coverage from new insurer with a retroactive date back to the date of, or prior to, the inception of this Agreement; or 3) demonstrate through Certificates of Insurance that ENGINEER has Maintained continuous coverage with the same or original insurer. Coverage provided under items; 1), 2), or 3) will continue as long as the law allows.

5. General Insurance Provisions - All lines:

   a. Any insurance carrier providing insurance coverage hereunder shall be admitted to the State of California and have an A M BEST rating of not less than A: VIII (A:8) unless such requirements are waived, in writing, by the County Risk Manager. If the County's Risk Manager waives a requirement for a particular insurer such waiver is only valid for that specific insurer and only for one policy term.

   b. The ENGINEER must declare its insurance self-insured retention for each coverage required herein. If any such self-insured retention exceed $500,000 per occurrence each such retention shall have the prior written consent of the County Risk Manager before the commencement of operations under this Agreement. Upon notification of self-insured retention unacceptable to the COUNTY, and at the election of the Country's Risk Manager, ENGINEER'S carriers shall either; 1) reduce or eliminate such self-insured retention as respects this Agreement with the COUNTY, or 2) procure a bond which guarantees payment of losses and related investigations, claims administration, and defense costs and expenses.

   c. ENGINEER shall cause ENGINEER'S insurance carrier(s) to furnish the County of Riverside with

either 1) a properly executed original Certificate(s) of Insurance and certified original copies of Endorsements effecting coverage as required herein, and 2) if requested to do so orally or in writing by the County Risk Manager, provide original Certified copies of policies including all Endorsements and all attachments thereto, showing such insurance is in full force and effect. Further, said Certificate(s) and policies of insurance shall contain the covenant of the insurance carrier(s) that thirty (30) days written notice shall be given to the County of Riverside prior to any material modification, cancellation, expiration or reduction in coverage of such insurance. In the event of a material modification, cancellation, expiration, or reduction in coverage, this Agreement shall terminate forthwith, unless the County of Riverside receives, prior to such effective date, another properly executed original Certificate of Insurance and original copies of endorsements or certified original policies, including all endorsements and attachments thereto evidencing coverage's set forth herein and the insurance required herein is in full force and effect. ENGINEER shall not commence operations until the COUNTY has been furnished original Certificate (s) of Insurance and certified original copies of endorsements and if requested, certified original policies of insurance including all endorsements and any and all other attachments as required in this Section. An individual authorized by the insurance carrier to do so on its behalf shall sign the original endorsements for each policy and the Certificate of Insurance.

d. It is understood and agreed to by the parties hereto that the ENGINEER'S insurance shall be construed as primary insurance, and the COUNTY'S insurance and/or deductibles and/or self-insured retention's or self-insured programs shall not be construed as contributory.

e. If, during the term of this Agreement or any extension thereof, there is a material change in the scope of services; or, there is a material change in the equipment to be used in the performance of the scope of work; or, the term of this Agreement, including any extensions thereof, exceeds five (5) years; the COUNTY reserves the right to adjust the types of insurance and the monetary limits of liability required under this Agreement, if in the County Risk Manager's reasonable judgment, the amount or type of insurance carried by the ENGINEER has become inadequate.

f. ENGINEER shall pass down the insurance obligations contained herein to all tiers of subconsultants working under this Agreement.

g. The insurance requirements contained in this Agreement may be met with a program(s) of self-

insurance acceptable to the COUNTY.

h. ENGINEER agrees to notify COUNTY of any claim by a third party or any incident or event that may give rise to a claim arising from the performance of this Agreement.

O. Conflict of Interest

ENGINEER warrants, by execution of this contract, that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by ENGINEER for the purpose of securing business. For breach or violation of this warranty, COUNTY has the right to annul this contract without liability, pay only for the value of the work actually performed, or in its discretion to deduct from the contract price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee. ENGINEER may be requested to complete a Conflict of Interest Statement prior to, during, or after execution of this contract. ENGINEER understands that as a condition of this contract ENGINEER agrees to complete the Conflict of Interest Statement when requested to do so by COUNTY.

P. Legal Compliance

ENGINEER shall comply with all Federal, State and local laws, statutes, ordinances, rules and regulations, and the orders and decrees of any courts or administrative bodies or tribunals currently in effect and in any manner affecting the performance of this contract, including, without limitation, workers' compensation laws and licensing and regulations.

Q. Nondiscrimination

1. During the performance of this contract, ENGINEER and its Subcontractors shall not act unlawfully against any employee or applicant for employment because of race, religion, color, national origin, ancestry, physical handicap, medical condition, marital status, age or sex. ENGINEER and Subcontractor shall comply with the provisions of the Fair Employment and Housing Act (Government Code, Section 12900 et seq.) and applicable regulations promulgated thereunder (California Administrative Code, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code, Section 12900, set forth in Chapter 5 of Division 4 of Title 2 of the California Administrative Code are incorporated into this contract by reference and made a part hereof as if set forth in full. ENGINEER and its Subcontractors shall give written notice

of their obligations under this clause to labor organizations with which they have a collective bargaining or other agreement.

2. ENGINEER will provide all information and reports required by the Regulations, or orders and instructions issued pursuant thereto, and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by COUNTY or AGENCIES to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of ENGINEER is in the exclusive possession of another who fails or refuses to furnish this information, ENGINEER shall so certify to COUNTY, or the Federal Highway Administration as appropriate and shall set forth what efforts he has made to obtain the information.
3. In the event of ENGINEER's noncompliance with the nondiscrimination provisions of this contract, COUNTY shall impose such contract sanctions as it determines to be appropriate, including, but not limited to:
    - Withholding of payments to ENGINEER under the contract until ENGINEER complies;
    - Cancellation, termination, or suspension of the contract in whole or in part.
4. ENGINEER shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under this contract.
5. ENGINEER shall comply with Title VI of the Civil Rights Act of 1964, as amended. Accordingly, 49 CFR 21 through Appendix H and 23 CFR 710.405(b) are applicable to this contract by reference.

R. Labor Code and Prevailing Wages

1. Certain Classifications of Labor under this contract may be subject to prevailing wage requirements.
2. Reference is made to Chapter 1, Part 7, Division 2 of the California Labor Code (commencing with Section 1720). By this reference said Chapter 1 is incorporated herein with like effect as if it were here set forth in full. The parties recognize that said Chapter 1 deals, among other things with discrimination, penalties and forfeitures, their disposition and enforcement, wages, working hours, and securing worker's compensation insurance and directly effect the method of prosecution of the work by ENGINEER and subject it under certain conditions to penalties and forfeitures. Execution of the contract by the parties constitutes their agreement to abide by said Chapter 1, their stipulation as to all matters which they are required to stipulate as to by the provisions of said Chapter 1, constitutes ENGINEER's certification that he is aware of the provisions of said Chapter 1 and will comply with them and further constitutes

ENGINEER's certification as follows: "I am aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that Code, and I will comply with such provisions before commencing the performance of the work of this contract."

3. Pursuant to Section 1773 of the Labor Code, the general prevailing wage rates, including the per diem wages applicable to the work, and for holiday and overtime work, including employer payments for health and welfare, pension, vacation, and similar purposes, in the county in which the work is to be done have been determined by the Director of the California Department of Industrial Relations. These wages are available from the California Department of Industrial Relations' Internet website at http://www.dir.ca.gov.
4. Should a portion of the project contain Federal funding, Federal minimum wages shall be used. The Federal minimum wage rates for this project as determined by the United States Secretary of Labor are available from the U.S Department of Labor, Employment Standards Administration, Wage and Hour Division's Internet website at http://www.access.gpo.gov/davisbacon. If there is a difference between the minimum wage rates determined by the Secretary of Labor and the general prevailing wage rates determined by the Director of the California Department of Industrial Relations for similar classifications of labor, the ENGINEER and subcontractors shall pay not less than the higher wage rate. The Department will not accept lower State wage rates determinations. This includes "helper" (or other classifications based on hours of experience) or any other classification not appearing in the Federal wage determinations. Where Federal wage determinations do not contain the State wage rate determination otherwise available for use by the ENGINEER and subcontractors, the ENGINEER and subcontractors shall pay not less than the Federal minimum wage rate which most closely approximates the duties of the employees in question.

S. Review and Inspection

ENGINEER and any Subcontractors shall permit COUNTY and/or AGENCIES to review and inspect PROJECT activities including review and inspection on a daily basis.

T. Record Retention / Audits

1. ENGINEER's and subconsultants' contracts, including cost proposals and indirect cost rates (ICR), are subject to audits or reviews such as, but not limited to, a Contract Audit, an Incurred Cost Audit, an ICR Audit, or a certified public accountant (CPA) ICR Audit Workpaper Review. If selected for audit or review,

the contract, cost proposal and ICR and related workpapers, if applicable, will be reviewed to verify compliance with 48 CFR, Part 31 and other related laws and regulations. In the instances of a CPA ICR Audit Workpaper Review, it is ENGINEER's responsibility to ensure federal, state, or local government officials are allowed full access to the CPA's workpapers. The contract, cost proposal, and ICR shall be adjusted by ENGINEER and approved by COUNTY contract manager to conform to the audit or review recommendations. ENGINEER agrees that individual terms of costs identified in the audit report shall be incorporated into the contract by this reference if directed by COUNTY at its sole discretion. Refusal by ENGINEER to incorporate audit or review recommendations, or to ensure that the Federal, State, or local governments have access to CPA workpapers, will be considered a breach of contract terms and cause for termination of the contract and disallowance of prior reimbursed costs.

2. ENGINEER, Subcontractors, and COUNTY shall maintain all books, documents, papers, accounting records, and other evidence pertaining to the performance of the contract, but not limited to, the costs of administering the contract. All parties shall make such materials available at their respective offices at all reasonable times during the contract period and for ten years from the date of final payment under the contract or ten years from project closeout, whichever is later.
3. COUNTY, Caltrans, the State Auditor General, FHWA or any duly authorized representative of the Federal Government shall have access to any books, records, and documents of ENGINEER that are pertinent to the contract for audits, examinations, excerpts, and transactions, and copies thereof shall be furnished if requested.

U. Rebates, Kickbacks, or Other Unlawful Consideration

ENGINEER warrants that this contract was not obtained or secured through rebates kickbacks or other unlawful consideration, either promised or paid to any COUNTY employee. For breach or violation of this warranty, COUNTY shall have the right in its discretion; to terminate the contract without liability; to pay only for the value of the work actually performed; or to deduct from the contract price; or otherwise recover the full amount of such rebate, kickback or other unlawful consideration.

V. Prohibition of Expending Local Agency, State, or Federal Funds for Lobbying

1. ENGINEER certifies to the best of his or her knowledge and belief that:
   a. No state, federal or local agency appropriated funds have been paid, or will be paid by-or-on behalf of ENGINEER to any person for influencing or attempting to influence an officer or employee of any

state or federal agency; a Member of the State Legislature or United States Congress; an officer or employee of the Legislature or Congress; or any employee of a Member of the Legislature or Congress, in connection with the awarding of any state or federal contract; the making of any state or federal grant; the making of any state or federal loan; the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any state or federal contract, grant, loan, or cooperative agreement.

b. If any funds other than federal appropriated funds have been paid, or will be paid to any person for influencing or attempting to influence an officer or employee of any federal agency; a Member of Congress; an officer or employee of Congress, or an employee of a Member of Congress; in connection with this federal contract, grant, loan, or cooperative agreement; ENGINEER shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying", in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by Section 1352, Title 31, US. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. ENGINEER also agrees by signing this document that he or she shall require that the language of this certification be included in all lower-tier subcontracts, which exceed $100,000, and that all such sub recipients shall certify and disclose accordingly.

W. Ownership of Data

Ownership and title to all reports, documents, plans, specifications, and estimates produced as part of this contract will automatically be vested in COUNTY and no further agreement will be necessary to transfer ownership to COUNTY.

X. Confidentiality of Data

1. All financial, statistical, personal, technical or other data and information which is designated confidential by COUNTY or AGENCIES, and made available to ENGINEER in order to carry out this contract, shall be protected by ENGINEER from unauthorized use and disclosure.

2. Permission to disclose information on one occasion for a public hearing held by COUNTY or AGENCIES

relating to the contract shall not authorize ENGINEER to further disclose such information or disseminate the same on any other occasion.

3. ENGINEER shall not comment publicly to the press or any other media regarding the contract, including COUNTY or Agencies actions regarding this contract. Communication shall be limited to COUNTY, Agency or ENGINEER's staff that are involved with the project, unless ENGINEER shall be requested by COUTY to attend a public hearing or respond to questions from a Legislative committee.
4. Each subcontract shall contain provisions similar to the foregoing related to the confidentiality of data and nondisclosure of the same.
5. ENGINEER shall not issue any news release or public relations item of any nature whatsoever regarding work performed or to be performed under this contract without prior review of the contents thereof by COUNTY and receipt of COUNTY's written permission.

Y. Funding Requirements

1. All obligations of COUNTY are subject to appropriation of resources by various Federal, State and local agencies.
2. This contract is valid and enforceable only if sufficient funds are made available to COUNTY for the purpose of this PROJECT. In addition, this contract is subject to any additional restrictions, limitations, conditions or any statute enacted by Congress, State Legislature or COUNTY that may affect the provisions, terms or funding of this contract in any manner.
3. It is mutually agreed that if sufficient funds for the program are not appropriated, this contract will be amended or terminated to reflect any reduction in funds.

ARTICLE V • PERFORMANCE

A. Performance Period

1. This contract shall begin upon notification to proceed by the COUNTY PROJECT MANAGER.
2. ENGINEER is advised that any recommendation for contract award is not binding on COUNTY until the proposed contract is fully executed and approved by COUNTY.
3. ENGINEER shall perform PROJECT services in accordance with the provisions set forth in Appendix B, Schedule of Services, which is attached hereto and incorporated herein by reference.
4. Where ENGINEER is required to prepare and submit studies, reports, plans, etc., to COUNTY, these shall be submitted in draft as scheduled, and the opportunity provided for COUNTY to offer comments

prior to final submission.

5. When COUNTY determines that ENGINEER has satisfactorily completed the PROJECT services, COUNTY may give ENGINEER a written Notice of Final Acceptance. ENGINEER shall not incur any further costs hereunder unless so specified in the Notice of Final Acceptance. ENGINEER may request a Notice of Final Acceptance determination when, in its opinion, it has satisfactorily completed all covenants as stipulated in this contract.
6. Time is of the essence in this contract.

B. Time Extensions

1. Any delay in providing PROJECT services required by this contract occasioned by causes beyond the control and not due to the fault or negligence of ENGINEER, shall be the reason for granting an extension of time for the completion of the aforesaid work. When such delay occurs, ENGINEER shall promptly notify COUNTY in writing of the cause and of the extent of the delay whereupon COUNTY shall ascertain the facts and the extent of the delay and grant an extension of time for the completion of the work when, in COUNTY's judgment, their findings of fact justify such an extension of time.
2. COUNTY's findings of fact shall be final and conclusive to the parties hereto. However, this is not intended to deny ENGINEER it's civil legal remedies in the event of a dispute.

C. Reporting Progress

1. As part of the monthly invoice ENGINEER shall submit a progress report in accordance with COUNTY Engineering Services Progress Reporting Guidelines. Progress Reports shall indicate the progress achieved during the previous month in relation to the Schedule of Services. Submission of such progress report by ENGINEER shall be a condition precedent to receipt of payment from COUNTY for each monthly invoice submitted.
2. To ensure understanding and performance of the contract objectives, meetings between COUNTY, AGENCIES, and ENGINEER shall be held as often as deemed necessary. All work objectives, ENGINEER's work schedule, the terms of the contract and any other related issues will be discussed and/or resolved. ENGINEER shall keep minutes of meetings and distribute copies of minutes as appropriate.

