

AGREEMENT FOR REIMBURSEMENT

THIS AGREEMENT FOR REIMBURSEMENT (hereafter "Agreement") is made by and between the County of Santa Barbara, a political subdivision of the State of California (hereafter "County"), and Vintage Ranch Orcutt, LLC, a California limited liability company ("Owner"), as successor in interest to Mesa Verde Development Partners II, LLC, a California limited liability company (hereafter "Former Owner") wherein Owner agrees to provide and County agrees to accept the services specified herein.

WHEREAS, Owner owns certain real property identified by Assessor Parcel No. 101-570-045, and previously dedicated to the County as Open Space Areas certain adjacent real property identified by Assessor Parcel Nos. 101-570-042 and 101-570-043 pursuant to Instrument No. 2021-0083916 recorded on December 9, 2021 in Official Records (collectively, the "Project Site") in the unincorporated area of the County located approximately 0.5 acres south of Clark Avenue at the terminus of Black Oak Drive, in Key Site 7 of the Orcutt Community Plan ("OCP") area, Fourth Supervisorial District;

WHEREAS, on March 9, 2005, the Santa Barbara County Planning Commission (Planning Commission) approved a Vesting Tentative Tract Map (TM 14,556) to subdivide into 55 lots the 33.07-acre real property formerly identified by Assessor Parcel No. 100-400-008, including 52 lots for single family dwellings, two public open space lots totaling approximately 20 acres, and one private open space lot. Due to the downturn in the economy, this map was not recorded;

WHEREAS, on March 19, 2015, Former Owner filed an application for approval of a Vesting Tentative Tract Map (TM 14,812) in compliance with County Code Chapter 21 to subdivide the 33.07-acre property into: 1) 41 residential lots ranging in size from 9,685 sq. ft. to 17,575 sq. ft.; 2) two lots for private roads totaling 1.93 acres, and 3) two lots for open space totaling 18.46 acres on property zoned PRD (Case No. 15TRM-00000-00002/TM 14,812); a Final Development Plan in compliance with Section 35.82.080 of the County Land Use and Development Code on property zoned PRD to develop 41 market rate single family dwellings and associated infrastructure (Case No. 15DVP-00000-00002); a Minor Conditional Use Permit to allow for the construction of a retaining wall/privacy fence combination of up to 10 feet in height in compliance with Section 35.82.060 of the County Land Use and Development Code, on property zoned PRD (Case No. 15CUP-00000-00006); the naming of four private roads within the proposed tract in compliance with Chapter 35.76 of the County Land Use and Development Code, on property zoned PRD (Case No. 15RDN-00000-00002); and to accept the Addendum to the Orcutt Community Plan Environmental Impact Report (95-EIR-01, certified 7/22/97) pursuant to the State Guidelines for Implementation of the California Environmental Quality Act, hereinafter referred to as the "Project";

WHEREAS, on January 11, 2017, pursuant to its jurisdiction under County Code Chapter 21-6 and County Land Use and Development Code ("LUDC") Sections 35.82.080, Table 8-2; 35.80.020, Table 8-1; 35.76.050.C.2.a.3; and 35.80.020, the Planning Commission approved the Project with revisions to the Conditions of Approval. The Project was not appealed after the Planning Commission's approval. The time to appeal the Planning Commission's approval of the Project has expired;

WHEREAS, OCP Development Standard KS7-3 and KS7-4 require the Owner to construct a bridge or a box culvert if a span bridge is not feasible, on Black Oak Drive across Orcutt Creek ("Orcutt Creek Crossing Improvements"), funded in part through Orcutt Transportation Improvement Plan ("OTIP") fees;

WHEREAS, the OTIP does not reference the Orcutt Creek Crossing Improvements, nor does it include funding for any portion of the Orcutt Creek Crossing Improvements through collection of OTIP fees, which in turn gives rise to the need for County and Owner to agree on a mechanism for Owner's reimbursement of certain construction costs related to the Orcutt Creek Crossing Improvements as required by the OCP;

WHEREAS, County and Owner (individually a "Party" and collectively the "Parties") have agreed on the portion of the Orcutt Creek Crossing Improvements that will be funded by the County pursuant to this Agreement (hereinafter the "Structure"); and

WHEREAS, the Parties hereto desire to set forth each's obligations regarding (1) construction of the Structure on Black Oak Drive by Owner, and (2) reimbursement of Owner up to a certain dollar amount by County, in accordance with this Agreement and the Conditions of Approval on the Project.

NOW, THEREFORE, in consideration of the mutual covenants and conditions contained herein, the Parties agree as follows:

1. DESIGNATED REPRESENTATIVE

Chris Sneddon with Santa Barbara County Public Works, is the representative of County and will administer this Agreement for and on behalf of County. Quincy Daniels, with Coastal Community Builders, Inc. is the representative of the Owner. Changes in designated representatives shall be made only after advance written notice to the other Party.

2. NOTICES

Any notice or consent required or permitted to be given under this Agreement shall be given to the respective parties in writing, by personal delivery, or with postage prepaid by first class mail, registered or certified mail, or express courier service, as follows:

To County: Chris Sneddon
Santa Barbara County Public Works
Transportation Division
123 E. Anapamu St.
Santa Barbara, CA 93101
o. 805-568-3064

To Owner: Quincy Daniels, Senior Project Manager
330 James Way, Ste. 270
Pismo Beach, CA 93449
c. 805.264.3555
o. 805.556.3060 ext 114
CoastalCommunityBuilders.com

or at such other address or to such other person that the Parties may from time to time designate in accordance with this Notices section. Notices and consents under this Agreement shall be deemed delivered (a) if sent by first class mail, five (5) days following their deposit in the U.S. mail; (b) if by personal delivery, the day of such personal delivery; and (c) if delivered by overnight express courier service, the next business day after posting. This Notices section shall not be construed as meaning that either party agrees to service of process except as required by applicable law.

3. SCOPE OF SERVICES

Owner agrees to construct the Structure in accordance with EXHIBIT A attached hereto and incorporated herein by reference.

4. **TERM**

Owner shall complete the Work (defined in EXHIBIT A) prior to issuance of an occupancy clearance for the first residential structures. Unless terminated earlier pursuant to Section 18 or by law, the term of this Agreement shall expire thirty (30) days after the later to occur of (a) the County's funding of final payment to Owner under this Agreement, or (b) the date of issuance of an occupancy clearance for the first residential structures at the Project.