D. Evaluation of ENGINEER

ENGINEER's performance will be evaluated by COUNTY for future reference.

ARTICLE VI • COMPENSATION

A. Work Authorization

ENGINEER shall not commence performance of any work or project services until so directed by the County Project Manager. No payment will be made prior to approval of this contract.

B. Basis of Compensation

1. PROJECT services as provided under this contract and as described in the Scope of Services, shall be compensated for as defined in Appendix C, Budget, which is attached hereto and incorporated herein by reference. The total amount of the contract is not to exceed $955,896.73 and reimbursement is to be made at actual cost plus fixed fee for the following contractors:

• NCM	$794,966.94
• Diaz Yourman & Associates	$24,371.18
• Iteris	$58,556.64
• Green Com, Inc.	$15,458.64
• Lin Consulting, Inc.	$24,395.79
• Psomas	$38,147.54

If a contingency budget is provided, COUNTY shall hold such contingency in reserve for unforeseen Extra Work that may arise during the performance of this agreement. Contingency budget shall only be used at the discretion of the COUNTY PROJECT MANAGER, and with prior written authorization by the COUNTY PROJECT MANAGER.

No additional compensation for Extra Work will be paid except upon the issuance of an Extra Work Order by COUNTY.

2. Prior authorization in writing by the COUNTY PROJECT MANAGER will be required before ENGINEER enters into any non-budgeted purchase order or subcontract exceeding $500 for supplies, equipment or consultant services. ENGINEER shall provide an evaluation of the necessity or desirability of incurring such costs.
3. For purchase of any item, service or consulting work not covered in ENGINEER's proposal and exceeding $500, with prior authorization by the COUNTY PROJECT MANAGER, three competitive quotations shall be submitted with the request, or the absence of bidding shall be adequately justified.
4. Any equipment purchased as a result of this contract is subjected to the following: ENGINEER shall

maintain an inventory of all nonexpendable property. Nonexpendable property is defined as having a useful life of at least two years and an acquisition cost of $500 or more. If the purchased equipment needs replacement and is sold or traded in, COUNTY shall receive a proper refund or credit. At the conclusion of the contract or if the contract is terminated, ENGINEER may either keep the equipment and credit COUNTY in an amount equal to its fair market value or sell such equipment at the best price obtainable at a public or private sale in accordance with established COUNTY procedures and credit COUNTY in an amount equal to the sales price. If ENGINEER elects to keep the equipment, fair market value shall be determined, at ENGINEER's expense, on the basis of a competent independent appraisal of such equipment. Appraisals shall be obtained from an appraiser mutually agreeable by COUNTY, and ENGINEER. If it is determined to sell the equipment, the terms and conditions of such sale must be approved in advance by COUNTY and AGENCIES.

5. The consideration to be paid ENGINEER, as provided herein, shall be in compensation for all of ENGINEER's expenses incurred in the performance hereof, including travel and per diem, unless otherwise expressly so provided.
6. ENGINEER agrees that the Contract Cost Principles and Procedures, CFR 48, Federal Acquisition Regulations Systems, Chapter 1, Part 31, shall be used to determine the allowability of individual items of cost.
7. ENGINEER also agrees to comply with Federal procedures in accordance the Code of Federal Regulations Section 49, Part 18, Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments.
8. In the event of errors or omissions in the plans for PROJECT, ENGINEER shall perform the necessary engineering services required to correct such errors and omissions without additional charge to COUNTY.

C. Progress Payments

1. ENGINEER shall submit monthly invoices for PROJECT Services in accordance with Appendix C, Budget, and in accordance with COUNTY Engineering Services Invoicing Procedures.
2. ENGINEER shall submit an invoice each month for PROJECT services performed during the preceding month. Invoices shall be submitted to the COUNTY PROJECT MANAGER and shall be included with a Progress Report covering the same period as the submitted invoice.
3. Progress payments will be based on PROJECT services provided and actual costs incurred. Payments

made prior to the completion of each phase will not exceed the amount allowed in ENGINEER's cost proposal for the completion of that phase and prior phases, unless approved in writing by the COUNTY PROJECT MANAGER..

4. Progress payments will be made as promptly as fiscal procedures will permit upon receipt by the COUNTY PROJECT MANAGER of itemized invoices.
5. COUNTY will withhold the last 10 percent of the budget for preparation of PS&E documents. The 10 percent retainage is to be held after 90% of the PS&E phase has been billed and is not to be deducted from each invoice. The amount retained will be paid to ENGINEER after COUNTY has approved ENGINEER's plans, specifications and estimate.

ARTICLE VII • GIS INFORMATION

A. "GIS Information" shall include GIS digital files (including the information or data contained therein) and any other information, data, or documentation from County GIS (regardless of medium or format) that is provided pursuant to this contract.

B. ENGINEER acknowledges that the unauthorized use, transfer, assignment, sublicensing, or disclosure of the GIS information, documentation, or copies thereof will substantially diminish their value to COUNTY. ENGINEER acknowledges and agrees that COUNTY GIS information is a valuable proprietary product, embodying substantial creative efforts, trade secrets, and confidential information and ideas. COUNTY GIS information is and shall remain the sole property of COUNTY; and there is no intention of COUNTY to transfer ownership of COUNTY GIS information.

C. COUNTY GIS information is made available to ENGINEER solely for use in the normal course of ENGINEER's business to produce reports, analysis, maps and other deliverables only for this PROJECT and as described within the Scope of Services.

D. ENGINEER agrees to indemnify and hold harmless COUNTY, its officers, employees and agents from any and all liabilities, claims, actions, losses or damages relating to or arising from ENGINEER's use of COUNTY GIS information.

E. GIS information cannot be used for all purposes; and GIS information may not be complete for all purposes. Additional investigation or research by ENGINEER into other sources will be required. GIS information is intended only as an information base and is not intended to replace any legal records. COUNTY has used and will continue to use its best efforts to correctly input into COUNTY GIS the information contained in

various legal and other records; but COUNTY accepts no responsibility for any conflict with actual legal records or for information not transferred from legal records to COUNTY GIS. COUNTY has attempted to update GIS information as often as is practically feasible. However, ENGINEER should be aware that GIS information may not be current and changes or additions to the information contained in COUNTY GIS may not yet be reflected in COUNTY GIS.

F. COUNTY accepts no responsibility for the use of GIS information; and COUNTY provides no warranty for the use of COUNTY GIS or COUNTY GIS information by ENGINEER. THE WARRANTIES SPECIFICALLY SET FORTH IN THIS AGREEMENT ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE; AND SUCH OTHER WARRANTIES ARE HEREBY EXCLUDED.

G. Final plans, drawings or PROJECT work products will be provided in an electronic format suitable for inclusion within the COUNTY GIS or CADD Systems by ENGINEER and will contain the appropriate meta data and will be geographically registered using a appropriate coordinate system such as the California State Plane Coordinate System NAD 83.

ARTICLE VIII • APPROVALS

COUNTY Approvals

RECOMMENDED FOR APPROVAL:

Dated: 4/14/16

JUAN C. PEREZ

Director of Transportation
Patricia Romo
Assistant Director of Transportation

APPROVED AS TO FORM:

GREGORY P. PRIAMOS, COUNTY COUNSEL

Dated: 4/15/16

By Deputy

APPROVAL BY THE BOARD OF SUPERVISORS

Dated: MAY 24 2016

JOHN J. BENOIT
PRINTED NAME

Chairman, Riverside County Board of Supervisors

ATTEST:

Dated: MAY 24 2016

KECIA HARPER-IHEM

Clerk of the Board (SEAL)

ENGINEER Approvals

ENGINEER:

NCM ENGINEERING CORPORATION

Dated: 3/15/2016

Steve Mislinski, PE
PRINTED NAME

President
TITLE

Dated: 03/15/16

Mohan Char PhD, PE
PRINTED NAME

CEO
TITLE

APPENDIX A – TABLE OF CONTENTS

APPENDIX A

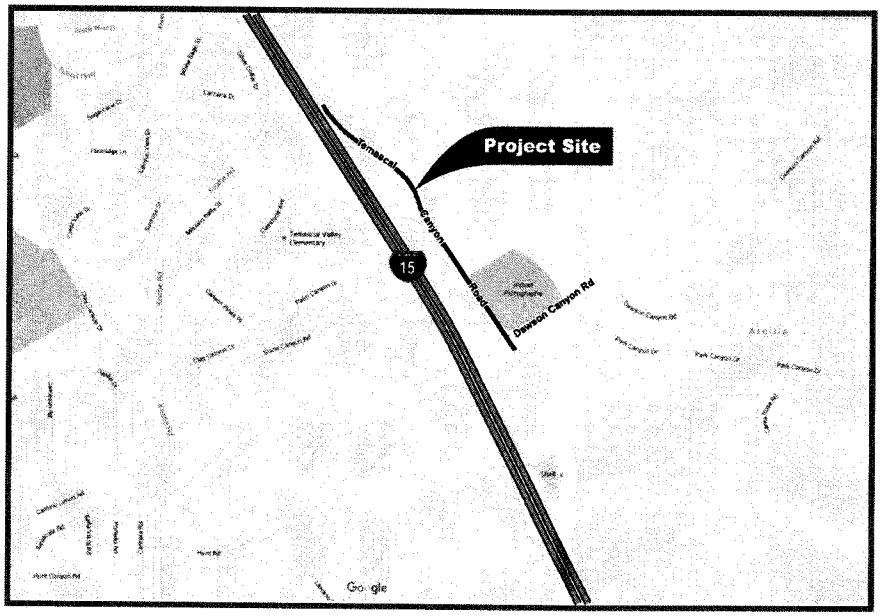
ARTICLE A-I • INTRODUCTION

A. PROJECT DESCRIPTION

The project proposes to construct roadway widening improvements along Temescal Canyon Road from Dawson Canyon Road to 0.7 miles north in the Glen Ivy area of Riverside County. The project proposes to widen the existing 2-lane portions of the roadway to four lanes to match up with the four lanes to the north and south. The total length of the project area is about 3,700 feet. Improvements will include pavement widening, curb, gutter, curb ramps, drainage, fiber-optic conduit, traffic signal modification, and utility relocations. Transitions to adjacent properties will include driveway and grading transitions, and may include fence and gate adjustments.

The scope of work covers preliminary engineering, final engineering (PS&E), bid support and construction support phases along Temescal Canyon Road from Dawson Canyon Rd to 0.7 miles northerly.

B. LOCATION



The project is located on Temescal Canyon Road from Dawson Canyon Road to 0.7 miles north.

C. COORDINATION

ENGINEER will coordinate with other involved agencies for design compatibility and construction phasing with existing conditions. Coordination may include, but will not necessarily be limited to the following:

- Riverside County Flood Control & Water Conservation District (RCFC&WCD)
- Utility Companies
- Property Owners
- County Consultants

All meetings with other outside agencies will be scheduled by ENGINEER with approval of COUNTY.

D. PHASES

The services performed by ENGINEER will be accomplished in four Phases:

Phase I – Preliminary Engineering

Phase II – Final Engineering (Plans, Specifications & Estimates)

Phase III – Bid Support and Construction Support

Phase I will begin immediately upon receipt of written notice to proceed. The remaining phases will not begin until authorized in writing by COUNTY.

E. STANDARDS

The preliminary engineering, final plans, specifications and estimates shall be prepared in accordance with relevant COUNTY regulations, policies, procedures, manuals and standards and State Department of Transportation (CALTRANS) latest standards and specifications, and AASHTO Design Guidelines where applicable. All Documents shall be prepared using English standards and dimensions.

1. Right-of-Way Engineering

If authorized by COUNTY, ENGINEER will prepare legal descriptions and plat maps in Microsoft Word format and MicroStation format, respectively, using COUNTY Map Preparation Manual standards.

2. Engineering Plans, Estimates and Specifications

Plans and specifications will be prepared in accordance with the current COUNTY Road Improvement Standards and COUNTY Policies and Guidelines for Submittal of Plans, Specifications and Estimates. Roadway plans will be prepared in MicroStation format. Special Provisions will be prepared using Microsoft Word conforming to COUNTY format and content. All documents will be prepared using English standards and units of measurement.

3. Accessibility Compliance

The design of all pedestrian improvements will be prepared in compliance with the Americans with Disabilities Act (ADA) and federal, state and local requirements. Design standards include the US Department of Justice "2010 ADA Standards," the US Access Board "Draft Accessibility Guidelines for Pedestrian Facilities in the Public Right of Way (PROWAG)," the latest "California Building Code" sections as incorporated by the California Division of the State Architect Access Compliance Office (DSA-AC), the COUNTY Transportation Department "ADA Self Evaluation and Transition Plan for Access in the Public Road Right-of-Way," and latest "COUNTY Roadway Standards" (updates available from the COUNTY PROJECT MANAGER). In situations with differing requirements among the design standards, the most stringent criteria will apply. Pedestrian improvements include sidewalks, trails, curb ramps, driveway crossings, street crossings (either marked or unmarked), and traffic signal equipment

F. KEY PERSONNEL

The ENGINEER has represented to the COUNTY that certain key personnel/consultants will perform the services and if one or more of such personnel should become unavailable, ENGINEER may substitute other personnel/consultants of at least equal competence only after prior written approval by the COUNTY PROJECT MANAGER has been secured. The key personnel for performance of this PROJECT are:

NCM Engineering	ENGINEER
Edward Ng, PE	NCM – ENGINEERING PROJECT MANAGER
Albert Pan, PE	NCM – NCM PROJECT ENGINEER

Psomas	SURVEY CONSULTANT
Diaz-Yourman & Associates	GEOTECHNICAL CONSULTANT
Iteris	TRAFFIC ANALYSIS CONSULTANT
Green Com, Inc.	OUTREACH CONSULTANT
LIN Consulting Inc.	TRAFFIC CONSULTANT

ARTICLE A-II • PROJECT ADMINISTRATION

A. PROJECT MANAGEMENT

The proposed work in this scope is Preliminary Engineering, Final Engineering, and Bid and Construction Support. The ENGINEERING PROJECT MANAGER will maintain ongoing liaison with the COUNTY PROJECT MANAGER and other affected agencies to promote effective coordination during the course of project development.

ENGINEER will hold a kickoff meeting with the COUNTY to confirm the project scope, establish the lines of communications, and establish a schedule for project coordination meetings and technical reviews. A kickoff meeting will address the startup activities to initiate Preliminary Engineering. Final Engineering and/or Bid and Construction Support will only be initiated by ENGINEER upon receipt of a Notice to Proceed issued by the COUNTY PROJECT MANAGER. Items of work identified as "Optional" will only be initiated by ENGINEER upon receipt of a written Notice to Proceed by the COUNTY PROJECT MANAGER. Regular team meetings, either monthly or bi-weekly (including physical meetings and/or teleconferences); will be held to review progress of the project development and any issues and concerns.

Additional coordination meetings with the COUNTY PROJECT MANAGER and other representatives from affected agencies will be held on an as-needed basis as determined by the ENGINEER or COUNTY PROJECT MANAGER. The ENGINEER shall prepare meeting agenda and minutes and action items matrix for each meeting and have these available for review within five (5) working days following the meeting.

B. BUDGETING

The ENGINEER will prepare budgets for each task and milestone for the PROJECT and use them as a basis for cost monitoring and control.

C. COST ACCOUNTING

The ENGINEER will prepare monthly reports of expenditures for the PROJECT by task and milestone. Expenditures include direct labor costs, overhead costs, other direct costs, and subconsultant costs. These reports will be included as supporting data for invoices presented to the COUNTY every month. Invoices will be prepared to COUNTY format standards and submitted electronically to the COUNTY PROJECT MANAGER for processing.