5. **COMPENSATION OF OWNER**

In full consideration for the Work, Owner shall be reimbursed for performance under this Agreement in accordance with the terms of EXHIBIT B attached hereto and incorporated herein by reference. Progress billing shall be made by invoice, which shall include the contract number assigned by County and which is delivered to the address given in Section 2 (Notices) above following completion of the project deliverables identified on Exhibit B-1. Unless otherwise specified on EXHIBIT B, payment shall be net thirty (30) days from presentation of any invoice. In no event shall Owner be paid an amount in excess of the Contract Maximum (see EXHIBIT B attached hereto and incorporated herein by reference), plus Owner's actual costs associated with any County-approved change order(s) that Owner completes.

6. **INDEPENDENT CONTRACTOR**

It is mutually understood and agreed that Owner (including any and all of its officers, agents, and employees), shall perform all of its services under this Agreement as an independent contractor as to County and not as an officer, agent, servant, employee, joint venture, partner, or associate of County. Furthermore, County shall have no right to control, supervise, or direct the manner or method by which Owner shall perform its work and function. However, County shall retain the right to administer this Agreement so as to verify that Owner is performing its obligations in accordance with the terms and conditions hereof, including but not limited to the Standard of Performance below. Owner understands and acknowledges that it shall not be entitled to any of the benefits of a County employee, including but not limited to vacation, sick leave, administrative leave, health insurance, disability insurance, retirement, unemployment insurance, workers' compensation and protection of tenure. Owner shall be solely liable and responsible for providing to, or on behalf of, its employees all legally-required employee benefits. In addition, Owner shall be solely responsible and save County harmless from all matters relating to payment of Owner's agents, contractors/subcontractors, and employees, including compliance with Social Security withholding and all other regulations governing such matters. It is acknowledged that during the term of this Agreement, Owner may be providing services to others unrelated to the County or to this Agreement.

7. **STANDARD OF PERFORMANCE**

Owner represents that any persons or entities with whom he contracts to perform the Work shall have the skills, expertise, and licenses/permits necessary to perform the Work required under this Agreement. Accordingly, such persons or entities shall perform all such Work in the manner and according to the standards observed by a competent practitioner of the same profession in which such persons or entities are engaged. All products of whatsoever nature, which Owner delivers to County pursuant to this Agreement, shall be completed using County and Caltrans design standards and construction practices as set forth in Caltrans Standard Plans and Specifications (2018) and County Engineering Design Standards (2011), and reflected in the approved project documents attached as EXHIBIT A-1. Owner shall correct or revise any construction related errors or omissions, at County's request without additional compensation. Permits necessary to complete the Work shall be obtained and maintained by Owner the reasonable costs of which shall be a component of the Contract Maximum.

8. DEBARMENT AND SUSPENSION

Owner certifies to County that he shall not contract with persons or entities for the Work who are debarred, suspended, or otherwise excluded from or ineligible for, participation in federal, state, or County government contracts.

9. TAXES

Owner shall pay all taxes, levies, duties, and assessments of every nature due in connection with installation and construction of the Work under this Agreement and shall make any and all payroll deductions required by law. County shall not be responsible for paying any taxes on Owner's behalf, and should County be required to do so by state, federal, or local taxing agencies, Owner agrees to promptly reimburse County for the full value of such paid taxes plus interest and penalty, if any. These taxes shall include, but not be limited to, the following: FICA (Social Security), unemployment insurance contributions, income tax, disability insurance, and workers' compensation insurance.

10. CONFLICT OF INTEREST

Owner certifies that it shall not contract with or employ persons or entities for the Work who have any employment or interest, direct or indirect, including any interest in any business, property, or source of income, which would conflict in any manner or degree with the performance of services required to be performed under this Agreement. Owner must promptly disclose to County, in writing, any potential conflict of interest. County retains the right to waive a conflict of interest disclosed by Owner if County determines it to be immaterial, and such waiver is only effective if provided by County to Owner in writing.

11. OWNERSHIP OF DOCUMENTS AND INTELLECTUAL PROPERTY

Owner and County shall have joint ownership of the following items incidental to this Agreement upon production, whether or not completed: all data collected, all documents of any type whatsoever, engineering plans and as-built drawings, including CAD files, all photos, design documents, sound or audiovisual recordings, software code, inventions, technologies, and other materials, and any material necessary for the practical use of such items, from the time of collection and/or production, whether or not performance under this Agreement is completed or terminated prior to completion. Owner shall not release any of such items to other parties except after prior written approval of County.

Unless otherwise specified in EXHIBIT A, Owner hereby assigns to County joint ownership rights to all copyright, patent, and other intellectual property and proprietary rights to all data, documents, reports, photos, designs, sound or audiovisual recordings, software code, inventions, technologies, and other materials prepared or provided by Owner pursuant to this Agreement (collectively referred to as "Copyrightable Works and Inventions"). County shall have the unrestricted authority to copy, adapt, perform, display, publish, disclose, distribute, create derivative works from, and otherwise use in whole or in part, any Copyrightable Works and Inventions. Owner agrees to take such actions and execute and deliver such documents as may be needed or requested by County to validate, protect and confirm the rights and assignments provided hereunder. Owner warrants that any Copyrightable Works and Inventions and other items provided under this agreement will not infringe upon any intellectual property or proprietary rights of any third party. Owner at its own expense shall defend, indemnify, and hold harmless County against any claim that any Copyrightable Works or Inventions or other items provided by Owner hereunder infringe upon intellectual or other proprietary rights of a third party, and Owner shall pay any damages, costs, settlement amounts, and fees (including attorneys' fees) that may be incurred by County in connection with any such claims. This Ownership of Documents and Intellectual Property provision shall survive expiration or termination of this Agreement.

12. NO PUBLICITY OR ENDORSEMENT

Owner shall not use County's name or logo or any variation of such name or logo in any publicity, advertising or promotional materials. Owner shall not use County's name or logo in any manner that would give the appearance that the County is endorsing Owner. Owner shall not in any way contract on behalf of or in the name of County. Owner shall not release any informational pamphlets, notices, press releases, research reports, or similar public notices concerning the County or its projects, without obtaining the prior written approval of County.

13. COUNTY PROPERTY AND INFORMATION

All of County's property, documents, and information provided for Owner's use in connection with the services shall remain County's property, and Owner shall return any such items whenever requested by County and whenever required according to the Termination section of this Agreement. Owner may use such items only in connection with the Work. Owner shall not disseminate any County property, documents, or information without County's prior written consent.

14. RECORDS, AUDIT, AND REVIEW

Owner shall keep such business records pursuant to this Agreement as would be kept by a reasonably prudent developer and shall maintain such records for at least four (4) years following the termination of this Agreement. All accounting records shall be kept in accordance with generally accepted accounting principles. County shall have the right to audit and review all such documents and records at any time during regular business hours or upon reasonable notice. In addition, if this Agreement exceeds ten thousand dollars (\$10,000.00), Owner shall be subject to the examination and audit of the California State Auditor, at the request of the County or as part of any audit of the County, for a period of three (3) years after final payment under the Agreement (Cal. Govt. Code Section 8546.7). Owner shall participate in any audits and reviews, whether by County or the State, and each Party shall bear its own costs related to same.

If federal, state or County audit exceptions are made relating to this Agreement, Owner shall reimburse all costs incurred by federal, state, and/or County governments associated with defending against the audit exceptions or performing any audits or follow-up audits, including but not limited to: audit fees, court costs, attorneys' fees based upon a reasonable hourly amount for attorneys in the community, travel costs, penalty assessments and all other costs of whatever nature. Immediately upon notification from County, Owner shall reimburse the amount of the audit exceptions and any other related costs directly to County as specified by County in the notification.

15. INDEMNIFICATION AND INSURANCE

A. Owner agrees to the indemnification and insurance provisions as set forth in EXHIBIT C attached hereto and incorporated herein by reference.

B. Owner shall require its contractor(s) performing work on the Project Site to agree to the indemnification and insurance provisions set forth in EXHIBIT C attached hereto and incorporated herein by reference.

16. NONDISCRIMINATION

County hereby notifies Owner that County's Unlawful Discrimination Ordinance (Article XIII of Chapter 2 of the Santa Barbara County Code) applies to this Agreement and is incorporated herein by this reference with the same force and effect as if the ordinance were specifically set out herein and Owner agrees to comply with said ordinance. Owner further agrees that persons or entities with whom he contracts shall also be required comply with such ordinance in regards to the Work.

17. NON-ASSIGNMENT

Owner shall not assign or transfer this Agreement or any of its rights or obligations under this Agreement without notice to County and appointment of a transferee subject to the terms of this Agreement. Upon delegation of the duties and obligations under this Agreement to a transferee, Owner shall be released from his obligations under this Agreement with respect to the Work so transferred arising subsequent to the effective date of such transfer if (i) the transferee or Owner has provided the County prior written notice of such transfer and (ii) the transferee has agreed in writing to be subject to the provisions of this Agreement.

18. TERMINATION

A. By County. County may, by written notice to Owner, terminate this Agreement in whole or in part at any time, whether for County's convenience, for nonappropriation of funds, or because of the failure of Owner to fulfill the obligations herein.

1. **For Convenience.** County may terminate this Agreement in whole or in part upon thirty (30) days written notice. During the thirty (30) day period, Owner shall, as directed by County, wind down and cease its services as quickly and efficiently as reasonably possible, without performing unnecessary services or activities and by minimizing negative effects on County from such winding down and cessation of services.

2. **For Nonappropriation of Funds.** Notwithstanding any other provision of this Agreement, in the event that no funds or insufficient funds are appropriated or budgeted by federal, state or County governments, or funds are not otherwise available for payments in the fiscal year(s) covered by the term of this Agreement, then County will notify Owner of such occurrence and County may terminate or suspend this Agreement in whole or in part, with or without a prior notice period. Upon receipt of notice of termination or suspension pursuant to this subsection, Owner shall immediately discontinue all services affected (unless the notice directs otherwise) and notify County as to the status of its performance. The date of termination shall be the date the notice is received by Owner, unless the notice directs otherwise.

3. **For Cause.** Should Owner default in the performance of this Agreement or materially breach any of its provisions, provided such default is not remedied by Owner within thirty (30) days of written notice to Owner, County may, at County's sole option, terminate or suspend this Agreement in whole or in part by written notice. Upon receipt of notice, Owner shall immediately discontinue all services affected (unless the notice directs otherwise) and notify County as to the status of its performance. The date of termination shall be the date the notice is received by Owner, unless the notice directs otherwise.

4. **County Completion of Work.** In the event the County terminates the Agreement pursuant to subsection A.1. or A.2. above, the County shall timely complete the Work itself at its own expense without unreasonable delay. The Parties recognize and expressly acknowledge that completion of the Work must occur prior to occupancy clearance for the first residential structures. In the event County performs the Work, in whole or in part, Owner shall grant to County easements or other permissions reasonably necessary for County to perform such Work.

B. By Owner. Should County fail to pay Owner all or any part of the payment set forth in EXHIBIT B, Owner may, at Owner's option terminate this Agreement if such failure is not remedied by County within thirty (30) days of written notice to County of such late payment.

C. Upon termination, Owner shall deliver to County copies of all data, estimates, graphs, summaries, reports, and all other property, records, documents or papers as may have been

accumulated or produced by Owner in performing this Agreement, whether completed or in process. Notwithstanding any other payment provision of this Agreement, County shall pay Owner for performance of the Work to the date of termination to include a prorated amount of compensation due hereunder less payments, if any, previously made. In no event shall Owner be paid an amount in excess of the Contract Maximum under this Agreement, plus any County-approved change orders completed prior to the date of termination. Owner shall furnish to County such financial information as in the judgment of County is necessary to determine the reasonable value of the services rendered by Owner. In the event of a dispute as to the reasonable value of the services rendered by Owner, the decision of County shall be final. The foregoing is cumulative and shall not affect any right or remedy which County or Owner may have in law or equity.

19. SECTION HEADINGS

The headings of the several sections, and any Table of Contents appended hereto, shall be solely for convenience of reference and shall not affect the meaning, construction or effect hereof.