D. SCHEDULING

Within two (2) weeks from the Notice to Proceed (NTP) for the Preliminary Engineering Phase, the ENGINEER will provide a detailed project schedule through the completion of the construction. The schedule will be comprised of milestones, major activities and the ENGINEER's deliverables to the COUNTY for review and comment. This schedule will reflect assumed review times necessary by all of the agencies involved. Review of the schedule will occur and adjustments will be made, if necessary, due to changes in circumstances. ENGINEER will provide updates to the schedule monthly or as OTHERWISE directed by the COUNTY PROJECT MANAGER.

E. PROGRESS REPORTING

Progress reports will be prepared in accordance with COUNTY guidelines. Reports will be required monthly and will be accompanied by an invoice. The ENGINEER will assess physical percent complete and compare it to the financial percent complete.

ARTICLE A-III • SERVICES TO BE PROVIDED

The scope of work for this project will be divided into three main phases, Phase I will cover the Preliminary Engineering, Phase II will cover the Final Engineering (Plans, Specifications & Estimates), and Phase III will cover Bid and Construction Support.

PHASE I: PRELIMINARY ENGINEERING

A. RESEARCH AND DATA GATHERING

Existing topographic mapping, photos, maintenance reports, right-of-way maps, "as-built" plans, record maps and surveys, study reports, assessor maps, contract documents and any other pertinent data will be obtained and reviewed by ENGINEER. Topographic mapping and survey baseline data will be performed by the COUNTY and furnished to ENGINEER. Field reviews will be conducted by ENGINEER during the development of the project to visualize field conditions, determine conceptual improvement alternatives and to confirm the accuracy of any existing drawings and as-builts obtained

B. ENVIRONMENTAL COORDINATION

Environmental services for the project are being provided by COUNTY's Environmental Consultant under separate contract. ENGINEER will coordinate with COUNTY's Environmental Consultant to provide engineering support and project data needed to complete the CEQA environmental documentation. During the alternatives development stage, ENGINEER will coordinate with COUNTY's Environmental Consultant to review potential environmental impacts of each alternative and, where feasible, develop alignment adjustments and modify alternatives to avoid or reduce impacts. Provide engineering studies and reports needed for inclusion into the environmental documentation.

C. GEOTECHNICAL

The roadway grading is anticipated to remove the existing paving and the roadway constructed with a new pavement section due to changes in the profile grade and the road widening. The GEOTECHNICAL ENGINEERING CONSULTANT will furnish all geotechnical data and pavement recommendations to

COUNTY for review. Grading transitions to adjacent properties may involve large slopes and/or retaining walls. The potential length of retaining wall may extend up to 700 feet in length. The geotechnical tasks include:

1. **Preliminary Geotechnical Engineering**

- **Data Review, Site Reconnaissance, Development of Work Plan, and Underground Service Alert (USA) Notification** - Review project and underground utility information provided. Review the previously prepared geotechnical report that was prepared for this segment. Perform a site reconnaissance. Develop a subsurface exploration plan. Mark exploration locations in the field and contact USA.
- **Geophysical Survey** - Perform a geophysical survey to help check exploration locations for underground utilities.
- **Subsurface Exploration** - Drill borings and perform pavement coring. The boring depths will vary from 5 to 25 feet or refusal, whichever is shallower. One day of exploration is assumed. It is anticipated that 2 borings, 2 corings, and 1 seismic refraction survey will be performed. The GEOTECHNICAL ENGINEERING CONSULTANT will obtain a no-fee encroachment permit from the COUNTY prior to performing any work in the public right-of-way, will backfill and compact boring and coring locations, patch paved surfaces with cold patch asphalt in compliance with the COUNTY encroachment permit requirements.
- **Percolation Testing** – Where site has potential for placing a water quality basin, perform percolation tests near the surface of the site.
- **Geotechnical Laboratory Testing** - Perform moisture content/dry density, index test (particle size analysis - #200 sieve, or Atterberg limits), sand equivalent, shear strength, consolidation, compaction, R-Value, corrosion tests, and other tests as needed. The number of tests will be determined based on the subsurface conditions and improvements planned.
- **Engineering Analysis and Reporting** - Provide geotechnical reports with conclusions and recommendations regarding pavement recommendations, seismic hazards, earthwork/grading, temporary

and permanent slope stability, rippability of slope, temporary shoring, retaining wall type, bearing capacity and settlement, lateral earth pressures, and corrosion potential. The seismic refraction study will provide subsurface data including rock surface profile, rock characteristics, and supplementary data for retaining wall design. Data will be used to identify optimal cut bank slopes, rippability, and rock excavation quantities. Blasting plan will also be provided if required per Seismic Refraction testing.

2. Assumptions

- A no-fee permit will be issued by the COUNTY for geotechnical explorations in COUNTY R/W
- GEOTECHNICAL ENGINEERING CONSULTANT will prepare all exhibits and work description needed for COUNTY to obtaining Right of Entries for geotechnical explorations within private property.
- The Manual of Uniform Traffic Control Devices (MUTCD) will be used for traffic control. No location-specific traffic control plans will be provided
- Boring and coring locations will be backfilled with cuttings and compacted
- Paved surfaces will be patched as required by the encroachment permit
- One bound original, five bound copies, and an electronic copy of the final report will be provided

D. TRAFFIC ANALYSIS

The traffic operation analyses will support the environmental air quality study and noise study for Temescal Canyon Road Improvements between I-15/Temescal Canyon interchange and I-15/Ontario Avenue interchange. Temescal Canyon Road would be widened to be a 4-lane roadway between following three segments, which will be described and analyzed as separate projects within one comprehensive traffic analysis report:

1. Dawson Canyon Road to 0.7 miles north
2. Leroy Road to Dos Lagos Drive
3. Cajalco Road to El Cerrito Road

The tasks include:

1 Coordination and Scope Refinement

TRAFFIC ANALYSIS CONSULTANT will coordinate with the ENGINEER and the COUNTY to finalize the scope, methodology and content of the traffic study for the project. A Memorandum of Study Assumptions (MSA) between the ENGINEER and the COUNTY PROJECT MANAGER will be the product of this task, documenting the agreed upon assumptions for the study. The MSA will include such items as the final list of study intersections, and arterial segments and freeway segments to be studied; travel demand modeling and volume forecasting and development methodology; and traffic operations analysis methodology. The following are part of the analysis:

Intersections

Dawson Canyon Road to 0.7 miles north

A. Temescal Canyon Road & Dawson Canyon Road
B. Temescal Canyon Road & I-15 Northbound Ramps
C. Temescal Canyon Road & I-15 Southbound Ramps

Leroy Road to Dos Lagos Drive

D. Temescal Canyon Road & Leroy Road
E. Temescal Canyon Road & Foster Road
F. Temescal Canyon Road & Dos Lagos Drive
G. I-15 Northbound Ramps & Weirick Road
H. I-15 Southbound Ramps & Weirick Road

Cajalco Road to El Cerrito Road

I. Temescal Canyon Road & Cajalco Road
J. Temescal Canyon Road & Tuscany Street

K. Temescal Canyon Road & Tom Barnes Street

L. Temescal Canyon Road & Coronita Street

M. Temescal Canyon Road & Jolora Avenue

N. Temescal Canyon Road & Grant Street

O. Temescal Canyon Road & Minnesota Road

P. Temescal Canyon Road & El Cerrito Road

Q. I-15 Northbound Ramps & Cajalco Road

R. I-15 Southbound Ramps & Cajalco Road

S. I-15 Northbound Ramps & El Cerrito Road

T. I-15 Southbound Ramps & El Cerrito Road

Arterial Segments

Dawson Canyon Road to 0.7 miles north

A. Temescal Canyon Road between Dawson Canyon Road and I-15 Northbound Ramps

B. Temescal Canyon Road between Dawson Canyon Road and 0.7 mile north

C. Temescal Canyon Road between 0.7 mile north Dawson Canyon road and Leroy Road

D. Dawson Canyon Road between Temescal Canyon Road and Park Canyon Road.

Leroy Road to Dos Lagos Drive

E. Temescal Canyon Road between Leroy Road and Foster Road

F. Temescal Canyon Road between Foster Road and Dos Lagos Drive

G. Temescal Canyon Road between Dos Lagos Drive and Cabot Drive

H. Dos Lagos Drive between Temescal Canyon Road and I-15 Northbound Ramps

I. Dos Lagos Drive between I-15 Northbound Ramps and I-15 Southbound Ramps

Cajalco Road to El Cerrito Road

J. Temescal Canyon Road between Cajalco Road and Blue Springs Drive

K. Temescal Canyon Road between Cajalco Road and Tom Barnes Street

L. Temescal Canyon Road between Tom Barnes Street and Grant Street

M. Temescal Canyon Road between Grant Street and El Cerrito Road

N. Temescal Canyon Road between El Cerrito Road and Rising Sun Road

O. Cajalco Road west of Temescal Canyon Road

P. Cajalco Road east of Temescal Canyon Road

Q. Tom Barnes Street west of Temescal Canyon Road

R. Grant Street west of Temescal Canyon Road

S. Grant Street east of Temescal Canyon Road

T. Minnesota Road east of Temescal Canyon Road

U. El Cerrito west of Temescal Canyon Road

2 Data Collection

TRAFFIC ANALYSIS CONSULTANT will field review all study intersections and roadway segments to determine existing geometric conditions. Other information such as pedestrian roadway crossings, on-street parking restrictions, and roadway descriptions will also be noted. Traffic counts will be conducted at study analysis locations.

This scope of work assumes that new traffic counts would be collected during the a.m. and p.m. peak periods on a typical weekday (3-hour counts per peak period). Daily 24 hour traffic counts with vehicle classification will be collected along the arterial segments.

If it is deemed that additional intersections would be required, as an outcome of the MSA process, a unit cost of $300 per intersection would be added to the total base cost estimate, which would cover direct costs related to traffic count collection.

3 Existing Conditions Traffic Operation Analysis

Utilizing the traffic counts collected as part of Task 2, TRAFFIC ANALYSIS CONSULTANT will evaluate existing traffic and circulation conditions within the identified project impact study area using the Highway Capacity Manual 2010 (HCM) method of intersection analysis per COUNTY requirements. If any study intersections are determined to be operating at an unacceptable level of service (LOS), these locations will be identified. Arterial segments along Temescal Canyon Road will be analyzed using Riverside County LOS standards. I-15 freeway segments in the vicinity of the Temescal Canyon Road will be analyzed using HCM operations methodology and Caltrans Highway Design Manual (HDM) standards.

4 Travel Demand Modeling and Volume Forecasting

TRAFFIC ANALYSIS CONSULTANT updated the Riverside County Traffic Analysis Model (RIVTAM) in early 2015 for the Cajalco Road Widening Project and COUNTY approved the model updates. Existing (2007) and future year (2035) RIVTAM models were obtained from the COUNTY. Refinements were made to the 2007 model to make the highway network consistent with the existing conditions as observed in the field. The 2035 model network was reviewed and a few changes were made to make the network consistent with the improvements listed in SCAG "Modeling List" (which is consistent with the RTP list), the WRCOG Transportation Uniform Mitigation Fee (TUMF) program, and Measure A.

Traffic forecasts will be prepared though the use of the updated RIVTAM model. Separate future model runs will be conducted for each of the following scenarios:

- Future Year without project
- Future Year with project

Project's opening year for Temescal Canyon Road segments from Dawson Canyon Road to 0.7 miles north is 2019 and between Leroy Road to Dos Lagos Drive will be 2018. For Temescal Canyon Road segment between Cajalco Road and El Cerrito Road the opening year will be 2022. The opening year volumes will be developed by applying the growth rate to the existing volumes. The growth rate will be

obtained from existing and future year volumes. Peak hour volumes will be developed at all study area intersections and freeway segments. Daily volumes will be developed for all segments of Temescal Canyon and cross streets.

5 Opening Year Without Project Conditions Traffic Operation Analysis

Utilizing the traffic volumes forecasted as part of Task 4, TRAFFIC ANALYSIS CONSULTANT will evaluate opening year without project conditions. The analyses will be conducted for the study area intersections, arterial segments, and freeway segments.

6 Opening Year With Project Conditions Traffic Operation Analysis

Utilizing the traffic volumes forecasted as part of Task 4, TRAFFIC ANALYSIS CONSULTANT will evaluate opening year with project conditions. The analyses will be conducted for the study area intersections, arterial segments, and freeway segments.

7 Future Year Without Project Conditions Traffic Operation Analysis

Utilizing the traffic volumes forecasted as part of Task 4, TRAFFIC ANALYSIS CONSULTANT will evaluate future year without project conditions. The analyses will be conducted for the study area intersections, arterial segments, and freeway segments.

8 Future Year With Project Conditions Traffic Operation Analysis

Utilizing the traffic volumes forecasted as part of Task 4, TRAFFIC ANALYSIS CONSULTANT will evaluate future year with project conditions. The analyses will be conducted for the study area intersections, arterial segments, and freeway segments.

9 Data for CEQA Analysis

TRAFFIC ANALYSIS CONSULTANT will provide the following data required to perform Air Quality, Noise and Climate Change analysis:

- AM/PM peak Average Daily Traffic (ADT)
- AM/PM peak LOS
- Build and No-Build Vehicle Miles Travelled (VMT)
- Build and No-Build Vehicle Hours Travelled (VHT)
- Build and No-Build AADT at all segments, cross-streets: existing, opening, and future year.
- Build and No-Build LOS at all segments, cross-streets: existing, opening, and future year.
- Build and No-Build average daily traffic mix: existing, opening, and design year.

10 Documentation and Response to Comments

A draft traffic study documenting the methodologies and findings of the traffic analysis will be submitted to the ENGINEER for review and will be revised, as appropriate for submission to the COUNTY for review. TRAFFIC ANALYSIS CONSULTANT will respond to one set of consolidated comments from COUNTY staff and prepare a final report. ENGINEER will deliver 3 bound copies and CD of the final approved study to the COUNTY.

E. PUBLIC OUTREACH

The public outreach tasks include informational meetings, public meetings, and social media to keep residents, businesses, and the community apprised of the progress of the project and to provide open lines of communication to receive input and address concerns in a timely manner. These efforts include:

1. Task Force Meetings – A key element of a public meeting is coordination and support from the local public service and public safety agencies, including COUNTY Supervisor's Office representatives, Fire, Law Enforcement, schools, school transportation, local transit, City of Corona Traffic Engineer, and other impacted service providers. Task force meetings will be conducted by OUTREACH CONSULTANT prior to the community and public meetings
2. Community Meetings – Project presentations will be made as a part of regularly scheduled community meetings. ENGINEER will prepare presentations including preparation and setup of display boards and creating PowerPoint presentations for meetings. If necessary, OUTREACH CONSULTANT will provide

projectors, screens and audiovisual equipment for the presentations. Spanish translation of handout materials will be prepared by OUTREACH CONSULTANT to be reviewed by COUNTY translator. Minutes and notes of questions and comments related to the project presentation will be prepared by ENGINEER. Since these meetings are held as part of a regularly scheduled community meeting, it is assumed that arrangements for meeting venues will be made by others. During the preliminary engineering/environmental document phase, one community meeting is assumed.

3. Website and Social Media – OUTREACH CONSULTANT will provide project progress updates for COUNTY website.

F. UTILITIES COORDINATION AND POTHOLING

ENGINEER shall coordinate with utility owners and COUNTY utility coordination staff with respect to all utility related matters. ENGINEER shall provide copies of all correspondence with utility companies and other utility related information to the COUNTY. Correspondence, as described herein, shall be prepared by ENGINEER for either ENGINEER or COUNTY signature, as appropriate, and as directed by the COUNTY PROJECT MANAGER.

ENGINEER shall coordinate with COUNTY staff to obtain record copies of utility maps from each utility owner within the project limits for existing and/or proposed utility facilities. ENGINEER shall include mapping and/or exhibits that clearly define the project limits as part of the requests for utility information. For this Project, COUNTY has already sent utility requests to the utility companies.