20. SEVERABILITY

If any one or more of the provisions contained herein shall for any reason be held to be invalid, illegal or unenforceable in any respect, then such provision or provisions shall be deemed severable from the remaining provisions hereof, and such invalidity, illegality or unenforceability shall not affect any other provision hereof, and this Agreement shall be construed as if such invalid, illegal or unenforceable provision had never been contained herein.

21. REMEDIES NOT EXCLUSIVE

No remedy herein conferred upon or reserved to County is intended to be exclusive of any other remedy or remedies, and each and every such remedy, to the extent permitted by law, shall be cumulative and in addition to any other remedy given hereunder or now or hereafter existing at law or in equity or otherwise.

22. TIME IS OF THE ESSENCE

Time is of the essence in this Agreement and each covenant and term is a condition herein.

23. NO WAIVER OF DEFAULT

No delay or omission of County to exercise any right or power arising upon the occurrence of any event of default shall impair any such right or power, or shall be construed to be a waiver of any such default or an acquiescence therein; and every power and remedy given by this Agreement to County shall be exercised from time to time and as often as may be deemed expedient in the sole discretion of County.

24. ENTIRE AGREEMENT AND AMENDMENT

In conjunction with the matters considered herein, this Agreement contains the entire understanding and agreement of the Parties and there have been no promises, representations, agreements, warranties or undertakings by any of the Parties, either oral or written, of any character or nature hereafter binding except as set forth herein. This Agreement may be altered, amended or modified only by an instrument in writing, executed by the Parties to this Agreement and by no other means. Each Party waives their future right to claim, contest or assert that this Agreement was modified, canceled, superseded, or changed by any oral agreements, course of conduct, waiver or estoppel.

25. SUCCESSORS AND ASSIGNS

All representations, covenants and warranties set forth in this Agreement, by or on behalf of, or for the benefit of any or all of the Parties hereto, shall be binding upon and inure to the benefit of such Party, its successors and assigns.

26. COMPLIANCE WITH LAW

Owner shall, at its sole cost and expense, comply with all County, State and Federal ordinances and statutes now in force or which may hereafter be in force with regard to this Agreement. The judgment of any court of competent jurisdiction, or the admission of Owner in any action or proceeding against Owner, whether County is a Party thereto or not, that Owner has violated any such ordinance or statute, shall be conclusive of that fact as between Owner and County.

27. CALIFORNIA LAW AND JURISDICTION

This Agreement shall be governed by the laws of the State of California. Any litigation regarding this Agreement or its contents shall be filed in the County of Santa Barbara, if in state court, or in the federal district court nearest to Santa Barbara County, if in federal court.

28. EXECUTION OF COUNTERPARTS

This Agreement may be executed in any number of counterparts and each of such counterparts shall for all purposes be deemed to be an original; and all such counterparts, or as many of them as the Parties shall preserve undestroyed, shall together constitute one and the same instrument.

29. AUTHORITY

All signatories and parties to this Agreement warrant and represent that they have the power and authority to enter into this Agreement in the names, titles and capacities herein stated and on behalf of any entities, persons, or firms represented or purported to be represented by such entity(ies), person(s), or firm(s) and that all formal requirements necessary or required by any state and/or federal law in order to enter into this Agreement have been fully complied with. Furthermore, by entering into this Agreement, Owner hereby warrants that he shall not have breached the terms or conditions of any other contract or agreement to which Owner is obligated, which breach would have a material effect hereon.

30. SURVIVAL

All provisions of this Agreement which by their nature are intended to survive the termination or expiration of this Agreement shall survive such termination or expiration to the extent necessary for the enforcement of the parties' rights and obligations hereunder.

31. PRECEDENCE

In the event of conflict between the provisions contained in the numbered sections of this Agreement and the provisions contained in the Exhibits, the provisions of the Exhibits shall prevail over those in the numbered sections.

[Signature Pages Follow]

Agreement for Reimbursement between the County of Santa Barbara and Vintage Ranch Orcutt, LLC.

IN WITNESS WHEREOF, the Parties have executed this Agreement to be effective on the date executed by County.

ATTEST:

Mona Miyasato
County Executive Officer
Clerk of the Board

By: Sheila LaGuerra
Deputy Clerk

COUNTY OF SANTA BARBARA:

By: Joe Hartman
Chair, Board of Supervisors

Date: 7-12-22

RECOMMENDED FOR APPROVAL:

PUBLIC WORKS

By: [Signature]
Department Head

OWNER:

VINTAGE RANCH ORCUTT, LLC,
a California limited liability company

By: [Signature]
Gary H. Grossman, Manager

APPROVED AS TO FORM:

Rachel Van Mullem
County Counsel

DocuSigned by:
By: [Signature]
2DC569DD4D094B4...
Deputy County Counsel

APPROVED AS TO ACCOUNTING FORM:

Betsey M. Schaffer, CPA
Auditor-Controller

DocuSigned by:
By: [Signature]
D25019E2AF094BE...
Deputy

APPROVED AS TO FORM:

RISK MANAGEMENT

DocuSigned by:
By: [Signature]
DC240AC1E64247D...
RISK Management

EXHIBIT A

STATEMENT OF WORK

I. THE WORK

1. Owner shall do the following: (a) cause the construction of the Structure as shown in EXHIBIT A-1, (County-approved project documents), attached hereto and incorporated herein by reference, according to approved specifications; and (b) comply with all necessary County and/or environmental permits throughout construction of the Structure (the "Work").

II. PERFORMANCE OF THE WORK

2. Owner shall submit plans and specifications for the Structure to be approved by Public Works. The County-approved plans and specifications shall be attached as EXHIBIT A-1.

3. Owner shall build or cause to be built the Structure as shown in EXHIBIT A-1, and shall furnish all labor, equipment and materials necessary to perform and complete the Work. Owner shall complete such Work in a workmanlike manner in compliance with all County-approved specifications for such Work set forth in EXHIBIT A-1 to the satisfaction of the Santa Barbara County Director of Public Works.

4. Owner shall ensure all permits necessary for the Work are obtained in accordance with applicable County permitting requirements. County shall act diligently and without unreasonable delay in the review of said permit applications. Nothing herein shall be deemed to be a waiver or infringement of the County's police power, nor shall any part or all of this Agreement be construed on the part of the County as an obligation to grant any permits, entitlements, or approvals.