ENGINEER shall identify utility companies affected by the project and delineate utilities within the project's sphere of influence on the plans. ENGINEER shall prepare preliminary plans, which shall include all existing utilities (above ground and below ground) identified by location, size, type, and owner, as appropriate. ENGINEER shall check horizontal and vertical clearances for utilities and coordinate design with the various utility companies to address conflicts. In addition to information provided by the owning utility companies and through research of other record maps, field surveys shall be used to locate utility features such as manholes,

valves, fire hydrants, poles, risers, etc., which shall be reflected on the plans. If ENGINEER determines that additional field survey work is required to identify precise locations of existing above-ground utilities, then ENGINEER shall prepare a survey request and provide it to the COUNTY PROJECT MANAGER for work to be performed by COUNTY survey staff.

Potholing

Potholing of both high and low risk utilities, including all utilities that could be in conflict with the improvements, shall be anticipated by the ENGINEER. The ENGINEER shall prepare potholing exhibits as needed to adequately locate underground utilities, shall enter into a contract with a licensed contractor for the potholing of utilities upon the receipt of three (3) competitive bids, shall ensure that appropriate permits are obtained from all appropriate jurisdictions prior to the start of work, shall notify the utility companies of the pending potholing work, shall ensure that the utility horizontal and vertical data is collected by COUNTY survey, shall update the potholing exhibit with the collected data, and shall note known utility conflicts on the potholing exhibit.

The contract between the ENGINEER and the potholing contractor shall require that the potholing contractor's insurance policies name the ENGINEER, the COUNTY of Riverside, and any other affected jurisdictions or facility owner as additionally insured with respect to the potholing contractor's general liability, excess liability and automobile liability policy. The potholing contractor shall meet the insurance requirements, as set forth elsewhere in this agreement, except that the potholing contractor will not be required to provide professional liability coverage. Review and approval of the potholing contractor's insurance certificate and endorsements by the COUNTY's representative shall be obtained prior to the start of potholing work.

The ENGINEER shall evaluate the potholing data, and shall include the information on the utility plans in table format, with numbered or letter references to the location of the location of the potholes. The ENGINEER shall determine whether or not the facilities are in conflict, and the limits of the conflict, both of which shall be shown on the utility plans with construction notes as part of the roadway improvement plan set.

For the purposes of this proposal, the scope assumes potholes at thirty (30) locations. The exact scope and timing of potholing will be determined during the design process.

G. PRELIMINARY ENGINEERING

1. Roadway and Grading Alternatives Development

The roadway and grading preliminary engineering will develop layouts of the proposed roadway widening to meet the project goal of providing improvements for four travel lanes, striped median, paved shoulders/bike lane, curb & gutter, drainage, water quality, and fiber optic conduit. The existing centerline alignment along this project area is straight at the southern end and then winds through several curves at the north end. The curves and profiles do not meet the 55 mph design standard and will have to be realigned in order to meet the design speed criteria set by COUNTY. Temescal Canyon Road is relatively close to the Temescal Wash which is an important feature to the wildlife in the region. The parcels adjacent to the road are not as fully developed as other areas to the north. The adjacent parcels may have environmental and biological sensitivities that will be taken into account in the alignment design. Attention will be focused on strategies to reduce impacts to the environmentally sensitive areas. Identify approximate grading limits and affected offsite improvements including walls, fences, driveways, landscaping, and utilities. Where significant environmental impacts are identified, develop alignment alternatives to reduce impacts. Physical topography, earthwork balancing, existing right-of-way availability, existing site improvements and site constraints will be taken into account in the development of alternatives for consideration by the COUNTY. The preliminary design and alternatives will show topography, improvements, physical and legal constraints, existing and preliminary proposed right-of-way, typical cross-sections, grading limits, drainage improvements and existing utilities. The plans shall also include:

- Approximate limits of cut and fill
- Location of major structures

- Drainage conveyances and approximate size of hydraulic structures
- Permanent water quality BMP improvements
- Areas of environmental concern, if notified of any

The preliminary engineering alignment design will incorporate input received from:

- COUNTY PROJECT MANAGER
- COUNTY utility, traffic, environmental, drainage plan check, water quality, survey, construction, materials, maintenance, and management staff
- ENGINEER's traffic and geotechnical subconsultants

The preliminary engineering plan set for Dawson Canyon Road to 0.7 miles northerly is anticipated to include:

- Preliminary Roadway Layout – Plan view with aerial photo, typical cross-sections, survey centerline, construction centerline, curb alignment, curb ramps, drainage, permanent water quality BMPs. Grading/slopes, retaining walls, driveway approach locations, fence/wall relocations, and general details
- Schematic Traffic Plans – Preliminary pavement delineation, conceptual traffic signal relocations
- Schematic stage construction, traffic handling, and detours exhibit
- Schematic Utility Exhibit – Preliminary utility conflicts, potential relocations (to be utilized later for the Pothole Location Exhibit)
- Right-of-Way Requirements Exhibits Map – Permanent right-of-way schematic and temporary construction easement requirements

2. Retaining Walls – Optional Task

2.1 Reference Materials

ENGINEER shall generally comply with Caltrans Design Standards and Procedures. ENGINEER shall utilize the following documents. In addition the ENGINEER shall make use of additional reference material as appropriate. ENGINEER shall also be responsible for ensuring the most recent version of all reference materials are used, including any addenda and errata.

- Applicable Local Codes and Manuals
- AASHTO Load and Resistance Factor Design Bridge Design Specifications (AASHTO LRFD)
- Caltrans Amendments to AASHTO LRFD Bridge Design Specifications
- Caltrans Standard Plans
- Caltrans XS Sheets
- Caltrans Design Manuals
- Caltrans Standard Specifications and Standard Special Provisions

Note: The above listing of standards is not in order of precedence

2.2 Preliminary Engineering of Retaining Walls – Optional Task

The curved portion of the roadway at the north end will have to be realigned horizontally and vertically. The area has high potential of environmental impacts and retaining walls will be considered as options to reduce environmental impacts. Up to 700 feet of grading along the west side of the road may have grading impacts reduced through use of retaining walls. Wall types, constructability, and costs will be weighed against the environmental impacts and mitigation costs to arrive at a reasonable balance for the Project.

ENGINEER will prepare an Advanced Planning Study Memo to document the structural concept evaluation including an engineering study of various feasible retaining wall alternatives as they relate to the overall project study report and project report. This investigation and discussion shall include the following parameters:

- Aesthetics
- Constructability
- Right-of-Way Constraints
- Construction Materials
- Cost comparisons
- Seismic Requirements

Retaining walls layouts will be shown as alternatives to offsite grading and a cost comparison of grading

versus retaining walls will be calculated by the ENGINEER. Impacts to offsite structures and costs of structure impacts are not included in ENGINEER's calculations. It is assumed that costs of impacts to offsite structures and property values will be handled by COUNTY's Real Estate Department.

3. Drainage

ENGINEER will perform research and obtain as-built plans from the COUNTY and from the Riverside County Flood Control and Water Conservation District (RCFC&WCD), including any master-planned facility maps. ENGINEER will review the five drainage crossings along Temescal Canyon Road. Existing drainage features along the project route will be reviewed by site visits and any signs of damage and deficiencies will be noted. Drainage patterns along the project route will be identified. Preliminarily identify needed drainage collection facilities needed due to change of roadway cross-section to curb and gutter. Maintenance records will be examined to identify systems or locations of known drainage problems. ENGINEER will coordinate with the COUNTY PROJECT MANAGER to set up a field review meeting to include the COUNTY Transportation Department maintenance district supervisor. Prior studies, if any and if applicable, will be reviewed and the data utilized to streamline the evaluation process. Hydrology and hydraulic analysis will be performed according to Riverside County Flood Control and Water Conservation District (RCFC&WCD) standards. The hydrology and hydraulic analysis at this stage will be for major and the mainline systems. No detailed design of local drainage facilities is included in the preliminary engineering phase. The costs for the local drainage facilities will be estimated based on review of road profiles and drainage patterns.

Where the existing culverts or drainage facilities may fall within footprints of proposed alignments and may be incorporated into the ultimate alignment, an evaluation of the physical condition of the facility will be made in coordination with COUNTY maintenance. Caltrans DB-83 will be used a guide to evaluate and develop remediation strategies as appropriate.

4. NPDES Permit Compliance

A draft Transportation Project Guidance (TPG) water quality document will be prepared in accordance with

the Transportation Project Guidance guidelines from RCFC&WCD. For this phase of the work, opportunities for BMP's will be identified for consideration by COUNTY. The BMP devices will be preliminarily sized and probable locations identified, but will not be detailed out.

5. Preliminary Right-of-Way Requirements Exhibit

ENGINEER will prepare an exhibit identifying potential limits of right-of-way (R/W) to accommodate the street improvements. The R/W requirements exhibit will also show additional areas required for Temporary Construction Easements (TCE) or Right-of Entry (R/E) for construction of offsite improvements and modifications. Submit R/W Requirements Exhibit to COUNTY.

6. Conceptual Construction Staging Plan - OPTIONAL

ENGINEER will prepare conceptual construction staging plans to demonstrate feasible construction of the road widening and identifying potential impacts to local residents and businesses and the local road network. The staging plans will be conceptual level detail only. The staging plans shall be developed such that at least one lane of traffic is maintained in each direction at all times (with possible localized flagmen controlled traffic during non-peak hours), and access can be reasonably provided to all adjacent properties. The final version of the Conceptual Staging Plan will be incorporated in the construction documents (either plans or specifications).

7. Preliminary Engineer's Estimate

ENGINEER will prepare a preliminary cost estimate for the project on COUNTY's standard engineer's estimate spreadsheet format using COUNTY standard units of measure. The costs will include proposed roadway excavation, pavement, curb and gutter, sidewalk, drainage, permanent water quality BMPs, retaining wall, driveway, fence/wall relocation, fiber optic conduit, traffic signal modification, striping, signing, and utility relocation costs to be performed by the COUNTY construction contractor. Estimated cost for obtaining Right of Way and permanent easements will also be included. Where alternatives are developed for consideration, cost of alternatives will be developed.

8. Coordination with COUNTY Survey

The control surveys and topographic surveys are anticipated to be performed by the COUNTY survey department. COUNTY shall submit all survey data to ENGINEER including CADD files, alignment data, benchmarks, monuments, and basis of bearings. ENGINEER shall download survey data and review the data for any additional survey data needed. ENGINEER shall submit written request for any additional survey data required to the COUNTY PROJECT MANAGER.

ENGINEER will use the COUNTY's survey data under the assumption that the survey data is correct. Should there be errors in the survey data that require recalculation of alignment data and revision of the plans, additional costs of such efforts shall be considered as out of scope and shall be reimbursed as a contract change order.

9. Coordination with COUNTY Traffic

The traffic signal modification plans are anticipated to be prepared by the COUNTY. COUNTY will also prepare the final signing and striping plans. In the preliminary engineering phase, ENGINEER will prepare striping layouts for lane alignment for review by COUNTY. ENGINEER will prepare road layout plans with preliminary locations for signal poles and signal equipment. COUNTY will review striping layouts and traffic signal layouts and provide comments. ENGINEER will make adjustments per comments. No signing or signal plans will be prepared at the preliminary engineering phase.

10. OPTIONAL SERVICE – Traffic Signal Design

In the event COUNTY opts to have ENGINEER prepare traffic signal plans for the project, ENGINEER will provide the following services of its TRAFFIC CONSULTANT upon written authorization by COUNTY.

Traffic signal modification plans will be prepared for the following locations:

i. Temescal Canyon Road/Dawson Canyon Road

Obtain and review as-built plans. Conduct site visit to confirm signal equipment and operation. Based the road and intersection layout plans, develop traffic signal modification plans which show existing equipment to remain, to be relocated or to be removed and the new equipment to be installed at a preliminary 30% level. Consult with COUNTY traffic engineering staff for preliminary engineering cost estimate.

11. Prepare Oak Tree Survey Base Map

ENGINEER will prepare an aerial base map with "ultimate" right-of-way (R/W) lines for COUNTY's Oak Tree Survey. The ENGINEER will coordinate the base map preparation and needs with COUNTY and COUNTY consultants. The base map area limits will cover approximately 12 miles of Temescal Canyon Road within County Limits, beginning at the Temescal Canyon Road/Lake Street intersection in the Lake Elsinore area and ending at the Ontario Avenue/State Street intersection in the Corona area. The COUNTY will furnish COUNTY GIS aerial mapping panels and GIS right-of-way line CADD files to ENGINEER.

ENGINEER will prepare base map with the aerial photos and add road R/W lines for Temescal Canyon Road and the adjoining streets using the GIS R/W linework as a guide. The base R/W linework will be located graphically to line up with physical features that identify layouts of property lines and R/W's. The R/W lines will be set at the "ultimate" location using Arterial Highway General Plan standards for the portion north of Indian Truck Trail and Major Highway General Plan standards south of Indian Truck Trail, unless dictated by other circumstances such as existing fully developed parcels, in-fill areas, and where major site impacts exist. The electronic CADD files of the completed base map will be delivered to COUNTY.

PHASE II: FINAL ENGINEERING (PLANS, SPECIFICATIONS & ESTIMATES)

A. GENERAL

ENGINEER will provide professional and technical engineering services necessary to complete the construction plans, specifications, and estimate. The design plans will be submitted to COUNTY for review at the 65%, 95%, and 100% completion stages. The submittal at each stage of plans will be accompanied by

an ENGINEER's estimate of total project costs. The major work elements of this proposal include:

- Roadway Design Plans (with Offsite Grading and Private Property Modifications)
- Structural Design Details for Retaining Walls and Structures
- Drainage Improvement Design (as part of the Roadway Design Plans)
- Water Quality TPG Document (and BMP Design on the Roadway Design Plans)
- Fiber Optic Design Plan (standalone)
- Construction Staging Details (optional)
- Utility Coordination and Potholing
- Right of Way Engineering
- Public Outreach
- Special Provision Preparation
- Engineer's Estimate Preparation

B. ROADWAY

Roadway improvement plans and profiles will be prepared for the widening and reprofiling of Temescal Canyon Road from Dawson Canyon Road to 0.7 miles north. Temescal Canyon Road will be widened to four travel lanes, a striped median, and curb and gutter per the preferred alternative developed in the preliminary engineering phase as determined by COUNTY.

The horizontal alignment and profile will be developed to meet COUNTY road standards for 55 mph design speed and take into consideration vertical and horizontal curve sight distance and access needs for the properties along the road. The plans will detail modifications and transitions to existing driveways. Profiles will be provided on the plans for all driveways and will demonstrate vehicle drivability and stormwater containment. Transitions at the property frontages may be accommodated through the use of graded slopes, retaining walls, retaining curbs, or slough walls as appropriate. A level area of 2 feet will be provided between tops and toes of slopes and hard improvements/fences. Fences and gates will be called out to be adjusted, relocated, or reconstructed to meet the new grades and proposed R/W lines. ENGINEER will provide

COUNTY PROJECT MANAGER with a draft Survey Work Request for COUNTY survey staff to perform additional ground survey that may be needed to locate existing facilities and tie-ins for proposed facilities.

Driveways will be constructed or reconstructed to meet ADA accessibility standards. Intersection curb returns will have ADA compliant curb ramps per COUNTY standards. The elevations and slopes of all key points on curb ramps will be detailed in design tables for the ENGINEER to document ADA-compliance and for inspectors to verify compliance upon the completion of construction. Any existing curb ramp that will be protected in place will be field measured by ENGINEER to document ADA compliance; said measurements will be documented on the COUNTY standard Ramp Inspection Reports and submitted to the COUNTY PROJECT MANAGER.