5. Any Work performed by Owner or his agents under this Agreement shall be done in compliance with all regulations governing engineering and construction standards and specifications, including California Department of Transportation Standard Specifications, design review and right of way, and Local Assistance Procedures Manual, the Santa Barbara County Engineering Design Standards; and all uniform codes adopted by the State of California and subsequently adopted by the County, including local amendments to those codes pursuant to those codes; and the Project's Conditions of Approval.

6. Owner shall be responsible to otherwise satisfy the conditions of the Project.

7. Owner understands that no permits will be issued until all bonds, insurance certificates and other required certifications have been provided to County as required.

8. Owner guaranties that he shall engage a construction management specialist that has the skills, expertise, and licenses necessary to perform the Work required under this Agreement. Owner shall provide the name and contact information of such construction management specialist for review and approval by the County's Designated Representative prior to commencement of the Work. Accordingly, Owner and his agents shall perform the Work in the manner and according to the standards observed by a competent person engaged in the design and construction of this type of Work. The Work shall be prepared in a first class and workmanlike manner and shall conform to the standards of quality normally observed by a person engaged in the design and construction of this type of Work. Owner shall correct or revise any errors or omissions, at County's request without additional compensation. Permits and/or licenses shall be obtained and maintained by Owner through completion of the Project without additional compensation. Pursuant to Section 18 of the Agreement, the County may terminate the Agreement and complete the Work itself at its own expense. If the County terminates the Agreement

pursuant to Section 18, unless the Owner has abandoned the Project, as determined by the County, the County shall timely complete the Work without unreasonable delay. In such event, the County shall not be liable to Owner for any reimbursement regarding the Work, except for any portion of the Work completed by Owner prior to the County's provision of notice of termination of the Agreement. In the event County performs the Work, in whole or in part, Owner shall grant to County easements or other permissions reasonably necessary for County to perform such Work.

9. County's reimbursement for the Work under EXHIBIT B (or the completion of the Work by County in accordance with this EXHIBIT A) shall fully fulfill the obligations of County regarding the Structure.

III. PUBLIC WORKS

10. Any work performed by Owner or his agents shall be performed in the same manner and subject to the same requirements as would be applicable to the County or such other public agency should it have undertaken such construction of the Work, including, but not limited to, the Local Agency Public Construction Act (Public Contracts Code sections 20100 *et seq.*), the Uniform Public Construction Cost Accounting Act (Public Contracts Code sections 22000 *et seq.*), dispute resolution (Public Contracts Code section 9201 *et seq.*), and the payment of the prevailing wages pursuant to Labor Code section 1770 *et seq.*

11. Owner warrants that he understands that the Work is a "public work" as defined in Division 2, Part 7, Chapter 1 of the Labor Code to which Labor Code section 1771 Requirement of Prevailing Local Rate for Work under Contract applies.

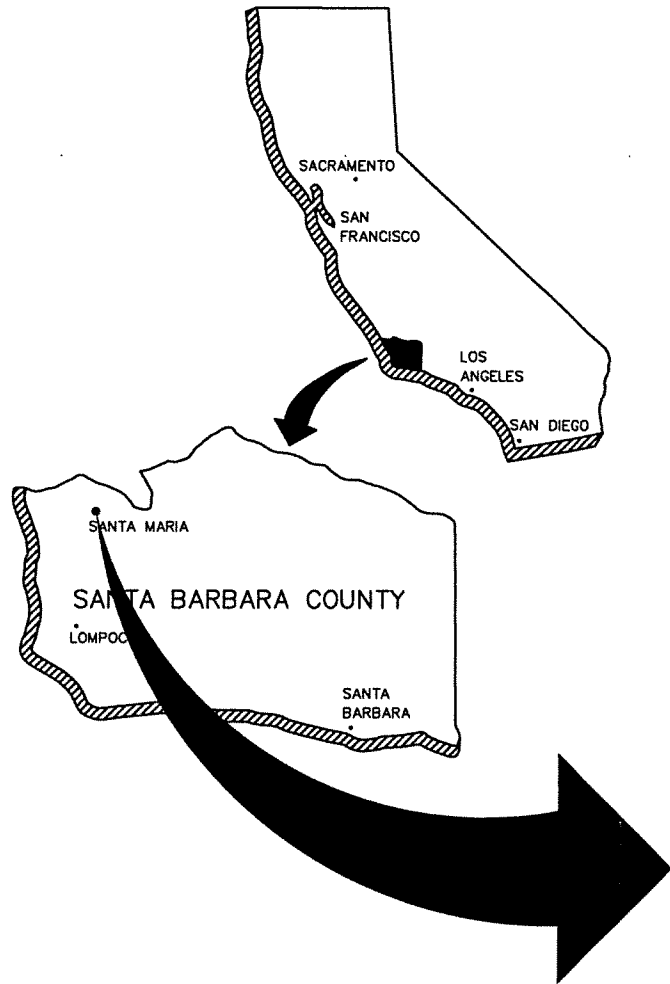
12. Owner shall identify in the notice inviting bids for the Work that the Work is a "public work" as defined in Division 2, Part 7, Chapter 1 of the Labor Code to which Labor Code Section 1771 Requirement of Prevailing Local Rate for Work applies and shall state the requirement for contractors and subcontractors to pay at least the prevailing wage for performance of such Work.

IV. ENVIRONMENTAL MATTERS

13. Owner is responsible for complying with all necessary environmental permits throughout construction of the Structure, the reasonable costs of which are a component of the Contract Maximum.

EXHIBIT A-1
APPROVED PROJECT DOCUMENTS

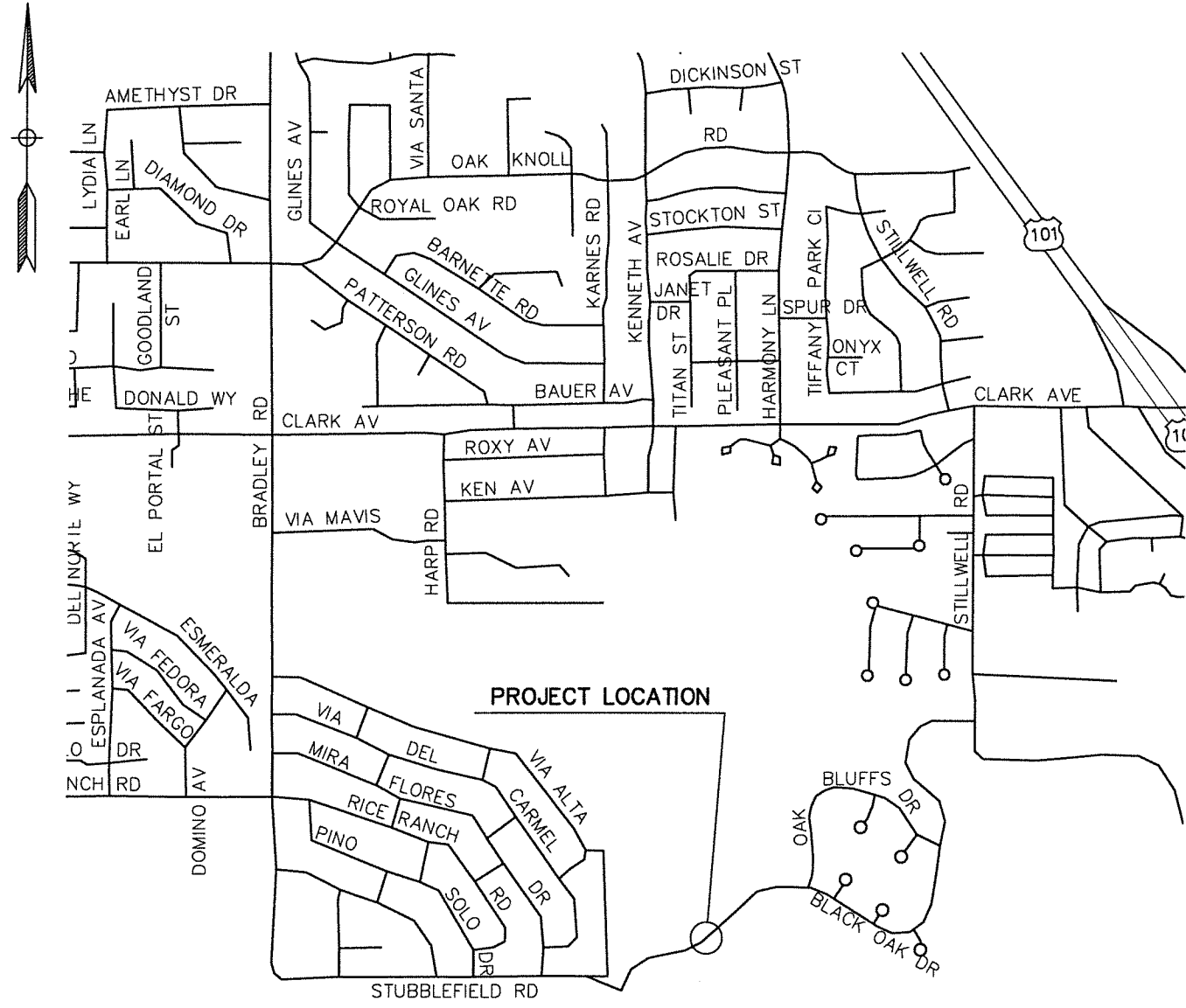
(attached)



APPROVED - CHAIRMAN, BOARD OF SUPERVISORS DATE 7/12/22
 DocuSigned by: [Signature] 6/29/2022 1:58:51 PM PDT
 2C7CB1B30C5741F
 APPROVED - DIRECTOR OF PUBLIC WORKS DATE
[Signature] 06/24/22
 APPROVAL RECOMMENDED - ENGINEERING SECTION MANAGER DATE

INDEX TO SHEETS

PAGE	SHEET	DESCRIPTION
1	TS	TITLESHEET
2	SD	SURVEY DATA
3	L-1	LAYOUT
4	C-1	DETAILS
5	C-2	DETAILS



VICINITY MAP
NOT TO SCALE

TITLE SHEET
TS



NOTE:
IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO WORK WITH THE LOCAL UTILITY COMPANIES TO LOCATE ALL UNDERGROUND UTILITY SERVICE LINES WITHIN THE PROJECT LIMITS. CALL UNDERGROUND SERVICE ALERT AT (800) 422-4133 OR 811 A MINIMUM OF TWO WORKING DAYS PRIOR TO ANY EXCAVATION WORK.



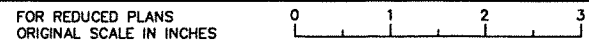
PROJECT ENGINEER:
Chris Sneddon 6/24/22
DATE

COUNTY OF SANTA BARBARA
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION DIVISION