The roadway plans will be prepared using the COUNTY standard title block sheets and drawing format at 22"x34" size. Text size will be 0.12 inches. The drawings will include sheet index map, general notes, construction notes, typical sections, pavement sections, removals and demolition as required, utility relocation notes, drainage improvements plan profile and details, construction details, driveway profiles, using County standard plans. The roadway plans will include existing utility data in the plan view and identify any relocations, adjustments, or protection of utility facilities identifying the utility purveyor and pole numbers as applicable.

The roadway plan view will show the existing survey centerline and proposed construction centerline, curb line, gutter line, and existing and proposed right of way lines. The plan view will also show existing and proposed aboveground and underground utilities, proposed storm drain and drainage structures, and proposed fiber optic lines. The layout data will include geometric alignment data for all points of tangents and curvature. The "existing centerline" alignment will use the surveyed centerline mapping as provided by the COUNTY's survey department. A "construction centerline" will be established for the construction of improvements. The plan and profile drawings will be prepared at 1"=40'.

ROADWAY DESIGN PLAN DRAWINGS

The following sheets are estimated to be in the plans set:

Sheet Name	Sheet Count
Master Title Sheet (listing all standalone construction plan sets)	1
Street Improvement Plan Title Sheet- Vicinity Map, Sheet Index, General Notes, Abbreviations, Bench Mark and Basis of Bearing	1
Sheet Index Map and Construction Notes	1
Typical Sections	2
Plan and Profile (40 scale)	5
Grading Details	3
Construction Details	3
Drainage & Details	7
Drainage Structure Detail	2
Fiber Optic Plans	5
Retaining Wall	12
Cross Sections at 50' intervals	13
Total Sheets	**55**

The development of the plan sheets will be based on engineering design, calculations, investigations, and reports.

C. RETAINING WALLS AND STRUCTURES DESIGN – OPTIONAL TASK

Because Caltrans Standard Plan retaining walls are designed for a maximum peak ground acceleration (PGA) of 0.6g and the project site is expected to have a PGA greater than 0.6g, all retaining walls will require special design and details. The exact PGA used to design the walls will be determined after geotechnical evaluation of the underlying geology and stratum. Any wall systems that are not available in some form

through Caltrans standards will also require custom design and detailing (soldier pile, ground anchor walls, etc.). If the PGA is found to be less than 0.6g at any location on the project, the design team will consider the use of unmodified Caltrans Standard Plan walls where possible. Culvert designs are expected to follow Caltrans Standard Plans, Caltrans Highway Design Manual and/or Caltrans Standard Detail sheets. Culvert headwalls will be treated as retaining walls, subject to special design and details as noted above.

ENGINEER will prepare structure plans in accordance with Caltrans recommended practice for detailing. Caltrans Standard Plans shall be utilized where applicable and shall be called out on the plans as a reference. ENGINEER will prepare design calculations and independent design check calculations for any special design retaining walls.

ENGINEER will consider retaining walls where they can reduce the overall project cost by reducing right-of-way and environmental mitigation costs. Retaining walls will be utilized where feasible, cost-effective and necessary to reduce grading impacts to adjacent properties. Retaining wall foundation types shall be selected taking into consideration constructability, maintenance, and availability of right-of-way. Sight distance will consider potential barriers created by retaining walls.

Retaining wall and structure details will be included within the Roadway Design Plan set.

D. DRAINAGE DESIGN

Drainage design is anticipated to consist of designing new storm drain pipe systems to replace the existing roadside ditch drainage system and to bring the existing drainage crossings up to current standards and to handle flows from site developments in the area. The storm drain lines and crossing will drain into the adjacent Temescal Wash. Inlets and catch basins will be designed at locations to intercept street flows to meet COUNTY storm drainage criteria. Where necessary, drainage laterals and inlets will be installed on offsite properties where road grading has impacted the drainage from the property. Design of the drainage facility improvements will be incorporated within the Roadway Design Plan set and include plan, profile and

details.

Hydrology and hydraulics calculations will be performed per Riverside County Flood Control & Water Conservation District (RCFC&WCD) methodologies. The tributary area draining to this part of Temescal Canyon Road extends west of the I-15 freeway into the Cleveland National Forest. Hydrology calculations are anticipated to use the Unit Hydrograph method for the main tributary flows and the Modified Rational Method for the local drainage facilities. Street hydraulic capacity calculations will be performed to locate catch basins to meet COUNTY standards to maintain a 12 foot dry lane during the design storm. All drainage reports, hydrology, hydraulics, calculations and storm drain plan design will be reviewed and plan checked by the Transportation Department and/or RCFC&WCD. Plans may be required to use Transportation Department title block and/or RCFC&WCD title block. Deliverables will include 3 bound copies and a CD of the final approved Drainage Study including narrative discussion, hydrology, hydraulics, and folded maps.

E. NPDES PERMIT COMPLIANCE

The project area is located in the Riverside County Santa Ana Region MS4 Permit area and is a new surface transportation project. Therefore, the project water quality documentation will be prepared by ENGINEER following the Transportation Project Guidance (TPG) in lieu of preparing a WQMP. The TPG, including attached exhibits, will be prepared using the template and guidance as prepared by RCFC&WCD and will be reviewed for approval by COUNTY water quality staff.

Opportunities for implementation of Low Impact Development (LID) water quality features will be explored by ENGINEER and discussed with COUNTY. Where properties must be acquired for right-of-way, remnant parcels will be examined for feasibility for location of water quality features taking into account suitability for water quality treatment, accessibility for maintenance, and ability to drain roadway tributary flows into the sites. Street parkways will be reviewed for potential to include LID features.

The implementation of LID features and permanent BMPs will be shown to be constructed on the Roadway

Design Plans. The final TPG as approved by the COUNTY will not be part of the construction documents, but will be kept on file. ENGINEER's final deliverable will include 3 bound copies and CD of the electronic file including folded attachments in sleeves submitted to the COUNTY.

F. SITE RESTORATION DESIGN AND COORDINATION

Developed properties along portions of the roadway that will be widened and reprofiled may require offsite regrading and improvements. These will typically be regraded driveways and grading transitions to the new driveway grades, elevations and locations. The driveways within the properties to be reconstructed will be replaced in kind with material and finish generally matching the existing driveways. Landscaping and irrigation disturbed by construction will be restored as closely as possible to existing condition. Other offsite improvements that may require adjustment or modification include fencing, gates, walkways, and hardscape. Business parking lot layouts and parking spaces may be modified.

It is assumed that COUNTY and/or its Real Estate Agent will be contacting and negotiating with the individual impacted residents and businesses regarding the final disposition of compensation and improvements within the impacted properties. ENGINEER's role will be to develop the design layouts of the agreed-to site modifications and incorporate those improvements into the engineering plans. ENGINEER may develop conceptual plans and graphics for COUNTY and/or Real Estate Agent to present to property owners to illustrate the extent of impacts and potential restoration improvements. The extent that improvements will be reconstructed as part of the construction contract versus compensation to property owners to make the necessary improvements will be determined by COUNTY and their designated Right-of-Way Agent. ENGINEER will prepare plans for the offsite improvements accordingly.

It is anticipated that ENGINEER will attend meetings with affected property owners and businesses on a limited and as-needed basis as requested by COUNTY or its Real Estate Agent. For budgetary purposes, it is assumed that there will be 3 meetings (Note: there are about 16 potentially impacted parcels in the project segment) at 8 hours each for meetings and preparation of exhibits. All meetings with property owners will be

coordinated through COUNTY.

ENGINEER will prepare construction documents denoting the impacted areas and the proposed improvements for reconstruction of driveways, regrading, retaining walls, landscape and hardscape, fences and gates. Cost estimates will be prepared for the proposed offsite reconstruction which may be used as a basis for determining compensation in lieu of reconstruction by the COUNTY's construction contract.

The ENGINEER will denote items required for construction by the COUNTY construction contractor on the Roadway Design Plans, excluding items where COUNTY utilizes compensation in lieu of construction.

G. FIBER OPTIC PLAN

Separate Fiber Optic Conduit Plans will be prepared by ENGINEER and included in the construction bid documents. Plans will be prepared on size 22" x 34" drawings at 1"=40'. The plans will be shown in plan view only along with details of conduit, pull box, and vault installation and fiber assignment details. Utility conflicts with existing facilities or services will be called out.

H. CONSTRUCTION STAGING PLANS – OPTIONAL TASK

Temescal Canyon Road is a vital arterial road that serves the Temescal Valley communities as well as the local community. Temescal Canyon Road is the primary alternative to the I-15 freeway when there are incidents that disrupt traffic on the I-15 freeway. Therefore, staging the work to maintain traffic flow is critically important.

ENGINEER shall prepare construction staging plans. The construction staging plans will show sufficient detail of the work area constraints, work areas and areas to be maintained for traffic flow. Access to the local businesses and residents will be maintained.

The construction staging drawings will identify contractor work areas and traffic routing for each stage. The

active work areas will be hatched and the description of work for each stage will be shown, along with areas that are completed in prior stages.

This optional service will be performed only if authorized in writing by COUNTY.

I. PUBLIC OUTREACH

Open communications with affected businesses and nearby residents during the design process will greatly reduce the potential for complaints during the construction phase. Early communication will educate and inform the community members about the project. Public outreach efforts during the final engineering phase will focus on preparing and informing the community of the project prior to construction of the project. It will also be an opportunity for the community to voice concerns that can be addressed and, if necessary, incorporated into the design and specifications to avoid potential complications during construction and avoid delays and change orders. The COUNTY will assume ownership of the public presentation materials.

These public outreach efforts in the final engineering phase include:

1. **Task Force Meeting** – OUTREACH CONSULTANT will meet with the local public service and public safety agencies, including COUNTY Supervisor's Office representatives, Fire, Law Enforcement, schools, school transportation, local transit, , and other impacted service providers. Task force meetings will be conducted prior to the public meeting to provide project information, obtain input, and to develop strategies to address the needs and concerns of these agencies and service providers. The information from the task force meetings will be part of the information to be shared with the community in the following public meeting.
2. **Community Meeting** – During the final engineering phase, one project presentation will be made as a part of a regularly scheduled community meeting. ENGINEER will prepare and setup display boards and create PowerPoint presentations for meetings. If necessary, OUTREACH CONSULTANT will provide projectors, screens and audiovisual equipment for the presentations. Spanish translation of handout materials will be prepared OUTREACH CONSULTANT. Minutes and notes of questions and comments

related to the project presentation will be prepared by ENGINEER. Since these meetings are held as part of a regularly scheduled community meeting, it is assumed that arrangements for meeting venues will be made by others.

3. **Website, Social Media, and Informational Materials** – OUTREACH CONSULTANT will provide project information and progress updates for COUNTY website. Provide information to COUNTY PROJECT MANAGER for use by Supervisor's office for dissemination to the affected community and to post on the Supervisor's website.

4. **Public Outreach Services Not Included** - Public outreach efforts in the timeframe immediately prior to start of construction are not included in this work scope. It is assumed that the public outreach efforts associated with the construction phase of the project will be contracted under a separate contract with the selected Construction Management firm for the project.

J. SPECIAL PROVISIONS AND SPECIFICATIONS

ENGINEER will review COUNTY boilerplate special provisions and provide revisions as necessary. Any special provisions not in the COUNTY's boilerplate special provisions will be prepared by ENGINEER following COUNTY formatting. Special Provisions will include any special traffic handling requirements as identified in Staging Plans. ENGINEER will sign the coversheet of the specifications package.

K. FINAL ENGINEER'S ESTIMATE PREPARATION

ENGINEER will perform a quality control review of the quantity calculations through the preparation of an independent quantity estimate by ENGINEER staff not associated with the project and not in collaboration with the ENGINEER's key project personnel. ENGINEER will use COUNTY standard spreadsheet format and COUNTY standard units of measurements. ENGINEER will submit quantity calculations and estimate from ENGINEER's project personnel and independent quantity estimator. Quantity differences in excess of 5% will be identified.

L. UTILITIES COORDINATION

ENGINEER shall send preliminary design plans through COUNTY staff to owning utility companies within the project limits with requests for review and comments on the plans relevant to their respective facilities, and with requests for other project specific information.

If it is necessary to pothole existing utilities at critical locations, ENGINEER shall coordinate with COUNTY staff to arrange with the respective utility owner to pothole its facility (at utility owner or COUNTY cost). ENGINEER shall prepare potholing exhibits as needed to adequately locate underground utilities. ENGINEER shall coordinate the use of field survey crews to locate potholed utilities by coordinates and elevations based on the project's survey controls. ENGINEER shall evaluate the potholing data, and shall include the information on the utility plans in table format, with numbered or letter references to the location of the location of the potholes. ENGINEER shall determine whether or not the facilities are in conflict, and the limits of the conflict, both of which shall be shown on the utility plans with construction notes

Known utility conflicts shall be shown on the plans with construction notes indicating action to be taken and by whom. Inventory numbers of poles, vaults and other surface facilities shall be shown on the plans for those facilities that have such numbers attached to the facility and as provided on the owner's inventory maps.

ENGINEER shall monitor responses of utility notices received and make recommendations for mitigating conflicts. ENGINEER shall provide written responses to utility companies with regard to stated concerns and conduct design coordination meetings with utility companies as needed. Unresolved issues shall be brought to the attention of the COUNTY PROJECT MANAGER and COUNTY utility coordination staff as early as practical. Utility conflict issues shall be resolved prior to the completion of the final design plans as follows:

- ENGINEER, through COUNTY staff, shall request and obtain a written acknowledgement of any conflicts from the respective utility owners.
- Reasonable efforts shall be taken to accommodate utility company requests for minor design changes to accommodate their facilities. ENGINEER understands that the utility companies are generally

operating within the COUNTY right-of-way, but may have prior rights to that of the COUNTY in some cases.

- ENGINEER shall coordinate inclusion of special provisions in COUNTY's bid documents for adjustments and relocations of utility facilities as alternate bid items, if requested by the owning utility. Said work may require that cooperative agreements be prepared by COUNTY between the COUNTY of Riverside and the owning utility companies. Engineer shall provide information and exhibits as required to support the preparation of cooperative agreements, if needed.

ENGINEER shall conduct utility coordination meetings, as needed, regarding adjustments and relocations, to resolve conflict issues, and with respect to performing work for utility companies by COUNTY contractors.

For utility conflicts that require relocating, COUNTY staff will submit the official notice / order to the utility companies to relocate conflicting facilities.

ENGINEER shall make recommendations for special provision language with regard to utility issues, recommendations for construction windows of time for utility relocation activities, recommendations for inclusion of utility bid items, etc.

M. GEOTECHNICAL REVIEW

In the final engineering phase, GEOTECHNICAL CONSULTANT will revise analyses and report prepared in the preliminary engineering phase as needed. It is assumed that no additional field exploration or laboratory testing will be required for this phase. GEOTECHNICAL CONSULTANT will review project plans and specifications and provide consultation when requested. If the geotechnical report is revised, a supplementary geotechnical memo with the revised data and findings will be submitted.

N. ENVIRONMENTAL PS&E ASSISTANCE

ENGINEER will submit plans and specifications to COUNTY's Environmental Consultant to confirm that the

necessary environmental commitments are incorporated into the final plans and specifications.

O. RIGHT OF WAY ENGINEERING

1. Right-of-Way Requirements Map. The Right-of-Way Requirements Map(s) will be finalized to identify the parcels needed for right-of-way acquisitions, permanent easements, temporary construction easements, and rights-of-entry. The map will be utilized by the COUNTY Surveyor and COUNTY Right-of-way Agent to prepare the documents necessary to obtain the required rights. The map will be utilized for tracking acquisitions and will be updated by ENGINEER regularly as requested by the COUNTY PROJECT MANAGER. Plan size may be custom. Scale will be sufficient to provide the information required: APN, property address, owner name, acquisition dimensions, and square footage.