DESIGN BY:
L. CADENA
CHECKED BY:
D. ESTORGA
DRAWN BY:
L. CADENA
CONSTRUCTABILITY REVIEW BY:
NAME

SCALE: NTS
PROJECT NO.: 862423

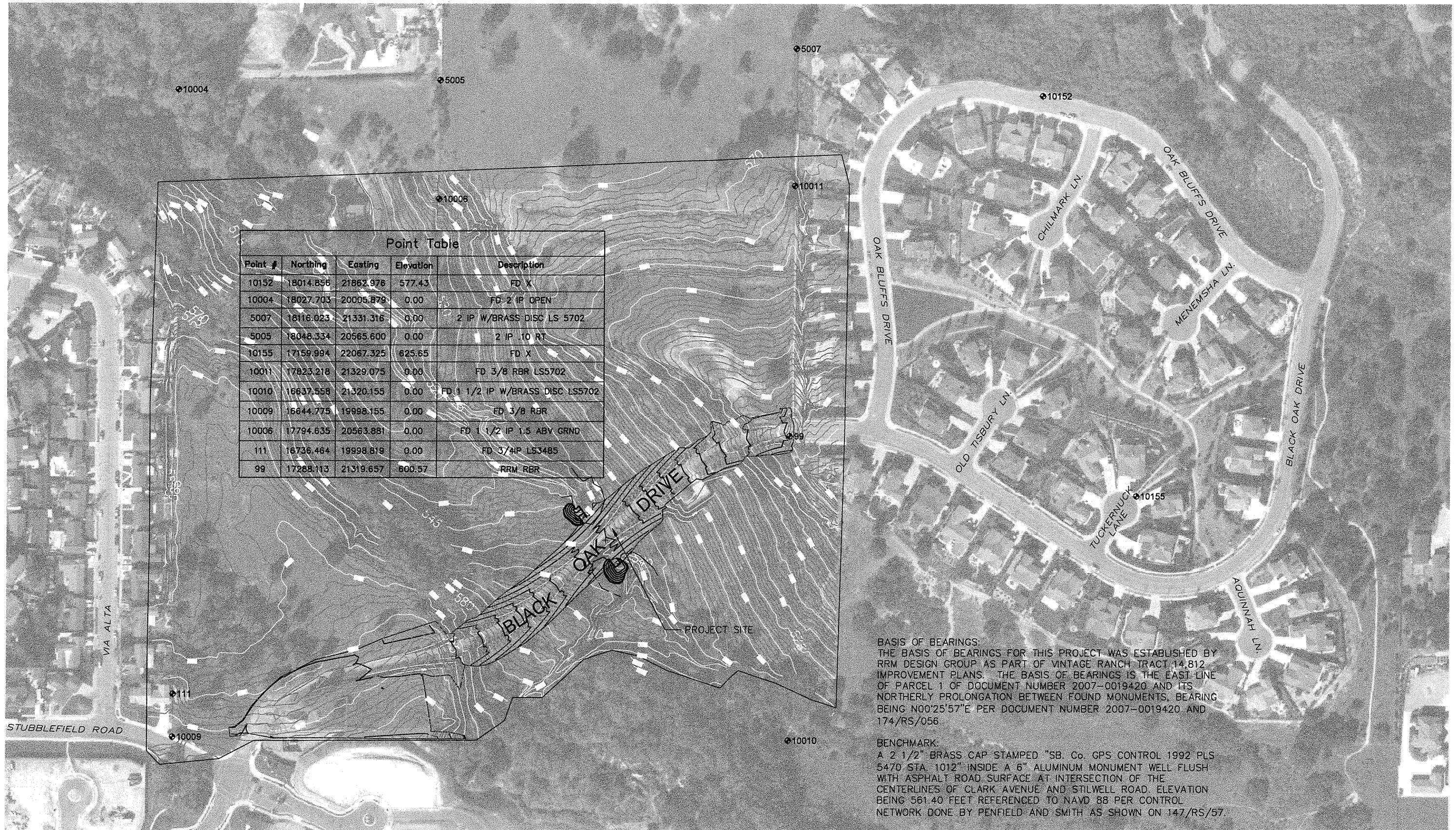
SHEET NO. 1 OF 5
FILE NO.



DISREGARD PRINTS BEARING EARLIER REVISION DATES

G:\Transportation\Projects\862423 Black Oak Drive Under Crossing\CAD\Archive\862423 BLACK OAK UNDERCROSSING 2022-05-03.dwg, TS, Jun 16, 2022 3:44pm, dgarcia

COUNTY OF SANTA BARBARA
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION DIVISION



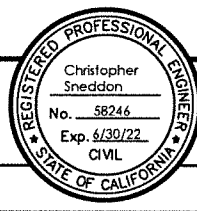
Point Table				
Point #	Northing	Easting	Elevation	Description
10152	18014.856	21862.976	577.43	FD X
10004	18027.703	20005.879	0.00	FD 2 IP OPEN
5007	18116.023	21331.316	0.00	2 IP W/BRASS DISC LS 5702
5005	18048.334	20565.600	0.00	2 IP 10 RT
10155	17159.994	22067.325	625.65	FD X
10011	17823.218	21329.075	0.00	FD 3/8 RBR LS5702
10010	16637.558	21320.155	0.00	FD 1 1/2 IP W/BRASS DISC LS5702
10009	16644.775	19998.155	0.00	FD 3/8 RBR
10006	17794.635	20563.881	0.00	FD 1 1/2 IP 1.5 ABY GRND
111	16736.464	19998.819	0.00	FD 3/8IP LS3485
99	17288.113	21319.657	800.57	RRM RBR

BASIS OF BEARINGS:
 THE BASIS OF BEARINGS FOR THIS PROJECT WAS ESTABLISHED BY RRM DESIGN GROUP AS PART OF VINTAGE RANCH TRACT 14,812 IMPROVEMENT PLANS. THE BASIS OF BEARINGS IS THE EAST LINE OF PARCEL 1 OF DOCUMENT NUMBER 2007-0019420 AND ITS NORTHERLY PROLONGATION BETWEEN FOUND MONUMENTS, BEARING BEING N00°25'57"E PER DOCUMENT NUMBER 2007-0019420 AND 174/RS/056.

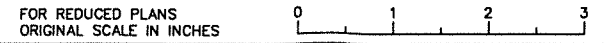
BENCHMARK:
 A 2 1/2" BRASS CAP STAMPED "SB. Co. GPS CONTROL 1992 PLS 5470 STA. 1012" INSIDE A 6" ALUMINUM MONUMENT WELL FLUSH WITH ASPHALT ROAD SURFACE AT INTERSECTION OF THE CENTERLINES OF CLARK AVENUE AND STILWELL ROAD. ELEVATION BEING 561.40 FEET REFERENCED TO NAVD 88 PER CONTROL NETWORK DONE BY PENFIELD AND SMITH AS SHOWN ON 147/RS/57.

**SD-1
SURVEY DATA**

CONSTRUCTION STARTED:		PROJECT ENGINEER:	Chris Sneddon	DATE:	6/24/22
CONSTRUCTION COMPLETED:					
RECORD DRAWING APPROVED BY:					
SURVEY CHECKED BY:					