2. Legal Descriptions and Plat Maps – Optional Task. SURVEY CONSULTANT will prepare legal descriptions and plat maps to support the acquisition of right-of-way and permanent easements. The metes and bounds legal descriptions or strip descriptions will be accompanied by a plat map that will be recorded with the description. All documents will be prepared by or under the direct supervision of a licensed land surveyor. It is assumed that COUNTY will furnish preliminary title reports to ENGINEER for preparation of the legal descriptions. COUNTY Survey Department staff will furnish landnet base line CAD files to ENGINEER.

Survey records from City, COUNTY, State, and others will be provided by COUNTY survey upon request. Review preliminary title reports of affected parcels. Legal descriptions will be prepared with guidance from the approved Right-of-Way Requirements Exhibit and will be checked by COUNTY survey staff.

For the purposes of this proposal, sixteen (16) locations have been identified and included as needing legal descriptions for right-of-way acquisition (road easements) and other permanent easements (such as storm drains, utilities, slope). 2 legal descriptions and plats per location or 32 legal descriptions and plats total are assumed to be included in this proposal. Size of documents shall be 8.5" x 11".

3. TCE and ROE Exhibits. Temporary construction easements (TCE) and rights of entry (ROE) will not require the preparation of legal description and plat maps. Instead, each TCE/ROE will require the preparation of an exhibit by the ENGINEER showing the dimensions of the location needing access and a list of general statements regarding the proposed construction work to be done on the property. A TCE/ROE exhibit may be required for the same parcel that requires a R/W acquisition legal and plat. For the purposes of this proposal, 16 locations have been identified and included as needing exhibits for TCE/ROEs. Exhibit sizes shall be 8.5" x 11".

P. COORDINATION WITH COUNTY TRAFFIC

The COUNTY will be providing final engineering design of traffic signals, signing and striping for the project. ENGINEER will coordinate with the COUNTY Traffic Engineering Department to assure consistency of designs for the project. ENGINEER will provide design CADD files (MicroStation format) to COUNTY Traffic Engineering for the roadway, drainage, and utility plans. When ENGINEER's design plans are updated, the updated plans will be sent to COUNTY Traffic Engineering. When COUNTY Traffic Engineering's design plans are updated, the updated plans will be sent to ENGINEER.

ENGINEER will review traffic signal plans for conflicts with storm drain, utility, driveways, or other features. ENGINEER will notify COUNTY Traffic Engineering of any conflicts and coordinate to resolve conflicts. The completed traffic signal plans, specifications and estimates will be incorporated into the final PS&E package.

ENGINEER will review signing and striping plans for consistency with the road improvement plans. The completed signing and striping plans, specifications and estimates will be incorporated into the final PS&E package.

In the event that COUNTY Traffic Engineering staff opts to have ENGINEER design the traffic signal, signing and striping plans, these services are shown below as optional services.

Q. OPTIONAL DESIGN SERVICE - TRAFFIC SIGNAL MODIFICATION PLANS

The existing traffic signals will be evaluated to determine their adequacy for the new lane configurations. The reviews will include the number of signal heads, their placement in line with the new four lane configuration, and the ability to withstand the current wind loading standards. Poles and facilities will be reviewed against the proposed street improvements and will be relocated to accommodate the proposed street improvements.

ENGINEER will prepare traffic signal modification plans for the following intersections:

1. Temescal Canyon Road/Dawson Canyon Road

The plans will include existing and proposed traffic signal poles, mast arms, safety lighting, vehicle signal and pedestrian head modifications to conform to the proposed roadway widening per the current COUNTY/State Standards, APS standards, and based on the Manual on Uniform Traffic Control Devices (MUTCD) and the California Supplement. The completed traffic signal facilities and pedestrian crossing facilities at the ultimate locations will meet current COUNTY Standards and ADA requirements and will be consistent with the ultimate intersection lane configurations. The modification of the traffic signal will also include replacement of detector loops, video detection, extension of conduits, wires, cables, pullboxes, traffic signal equipment, push buttons, street name signs, service equipment, controller equipment, enclosures, electrical feed, luminaires, and mast arm signs, as well as, the necessary construction notes, schedules, phasing diagram, and details. ENGINEER will coordinate with the traffic signal design with the COUNTY.

This optional service will be performed only if authorized by COUNTY.

R. SIGNING AND STRIPING PLANS – OPTIONAL TASK

ENGINEER will field check and prepare existing signs inventory along Temescal Canyon Road and the intersecting streets within the project limits. Existing signs and striping will be modified as required for the proposed Temescal Canyon Road roadway improvements. ENGINEER will prepare traffic Signs and Striping

Plans in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) and the California Supplement. The plans will be prepared in conformance with the COUNTY requirements.

This optional service will be performed only if authorized in writing by COUNTY.

S. SUMMARY OF DELIVERABLES

The following is a summary of deliverables to be prepared by the ENGINEER.

- Drainage Report
- Water Quality Document per TPG
- Right-of-Way Requirements Map
- Final Engineering Plans
    - Signing and Striping Plans (if authorized by COUNTY)
    - Signal Plans (if authorized by COUNTY)
- Special Provisions with Signed Spec Coversheet
- Engineer's Estimate
- CADD Files on CD
- Legal Descriptions and TCE & ROE Exhibits (if authorized by COUNTY)
- Fiber Optic Plans
- Construction Staging plans
- Updated Geotechnical Report

PHASE III: BID AND CONSTRUCTION SUPPORT

1. Bidding procedures will be the responsibility of COUNTY. While the PROJECT is being advertised for bids, all questions concerning the intent shall be referred to COUNTY for resolution. In the event that the items requiring interpretation in the drawings or specifications are discovered during the bidding period, said items will be analyzed by the ENGINEER for decision by COUNTY as to the

proper procedure required. Corrective action taken will either be in the form of an addendum prepared by the ENGINEER and issued by COUNTY or by covering change order after the award of the construction contract.

2. ENGINEER will review and take appropriate action upon COUNTY supplied Requests for Information (RFI's), Requests for Change (RFC's). The reviews and actions will be for conformance with the design concept of the Project and with appropriate construction specifications and details.
3. ENGINEER will provide adjustments and revisions to design based upon unanticipated and/or unknown field conditions encountered during the course of construction.
4. ENGINEER will be available to visit to the jobsite for on-site review of construction and other visits to the jobsite as requested by the COUNTY to resolve any discrepancies in the contract documents. ENGINEER shall bring to the attention of the COUNTY Resident Engineer any defects or deficiencies in the work by the construction contractor which the ENGINEER may observe. ENGINEER shall have no authority to issue instructions on behalf of the COUNTY or to deputize another to do so. All agreements shall be between the COUNTY and its construction contractor. These provisions shall not be construed as making the ENGINEER responsible for failure of the construction contractor to carry out the work in accordance with the contract documents nor the construction means or methods or techniques, sequences, procedures or safety programs in connection with the work.
5. ENGINEER shall assist with the resolution of utility related issues that may arise during the bidding process and during construction, including design modifications as needed and as approved by the COUNTY PROJECT MANAGER.
6. ENGINEER will prepare and deliver to the COUNTY the "As-Built" plans within two months of ENGINEER's receipt of red-line "as-built" drawings from construction contractor or COUNTY. Plans requiring as-builts include Roadway Design Plans, Fiber Optic Plans, Traffic Signal Modification Plans (optional task), and Signing and Striping Plans (optional task).

For purposes of this proposal, 120 man-hours have been assumed for bid and construction support, including as-built plan preparation.

ARTICLE A-IV • PROJECT COORDINATION, MEETINGS AND PRESENTATIONS

ENGINEER will update the COUNTY on the progress to date, work to be accomplished in the next period, and potential problems of a technical nature or forecasted budget/schedule adjustment requirement.

ARTICLE A-V • COUNTY FURNISHED MATERIALS / ELEMENTS OF WORK

The COUNTY will be responsible for the following:

- Topographic survey and mapping.
- Traffic Signal Plans and Signing & Striping Plans (unless COUNTY authorizes ENGINEER to perform this optional work)
- Legal description and plat map preparation unless COUNTY authorizes ENGINEER to perform this optional work)
- Title Reports.
- Utility Relocation Agreements.
- No-Fee Permits
- Right-of-way, rights of entry, and easement acquisition.
- Contact with property owners for the execution of all documents related to right-of-way, rights of entry, and easement acquisition.
- Plans, studies, as-builts and other documents readily available to the COUNTY that would assist the ENGINEER with preparation of the Plans, Specifications, and Estimates.

APPENDIX B • ARTICLE BI • INTRODUCTION

The Engineer shall perform the covenants set forth in Appendix A, Scope of Services in accordance with the performance requirements of Article V of this agreement and with the following Schedule of Services. All Covenants set forth in this agreement shall be completed by December 31, 2021, unless extended by supplemental agreement.

A. PHASES

The Schedule is divided into the following three phases:

Phase I - Preliminary Engineering

Phase II - Final Engineering (Plans, Specifications and Estimates)

Phase III - Bid and Construction support

Satisfactory performance and completion of the Services under this Agreement shall be compensated based upon actual costs plus a fixed fee. COUNTY will reimburse ENGINEER for actual costs (including labor costs, overhead, and other direct costs) incurred by ENGINEER in performance of the work, exclusive of any fixed fee. A prorata portion of ENGINEER's fixed fee shall be included in the progress payments. Actual costs shall not exceed the estimated costs without prior written agreement between COUNTY and ENGINEER.

APPENDIX C • ARTICLE CI • ELEMENTS OF COMPENSATION

Compensation for the Services will be comprised of the following elements: DIRECT LABOR COSTS, FEES, OTHER DIRECT COSTS and OUTSIDE SERVICES.

A. DIRECT LABOR COSTS

Direct Labor costs shall be paid in an amount equal to the Direct Salary Costs plus the product of the Direct Salary Costs and the Multiplier which are defined as follows:

1. Direct Salary Costs

   Direct Salary Costs are the base salaries and wages actually paid to the ENGINEER's personnel directly engaged in performance of the Services under the Agreement. Salary rates for specific employees shall be provided on the Fee Proposal Worksheets included in ARTICLE CV • COST PROPOSAL. All Salary rates shall be in effect for three years following the effective date of the Agreement. Thereafter, ENGINEER may request adjustments to individual rates on an annual basis. ENGINEER shall notify COUNTY in writing requesting a change in the rates included herein. All adjustments to rates shall be subject to approval by the County Director of Transportation, or his designee.

2. Multiplier

   The Multiplier to be applied to the Direct Salary Costs to determine the Direct Labor Costs is the sum of the following components:

   PAYROLL ADDITIVES..... 0.00%

   The decimal ratio of Payroll Additives to Direct Salary Costs. Payroll Additives include all employee benefits, allowances for vacation, sick leave, and holidays, and company portion of employee insurance and social and retirement benefits, all federal and state payroll taxes, premiums for insurance which are measured by payroll costs, and other contributions and benefits imposed by applicable laws and regulations.

   OVERHEAD COSTS..... 180.00%

The decimal ratio of allowable Overhead Costs to ENGINEER firm's total direct salary costs. Allowable Overhead Costs include general, administrative and overhead costs of maintaining and operating established offices, and consistent with established firm policies, and as defined in the Federal Acquisitions Regulations, Part 31.2.

TOTAL MULTIPLIER..... 180.00%

(sum of Payroll Additives and Overhead Costs)

B. FIXED FEE

1. The Total Fixed Fee payable to the ENGINEER is $54,871.77 (PRIME CONSULTANT Profit)
2. A pro-rata share of the Fixed Fee shall be applied to the total Direct Labor Costs expended for services each month, and shall be included on each monthly invoice.

C. OTHER DIRECT EXPENSES

Additional Direct Costs, directly identifiable to the performance of the services of this Agreement, shall be reimbursed at the rates below, or at actual invoiced cost.

Rates for identified Additional Direct Costs are as follows:

Item	Rate	Unit
Printing and Reproduction	$5,000.00	EACH
Pothole (up to 30 holes)	$24,000.00	EACH
Travel Mileage	$870.00	MILE

Travel by air and travel in excess of 100 miles from ENGINEER's office nearest to COUNTY's office must have COUNTY's prior written approval to be reimbursed under this Agreement.

D. OUTSIDE SERVICES

Outside services shall be paid in accordance with the cost proposals submitted by each Subconsultant. Billings for Outside Services shall be submitted along with the Prime Consultant's monthly Progress Report/Billing submittals and shall be in conformance with the COUNTY Engineering Services Invoicing Procedures.

ARTICLE CII • DIRECT SALARY RATES

Direct Salary Rates, which are the range of hourly rates to be used in determining Direct Salary Costs, are given below and are subject to the following:

A. PREMIUM OVERTIME

Direct Salary Rates shall be applicable to both straight time and overtime work, unless payment of a premium for overtime work is required by law, regulation or craft agreement, or is otherwise specified in this Agreement. In such event, the premium portion of Direct Salary Costs will not be subject to the Multiplier.

B. SALARY RATES

All Salary rates shall be in effect for three years following the effective date of the Agreement. Thereafter, ENGINEER may request adjustments to individual rates on an annual basis. ENGINEER shall notify COUNTY in writing requesting a change in the rates included herein. All adjustments to rates shall be subject to approval by the County Director of Transportation, or his designee.

POSITION OR CLASSIFICATION	MAXIMUM HOURLY RATES
Project Manager	$72.02 / hour
Structure Lead	$86.04 / hour
Project Engineer A	$62.92 / hour
Project Engineer B	$57.50 / hour
Engineer III A	$61.82 / hour
Engineer III B	$52.99 / hour
Engineer II A	$44.71 / hour
Engineer II B	$40.00 / hour
Senior CADD	$45.53 / hour
Assistant Engineer	$31.46 / hour

The above rates are for ENGINEER only. All rates for subconsultants to ENGINEER will be in accordance with the subconsultants cost proposal.

ARTICLE CIII • INVOICING

ENGINEER shall submit invoices in accordance with the Engineering Services Agreement ARTICLE VI • COMPENSATION and with the following requirements.

1. Charges shall be billed in accordance with the terms and rates included herein, unless otherwise agreed in writing by the County Contract Administrator.
2. Base Work and Extra Work shall be charged separately, and the charges for each Phase listed in Appendix B, Schedule of Services, shall be listed separately. The charges for each individual assigned under this Agreement shall be listed separately.

3. Charges of $500.00 or more for any one item of Additional Direct Costs shall be accompanied by substantiating documentation such as invoices, telephone logs, etc.
4. Each invoice shall indicate payments to DBE subconsultants or supplies by dollar amount and as a percentage of the total invoice and shall state the DBE goals as a percentage of Total Agreement Value.
5. Each invoice shall bear a certification signed by the Engineering Contract Manager or an officer of the firm which reads as follows:

   I hereby certify that the hours and salary rates charged in this invoice are the actual hours and rates worked and paid to the employees listed.

ARTICLE CIV • PAYMENT

Progress payments shall be made in accordance with the Engineering Services, Agreement ARTICLE VI • COMPENSATIONS.

ARTICLE CV • COST PROPOSAL

The following cost proposal reflects the negotiated targeted contract amount. The cost proposal will serve as a guideline and reference document during the execution of this contract. ENGINEER shall be compensated in accordance with the rates provided. The total amount of the contract is not to exceed $955,896.73 including a $0 contingency. Reimbursement is to be made at actual cost plus fixed fee; however, billing shall not exceed the rates provided in Section B above or the rates provided in the attached Fee Proposal Worksheets below. Written approval from the COUNTY PROJECT MANAGER is required to expend any contingency funds.

Temescal Canyon Road - Dawson Canyon Segment (C5-0072) Fee

Proposal Summary

March 14, 2016

COMPANIES	PHASE I	PHASE II	PHASE III		TOTAL
NCM Engineering Prime	$ 174,264.60	$ 436,656.94	$ 22,537.96		**$ 633,459.50**
NCM Engineering (Optional) Optional Tasks	$ 11,615.08	$ 149,892.35			**$ 161,507.44**
Diaz-Yourman & Associates Geotechnical	$ 21,459.37	$ 2,911.81			**$ 24,371.18**
Iteris Traffic Analysis	$ 58,556.64				**$ 58,556.64**
Green Com, Inc. Public Outreach	$ 7,729.32	$ 7,729.32			**$ 15,458.64**
LIN Consulting Inc. Fiber Optic Conduit		$ 12,312.76	$ 416.85		**$ 12,729.61**
LIN Consulting Inc. (Optional) Traffic Signals (Optional)		$ 11,291.25	$ 374.93		**$ 11,666.18**
Psomas (Optional) Legal Descriptions (Optional)		$ 38,147.54			**$ 38,147.54**
TOTAL WITHOUT OPTIONAL TASKS	**$ 262,009.93**	**$ 459,610.84**	**$ 22,954.81**		**$ 744,575.57**
TOTAL WITH OPTIONAL TASKS	**$ 273,625.01**	**$ 658,941.99**	**$ 23,329.73**		**$ 955,896.73**

Phase I **Preliminary Engineering & Environmental**
Phase II **Plans, Specs & Estimates**
Phase III **Bid & Construction Support**

FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
NCM Engineering	**Project Summary**	**All Phases**
PROJECT:		DATE:
Temescal Canyon Road - Dawson Canyon Segment (C5-0072)		**March 14, 2016**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Project Manager	Project Manager	564	@	$72.02	$40,620.82
Mohan Char	Structure Lead	158	@	$86.04	$13,594.16
Albert Pan	Project Engineer	712	@	$57.50	$40,940.00
Mark Stiller	Engineer III	114	@	$52.99	$6,040.89
Youichi Nakagawa	Engineer II	816	@	$44.71	$36,484.21
Alma Carrillo	Engineer II	632	@	$40.00	$25,280.00
Ray Andresek	Senior CADD			$45.53	
Mark Gonzalez	Project Engineer	112	@	$62.92	$7,046.91
Samantha Cadena	Assistant Engineer			$31.46	
Kimberly Gee	Engineer II			$44.71	
Engineer III	Engineer III	420	@	$61.82	$25,963.64
David Kim	Engineer III			$52.99	

TOTAL HOURS **3,528** AL DIRECT LABOR **$195,970.62**

MULTIPLIERS

ESCALATION @		(Rates Vary by Phase)	
OVERHEAD @	180.00%	(of Direct Labor + Escalation)	$352,747.11
PAYROLL ADDITIVES @		(of Direct Labor + Escalation)	
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives	$54,871.77

TOTAL MULTIPLIERS **$407,618.88**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Printing and Reproduction	5000		@	$1.00	$5,000.00
Pothole (up to 30 holes)	1		@	$24,000.00	$24,000.00
Travel Mileage	1500		@	$0.58	$870.00

TOTAL ODC'S **$29,870.00**

SUB CONSULTANT SERVICES

COMPANY	LABOR	MULTIPLIERS	ODC's	TOTAL
NCM Engineering (Optional)	$52,307.61	$108,799.83	$400.00	$161,507.44
Diaz-Yourman & Associates	$3,907.49	$9,661.19	$10,802.50	$24,371.18
Iteris	$16,521.36	$32,505.28	$9,530.00	$58,556.64
Green Com, Inc.	$4,713.60	$9,545.04	$1,200.00	$15,458.64
LIN Consulting Inc.	$4,244.12	$8,127.49	$358.00	$12,729.61
LIN Consulting Inc. (Optional)	$3,906.58	$7,481.10	$278.50	$11,666.18
Psomas (Optional)	$12,748.62	$25,198.92	$200.00	$38,147.54

TOTAL SUBCONSULTANT SERVICES **WITHOUT** OPTIONAL TASKS **$111,116.07**

TOTAL SUBCONSULTANT SERVICES **WITH** OPTIONAL TASKS **$322,437.23**

TOTAL WITHOUT OPTIONAL TASKS	**$744,575.57**
TOTAL WITH OPTIONAL TASKS	**$955,896.73**

FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
NCM Engineering	**Preliminary Engineering & Environmental**	**Phase I**
PROJECT:		DATE:
Temescal Canyon Road - Dawson Canyon Segment (C5-0072)		**March 14, 2016**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Project Manager	Project Manager	182	@	$72.02	$13,108.14
Mohan Char	Structure Lead	42	@	$86.04	$3,613.64
Albert Pan	Project Engineer	204	@	$57.50	$11,730.00
Mark Stiller	Engineer III	22	@	$52.99	$1,165.79
Youichi Nakagawa	Engineer II	164	@	$44.71	$7,332.61
Alma Carrillo	Engineer II	244	@	$40.00	$9,760.00
Ray Andresek	Senior CADD			$45.53	
Mark Gonzalez	Project Engineer	32	@	$62.92	$2,013.40
Samantha Cadena	Assistant Engineer			$31.46	
Kimberly Gee	Engineer II			$44.71	
Engineer III	Engineer III	120	@	$61.82	$7,418.18
David Kim	Engineer III			$52.99	

TOTAL HOURS **1,010** AL DIRECT LABOR **$56,141.75**

MULTIPLIERS

ESCALATION @		(of Direct Labor)	
OVERHEAD @	180.00%	(of Direct Labor + Escalation)	$101,055.16
PAYROLL ADDITIVES @		(of Direct Labor + Escalation)	
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives	$15,719.69
		TOTAL MULTIPLIERS	**$116,774.85**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Printing and Reproduction	1000		@	$1.00	$1,000.00
Pothole (up to 30 holes)				$24,000.00	
Travel Mileage	600		@	$0.58	$348.00
				TOTAL ODC'S	**$1,348.00**

SUB CONSULTANT SERVICES

COMPANY	LABOR	MULTIPLIERS	ODC's	TOTAL
NCM Engineering (Optional)	$3,738.66	$7,776.42	$100.00	$11,615.08
Diaz-Yourman & Associates	$3,068.95	$7,587.92	$10,802.50	$21,459.37
Iteris	$16,521.36	$32,505.28	$9,530.00	$58,556.64
Green Com, Inc.	$2,356.80	$4,772.52	$600.00	$7,729.32
LIN Consulting Inc.				
LIN Consulting Inc. (Optional)				
Psomas (Optional)				

TOTAL SUBCONSULTANT SERVICES WITHOUT OPTIONAL TASKS **$87,745.33**

TOTAL SUBCONSULTANT SERVICES WITH OPTIONAL TASKS **$99,360.41**

TOTAL WITHOUT OPTIONAL TASKS	**$262,009.93**
TOTAL WITH OPTIONAL TASKS	**$273,625.01**

FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
NCM Engineering	**Plans, Specs & Estimates**	**Phase II**
PROJECT:		DATE:
Temescal Canyon Road - Dawson Canyon Segment (C5-0072)		**March 14, 2016**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Project Manager	Project Manager	366	@	$72.02	$26,360.32
Mohan Char	Structure Lead	104	@	$86.04	$8,948.05
Albert Pan	Project Engineer	484	@	$57.50	$27,830.00
Mark Stiller	Engineer III	52	@	$52.99	$2,755.49
Youichi Nakagawa	Engineer II	624	@	$44.71	$27,899.69
Alma Carrillo	Engineer II	388	@	$40.00	$15,520.00
Ray Andresek	Senior CADD			$45.53	
Mark Gonzalez	Project Engineer	80	@	$62.92	$5,033.51
Samantha Cadena	Assistant Engineer			$31.46	
Kimberly Gee	Engineer II			$44.71	
Engineer III	Engineer III	300	@	$61.82	$18,545.45
David Kim	Engineer III			$52.99	
	TOTAL HOURS	**2,398**		AL DIRECT LABOR	**$132,892.51**

MULTIPLIERS

ESCALATION @		(of Direct Labor)	
OVERHEAD @	180.00%	(of Direct Labor + Escalation)	$239,206.52
PAYROLL ADDITIVES @		(of Direct Labor + Escalation)	
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives	$37,209.90
		TOTAL MULTIPLIERS	**$276,416.43**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Printing and Reproduction	3000		@	$1.00	$3,000.00
Pothole (up to 30 holes)	1		@	$24,000.00	$24,000.00
Travel Mileage	600		@	$0.58	$348.00
		TOTAL ODC'S			**$27,348.00**

SUB CONSULTANT SERVICES

COMPANY	LABOR	MULTIPLIERS	ODC's	TOTAL
NCM Engineering (Optional)	$48,568.95	$101,023.41	$300.00	$149,892.35
Diaz-Yourman & Associates	$838.54	$2,073.27		$2,911.81
Iteris				
Green Com, Inc.	$2,356.80	$4,772.52	$600.00	$7,729.32
LIN Consulting Inc.	$4,101.12	$7,853.64	$358.00	$12,312.76
LIN Consulting Inc. (Optional)	$3,777.96	$7,234.79	$278.50	$11,291.25
Psomas (Optional)	$12,748.62	$25,198.92	$200.00	$38,147.54
	TOTAL SUBCONSULTANT SERVICES WITHOUT OPTIONAL TASKS			**$22,953.90**
	TOTAL SUBCONSULTANT SERVICES WITH OPTIONAL TASKS			**$222,285.05**

TOTAL WITHOUT OPTIONAL TASKS	**$459,610.84**
TOTAL WITH OPTIONAL TASKS	**$658,941.99**

FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
NCM Engineering	**Bid & Construction Support**	**Phase III**
PROJECT:		DATE:
Temescal Canyon Road - Dawson Canyon Segment (C5-0072)		**March 14, 2016**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Project Manager	Project Manager	16	@	$72.02	$1,152.36
Mohan Char	Structure Lead	12	@	$86.04	$1,032.47
Albert Pan	Project Engineer	24	@	$57.50	$1,380.00
Mark Stiller	Engineer III	40	@	$52.99	$2,119.61
Youichi Nakagawa	Engineer II	28	@	$44.71	$1,251.91
Alma Carrillo	Engineer II			$40.00	
Ray Andresek	Senior CADD			$45.53	
Mark Gonzalez	Project Engineer			$62.92	
Samantha Cadena	Assistant Engineer			$31.46	
Kimberly Gee	Engineer II			$44.71	
Engineer III	Engineer III			$61.82	
David Kim	Engineer III			$52.99	
	TOTAL HOURS	**120**		AL DIRECT LABOR	**$6,936.35**

MULTIPLIERS

ESCALATION @		(of Direct Labor)	
OVERHEAD @	180.00%	(of Direct Labor + Escalation)	$12,485.43
PAYROLL ADDITIVES @		(of Direct Labor + Escalation)	
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives	$1,942.18
		TOTAL MULTIPLIERS	**$14,427.61**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Printing and Reproduction	1000		@	$1.00	$1,000.00
Pothole (up to 30 holes)				$24,000.00	
Travel Mileage	300		@	$0.58	$174.00
				TOTAL ODC'S	**$1,174.00**

SUB CONSULTANT SERVICES

COMPANY	LABOR	MULTIPLIERS	ODC's	TOTAL
NCM Engineering (Optional)				
Diaz-Yourman & Associates				
Iteris				
Green Com, Inc.				
LIN Consulting Inc.	$143.00	$273.85		$416.85
LIN Consulting Inc. (Optional)	$128.62	$246.31		$374.93
Psomas (Optional)				

TOTAL SUBCONSULTANT SERVICES WITHOUT OPTIONAL TASKS	**$416.85**
TOTAL SUBCONSULTANT SERVICES WITH OPTIONAL TASKS	**$791.77**

TOTAL WITHOUT OPTIONAL TASKS	**$22,954.81**
TOTAL WITH OPTIONAL TASKS	**$23,329.73**

MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
NCM Engineering	**Manhour Summary**	**All Phases**
PROJECT:		DATE:
Temescal Canyon Road - Dawson Canyon Segment (C5-0072)		**March 14, 2016**

TASK	PROJECT MANAGER	STRUCTURE LEAD	PROJECT ENGINEER	ENGINEER III	ENGINEER II	ENGINEER II	SENIOR CADD	PROJECT ENGINEER	ASSISTANT ENGINEER	ENGINEER II	ENGINEER III	ENGINEER III	HOURS	(Top & Bottom) HOURS
PHASE TOTALS	**564**	**158**	**712**	**114**	**816**	**632**	**112**	**420**					**3,528**	**3,528**
PHASE I	182	42	204	22	164	244	32	120					1,010	1,010
PHASE II	366	104	484	52	624	388	80	300					2,398	2,398
PHASE III	16	12	24	40	28								120	120
PHASE IV														

TASK	HOURS
PHASE TOTALS	
PHASE I	
PHASE II	
PHASE III	
PHASE IV	

MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
NCM Engineering	**Preliminary Engineering & Environmen**	**Phase I**
PROJECT:		DATE:
Temescal Canyon Road - Dawson Canyon Segment (C5-0072)		**March 14, 2016**

TASK	PROJECT MANAGER	STRUCTURE LEAD	PROJECT ENGINEER	ENGINEER III	ENGINEER II	ENGINEER II	SENIOR CADD	PROJECT ENGINEER	ASSISTANT ENGINEER	ENGINEER II	ENGINEER III	ENGINEER III	HOURS	COST
Total Manhours	182	42	204	22	164	244	32			120			1,010	
Project Management	40												40	$ 8,873
Meetings	30	6	60	6									102	$ 19,850
Research and Data Gattering	8	8	20	8		40							84	$ 13,670
Utility Coordination	16	24	16										56	$ 12,743
Environmental Coordination	16		20			60							96	$ 14,483
Prepare Oak Tree Survey Base Map	4		16			80							100	$ 13,577
Roadway & Grading Alternatives Development	20		48		60	40							168	$ 26,128
Develop Conceptual Drainage Improvements	16				40					24			80	$ 13,627
Prepare Draft Drainage Report	16				40					80			136	$ 24,290
Preliminary Right of Way Requirements Exhibi	4		16			16							36	$ 5,692
Preliminary Engineer's Estimate	4	4	8	8		8							32	$ 5,655
NPDES Permit Compliance	8				24					16			48	$ 8,126
QA/QC							32						32	$ 6,201

MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
NCM Engineering	Plans, Specs & Estimates	Phase II
PROJECT:		DATE:
Temescal Canyon Road - Dawson Canyon Segment (C5-0072)		March 14, 2016

TASK	PROJECT MANAGER	STRUCTURE LEAD	PROJECT ENGINEER	ENGINEER III	ENGINEER II	ENGINEER II	SENIOR CADD	PROJECT ENGINEER	ASSISTANT ENGINEER	ENGINEER II	ENGINEER III	ENGINEER III	HOURS	COST
Total Manhours	366	104	484	52	624	388		80		300			2,398	
Project Management	40												40	$ 8,873
Meetings	30	8	60	16									114	$ 22,012
Utility Coordination and Agreements	20	80	120										220	$ 46,889
Prepare 65% Roadway Plans	40		80		120	120							360	$ 54,350
Prepare 65% Drainage Plans	40				160					60			260	$ 42,331
Prepare Final Drainage Report	16				40					120			176	$ 31,906
Prepare 65% Engineering Cost Estimate	16		16		24								56	$ 9,688
Prepare 95% Roadway Plans	16		80		80	80							256	$ 38,590
Prepare 95% Drainage Plans	16				40					40			96	$ 16,674
Prepare 95% Engineering Cost Estimate	16		16			32							64	$ 10,325
Prepare 95% Specifications	16		24							32			72	$ 13,892
Prepare Final Right of Way Requirements Including TCE / ROE Exhibits	16		16		24	24							80	$ 12,645
Site Mod Meetings with Property Owners	24		24										48	$ 9,574
Prepare Water Quality Report (TPG)	4				16					24			44	$ 7,660
Prepare 100% PS&E	36	8	24	20	80	80				16			264	$ 41,540
Prepare Camera Ready PS&E	12	4	8	8	40	20				8			100	$ 15,940
RE Files	8	4	16	8		32							68	$ 10,916
QA/QC								80					80	$ 15,503

MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
NCM Engineering	**Bid & Construction Support**	**Phase III**
PROJECT:		DATE:
Temescal Canyon Road - Dawson Canyon Segment (C5-0072)		**March 14, 2016**

TASK	PROJECT MANAGER	STRUCTURE LEAD	PROJECT ENGINEER	ENGINEER III	ENGINEER II	ENGINEER II	SENIOR CADD	PROJECT ENGINEER	ASSISTANT ENGINEER	ENGINEER II	ENGINEER III	ENGINEER III			HOURS	COST
Total Manhours	16	12	24	40	28										120	
Meetings	8	2	8	4											22	$ 4,374
Responses to Bid RFIs	2	4	4	8											18	$ 3,518
Responses to Construction RFIs	4	4	4	8	8										28	$ 5,063
Prepare As-Built Plans	2	2	8	20	20										52	$ 8,409

FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
NCM Engineering (Optional)	**Optional Tasks**	**All Phases**
PROJECT:		DATE:
Temescal Canyon Road - Dawson Canyon Rd to 0.7 mile North		**March 7, 2016**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Project Manager	Project Manager	40	@	$72.02	$2,880.91
Mohan Char	Structure Lead	64	@	$86.04	$5,506.49
Albert Pan	Project Engineer	88	@	$57.50	$5,060.00
Mark Stiller	Engineer III	250	@	$52.99	$13,247.56
Youichi Nakagawa	Engineer II	40	@	$44.71	$1,788.44
Alma Carrillo	Engineer II	120	@	$40.00	$4,800.00
Ray Andresek	Senior CADD	300	@	$45.53	$13,659.00
Kimberly Gee	Engineer II	120	@	$44.71	$5,365.20
		TOTAL HOURS	**1,022**	AL DIRECT LABOR	**$52,307.61**

MULTIPLIERS

ESCALATION @		(Rates Vary by Phase)	
OVERHEAD @	180.00%	(of Direct Labor + Escalation)	$94,153.70
PAYROLL ADDITIVES @		(of Direct Labor + Escalation)	
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives	$14,646.13
		TOTAL MULTIPLIERS	**$108,799.83**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Printing and Reproduction	400	Budget	@	$1.00	$400.00
		TOTAL ODC'S			**$400.00**

TOTAL **$161,507.44**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY: **NCM Engineering (Optional)**	SCOPE OF WORK: **Optional Tasks**	PHASE: **Phase I**
PROJECT: **Temescal Canyon Road - Dawson Canyon Rd to 0.7 mile North**		DATE: **March 7, 2016**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Project Manager	Project Manager			$72.02	
Mohan Char	Structure Lead	4	@	$86.04	$344.16
Albert Pan	Project Engineer			$57.50	
Mark Stiller	Engineer III	30	@	$52.99	$1,589.71
Youichi Nakagawa	Engineer II			$44.71	
Alma Carrillo	Engineer II			$40.00	
Ray Andresek	Senior CADD	20	@	$45.53	$910.60
Kimberly Gee	Engineer II	20	@	$44.71	$894.20
	TOTAL HOURS	**74**		ᴬL DIRECT LABOR	**$3,738.66**

MULTIPLIERS

ESCALATION @		(of Direct Labor)	
OVERHEAD @	180.00%	(of Direct Labor + Escalation)	$6,729.59
PAYROLL ADDITIVES @		(of Direct Labor + Escalation)	
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives	$1,046.83
		TOTAL MULTIPLIERS	**$7,776.42**

OTHER DIRECT COSTS ••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Printing and Reproduction	100	Budget	@	$1.00	$100.00
				TOTAL ODC'S	**$100.00**

TOTAL **$11,615.08**

FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
NCM Engineering (Optional)	**Optional Tasks**	**Phase II**
PROJECT:		DATE:
Temescal Canyon Road - Dawson Canyon Rd to 0.7 mile North		**March 7, 2016**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
Project Manager	Project Manager	40	@	$72.02	$2,880.91
Mohan Char	Structure Lead	60	@	$86.04	$5,162.34
Albert Pan	Project Engineer	88	@	$57.50	$5,060.00
Mark Stiller	Engineer III	220	@	$52.99	$11,657.86
Youichi Nakagawa	Engineer II	40	@	$44.71	$1,788.44
Alma Carrillo	Engineer II	120	@	$40.00	$4,800.00
Ray Andresek	Senior CADD	280	@	$45.53	$12,748.40
Kimberly Gee	Engineer II	100	@	$44.71	$4,471.00
	TOTAL HOURS	**948**		AL DIRECT LABOR	**$48,568.95**

MULTIPLIERS

ESCALATION @		(of Direct Labor)	
OVERHEAD @	180.00%	(of Direct Labor + Escalation)	$87,424.10
PAYROLL ADDITIVES @		(of Direct Labor + Escalation)	
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives	$13,599.30
		TOTAL MULTIPLIERS	**$101,023.41**

OTHER DIRECT COSTS ••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Printing and Reproduction	300	Budget	@	$1.00	$300.00
		TOTAL ODC'S			**$300.00**

TOTAL **$149,892.35**

SUBCONSULTANT MANHOUR WORKSHEET SUMMARY

COMPANY:	SCOPE OF WORK:	PHASE:
NCM Engineering (Optional)	**Optional Tasks**	**All Phases**
PROJECT:		DATE:
Temescal Canyon Road - Dawson Canyon Rd to 0.7 mile North		**March 7, 2016**

TASK	PROJECT MANAGER	STRUCTURE LEAD	PROJECT ENGINEER	ENGINEER III	ENGINEER II	ENGINEER II	SENIOR CADD	ENGINEER II					HOURS
PHASE TOTALS	**40**	**64**	**88**	**250**	**40**	**120**	**300**	**120**					**1,022**
PHASE I		4		30			20	20					74
PHASE II	40	60	88	220	40	120	280	100					948
PHASE III													
PHASE IV													

SUBCONSULTANT MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
NCM Engineering (Optional)	**Optional Tasks**	**Phase I**
PROJECT:		DATE:
Temescal Canyon Road - Dawson Canyon Rd to 0.7 mile North		**March 7, 2016**

TASK	PROJECT MANAGER	STRUCTURE LEAD	PROJECT ENGINEER	ENGINEER III	ENGINEER II	ENGINEER II	SENIOR CADD	ENGINEER II						HOURS	COST
Total Manhours		**4**		**30**			**20**	**20**						**74**	
Preliminary Engineering of Retaining Walls		**4**		**30**			**20**	**20**						**74**	**$ 11,515**
.															

MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
NCM Engineering (Optional)	**Optional Tasks**	**Phase II**
PROJECT:		DATE:
Temescal Canyon Road - Dawson Canyon Rd to 0.7 mile North		**March 7, 2016**

TASK	PROJECT MANAGER	STRUCTURE LEAD	PROJECT ENGINEER	ENGINEER III	ENGINEER II	ENGINEER II	SENIOR CADD	ENGINEER II							HOURS	COST
Total Manhours	40	60	88	220	40	120	280	100							948	
Construction Staging Plans (Optional task)	16		40		40	40									136	$ 21,070
Signing and Striping Plans (Optional Task)	8		40			80									128	$ 18,715
Retaining Wall PS&E (Optional Task)	16	60	8	220			280	100							684	$ 109,808

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
Diaz-Yourman & Associates	**Geotechnical**	**All Phases**
PROJECT:		DATE:
Temscal Canyon Road - Dawson Canyon Road to 0.7 mile northerly (C5-0072)		**3/7/2016**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
V.R. Nadeswaran	Principal Engineer	8	@	$73.86	$590.88
S. Niranjanan	Associate Engineer/Project Manage	33	@	$51.79	$1,709.07
Charles Chen	Staff Engineer/ISA			$28.48	
Staff Engineer II	Staff Engineer II	26	@	$31.53	$819.78
Staff Engineer/Geologist I	Staff Engineer/Geologist I	18	@	$25.83	$464.94
Ashely Helma	CADD	2	@	$22.73	$45.46
Deanna Rose	Technical Editor/Word Processor	8	@	$34.67	$277.36
	TOTAL HOURS	**95**		AL DIRECT LABOR	**$3,907.49**

MULTIPLIERS

ESCALATION @		(Rates Vary by Phase)	
OVERHEAD @	215.68%	(of Direct Labor + Escalation)	$8,427.67
PAYROLL ADDITIVES @		(of Direct Labor + Escalation)	
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives	$1,233.52
		TOTAL MULTIPLIERS	**$9,661.19**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Drillers	1	Each	@	$4,500.00	$4,500.00
Geophysical Survey	1	Each	@	$2,500.00	$2,500.00
Traffic Control	1	Each	@	$1,300.00	$1,300.00
Geotechnical Laboratory Testing	1	Each	@	$1,196.00	$1,196.00
Mileage	60	miles	@	$0.575	$34.50
Field Truck	16	hour	@	$17.00	$272.00
Environmendal Database/Aerial Photographs		Each		$1,000.00	
Consulting Geologist	1	Each	@	$1,000.00	$1,000.00
		TOTAL ODC'S			**$10,802.50**

TOTAL **$24,371.18**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
Diaz-Yourman & Associates	**Geotechnical**	**Phase I**
PROJECT:		DATE:
Temscal Canyon Road - Dawson Canyon Road to 0.7 mile northerly (C5-0072)		**March 7, 2016**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
V.R. Nadeswaran	Principal Engineer	6	@	$73.86	$443.16
S. Niranjanan	Associate Engineer/Project Manage	21	@	$51.79	$1,087.59
Charles Chen	Staff Engineer/ISA			$28.48	
Staff Engineer II	Staff Engineer II	26	@	$31.53	$819.78
Staff Engineer/Geologist I	Staff Engineer/Geologist I	18	@	$25.83	$464.94
Ashely Helma	CADD	2	@	$22.73	$45.46
Deanna Rose	Technical Editor/Word Processor	6	@	$34.67	$208.02
	TOTAL HOURS	**79**		AL DIRECT LABOR	**$3,068.95**

MULTIPLIERS

ESCALATION @		(of Direct Labor)	
OVERHEAD @	215.68%	(of Direct Labor + Escalation)	$6,619.11
PAYROLL ADDITIVES @		(of Direct Labor + Escalation)	
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives	$968.81
		TOTAL MULTIPLIERS	**$7,587.92**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT		UNIT COST	AMOUNT
Drillers	1	Each	@	$4,500.00	$4,500.00
Geophysical Survey	1	Each	@	$2,500.00	$2,500.00
Traffic Control	1	Each	@	$1,300.00	$1,300.00
Geotechnical Laboratory Testing	1	Each	@	$1,196.00	$1,196.00
Mileage	60	miles	@	$0.58	$34.50
Field Truck	16	hour	@	$17.00	$272.00
Environmendal Database/Aerial Photographs		Each		$1,000.00	
Consulting Geologist	1	Each	@	$1,000.00	$1,000.00
		TOTAL ODC'S			**$10,802.50**

TOTAL **$21,459.37**

SUBCONSULTANT FEE PROPOSAL WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
Diaz-Yourman & Associates	**Geotechnical**	**Phase II**
PROJECT:		DATE:
Temscal Canyon Road - Dawson Canyon Road to 0.7 mile northerly (C5-0072)		**March 7, 2016**

DIRECT LABOR

PERSONNEL	POSITION	HOURS		RATE	AMOUNT
V.R. Nadeswaran	Principal Engineer	2	@	$73.86	$147.72
S. Niranjanan	Associate Engineer/Project Manage	12	@	$51.79	$621.48
Charles Chen	Staff Engineer/ISA			$28.48	
Staff Engineer II	Staff Engineer II			$31.53	
Staff Engineer/Geologist I	Staff Engineer/Geologist I			$25.83	
Ashely Helma	CADD			$22.73	
Deanna Rose	Technical Editor/Word Processor	2	@	$34.67	$69.34
	TOTAL HOURS	**16**		AL DIRECT LABOR	**$838.54**

MULTIPLIERS

ESCALATION @		(of Direct Labor)	
OVERHEAD @	215.68%	(of Direct Labor + Escalation)	$1,808.56
PAYROLL ADDITIVES @		(of Direct Labor + Escalation)	
PROFIT (FIXED FEE) @	10.0%	(of Direct Labor + Escalation + Overhead + Payroll Additives	$264.71
		TOTAL MULTIPLIERS	**$2,073.27**

OTHER DIRECT COSTS

••• Billed at Actual Cost •••

ITEM	QUANTITY	UNIT	UNIT COST	AMOUNT
Drillers		Each	$4,500.00	
Geophysical Survey		Each	$2,500.00	
Traffic Control		Each	$1,300.00	
Geotechnical Laboratory Testing		Each	$1,196.00	
Mileage		miles	$0.58	
Field Truck		hour	$17.00	
Environmendal Database/Aerial Photographs		Each	$1,000.00	
Consulting Geologist		Each	$1,000.00	
			TOTAL ODC'S	

TOTAL **$2,911.81**

SUBCONSULTANT MANHOUR WORKSHEET SUMMARY

COMPANY:	SCOPE OF WORK:	PHASE:
Diaz-Yourman & Associates	**Geotechnical**	**All Phases**
PROJECT:		DATE:
Temscal Canyon Road - Dawson Canyon Road to 0.7 mile northerly (C5-0072)		**March 7, 2016**

TASK	PRINCIPAL ENGINEER	ASSOCIATE ENGINEER/PROJECT MANAGER	STAFF ENGINEER/ISA	STAFF ENGINEER II	STAFF ENGINEER/GEOLOGIST I	CADD	TECHNICAL EDITOR/WORD PROCESSOR					HOURS
PHASE TOTALS	**8**	**33**	**26**	**18**	**2**	**8**						**95**
PHASE I	6	21	26	18	2	6						79
PHASE II	2	12				2						16
PHASE III												
PHASE IV												

SUBCONSULTANT MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
Diaz-Yourman & Associates	Geotechnical	Phase I

PROJECT:	DATE:
Temscal Canyon Road - Dawson Canyon Road to 0.7 mile northerly (C5-0072)	March 7, 2016

TASK	PRINCIPAL ENGINEER	ASSOCIATE ENGINEER/PROJECT MANAGER	STAFF ENGINEER/ISA	STAFF ENGINEER II	STAFF ENGINEER/GEOLOGIST I	CADD TECHNICAL EDITOR/WORD PROCESSOR								HOURS	COST
Total Manhours	6	21		26	18	2	6								79	
Preliminary Geotechnical Engineering	6	21		26	18	2	6								79	$ 10,657

SUBCONSULTANT MANHOUR WORKSHEET

COMPANY:	SCOPE OF WORK:	PHASE:
Diaz-Yourman & Associates	Geotechnical	Phase II
PROJECT:		**DATE:**
Temscal Canyon Road - Dawson Canyon Road to 0.7 mile northerly (C5-0072)		March 7, 2016

TASK	PRINCIPAL ENGINEER	ASSOCIATE ENGINEER/PROJECT MANAGER	STAFF ENGINEER/ISA	STAFF ENGINEER II	STAFF ENGINEER/GEOLOGIST I	CADD	TECHNICAL EDITOR/WORD PROCESSOR							HOURS	COST
Total Manhours	2	12					2							16	
Geotechnical Review	2	12					2							16	$ 2,912