**COUNTY OF SANTA BARBARA
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION DIVISION**

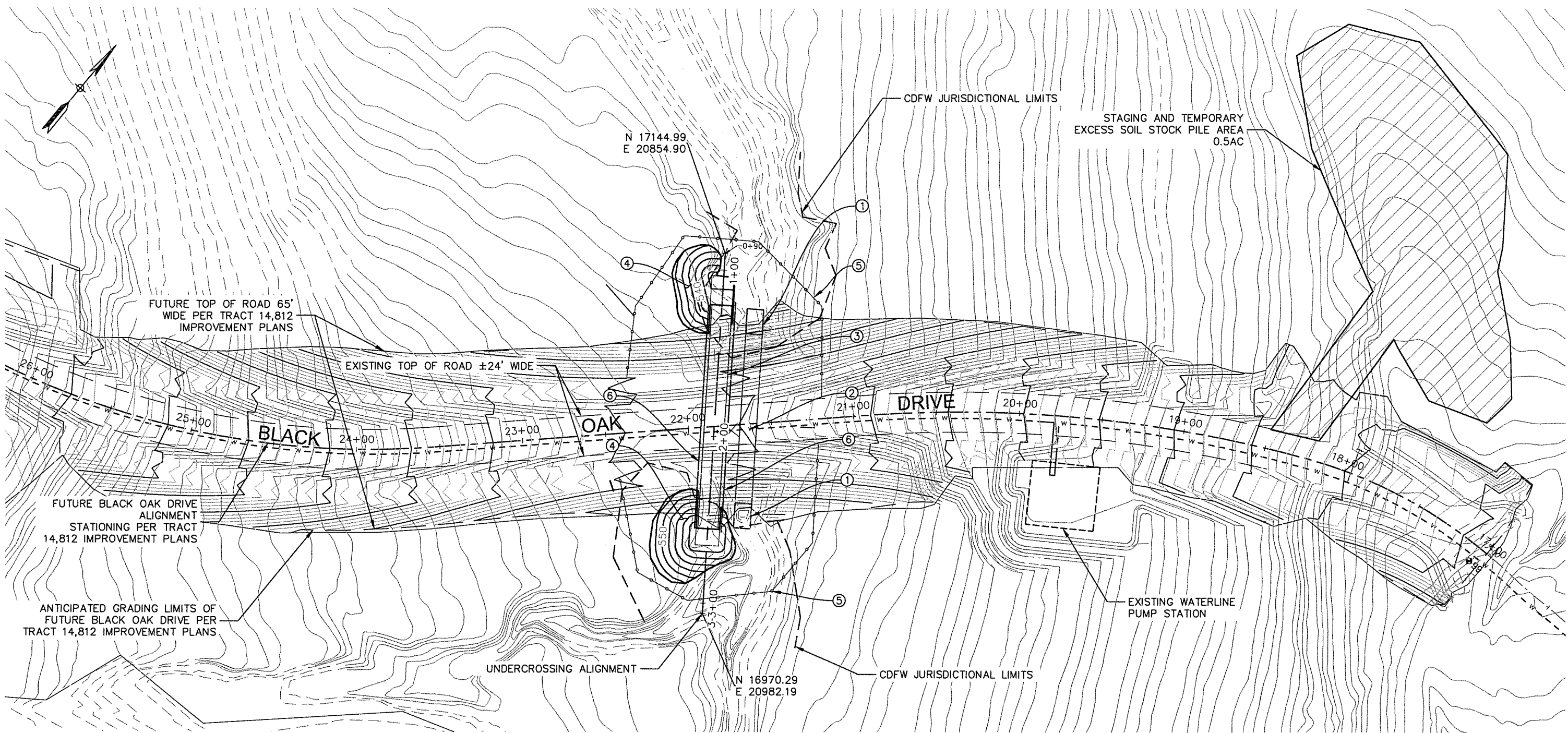


DESIGN BY:	L. CADENA	CHECKED BY:	D. ESTORGA
DRAWN BY:	L. CADENA	CONSTRUCTABILITY REVIEW BY:	NAME

SCALE:	1" = 100'
PROJECT NO.:	862423

SHEET NO.:	2 OF 5
FILE NO.:	

DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)
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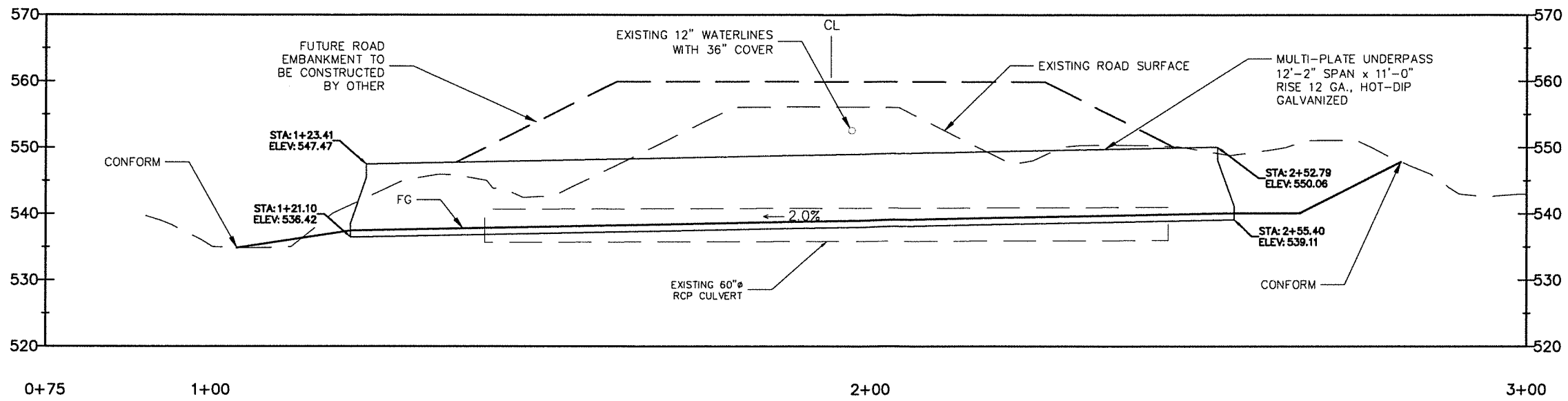
CONSTRUCTION NOTES:

- ① PROTECT IN PLACE AND EXTEND 15' OF EXISTING 60" RCP PIPE. CONNECT NEW RCP TO EXISTING RCP USING SBCO 3-115.
- ② PROTECT EXISTING 12" DIP WATERLINE IN-PLACE.
- ③ INSTALL MULTI PLATE ARCH CULVERT PER CONTECH SHEETS 1-4.
- ④ APPLY HYDROSEED AND EROSION CONTROL (JUTE MESH) TO GRADING AREA OR AS DIRECTED BY THE ENGINEER EXCEPT FOR WALKING PAD..
- ⑤ INSTALL TEMPORARY SILT FENCE.
- ⑥ TEMPORARY SHORING FOR CULVERT TRENCH AS REQUIRED. SEE CONTECH SHEETS 1-4 FOR EXCAVATION AND BACKFILL LIMITS.

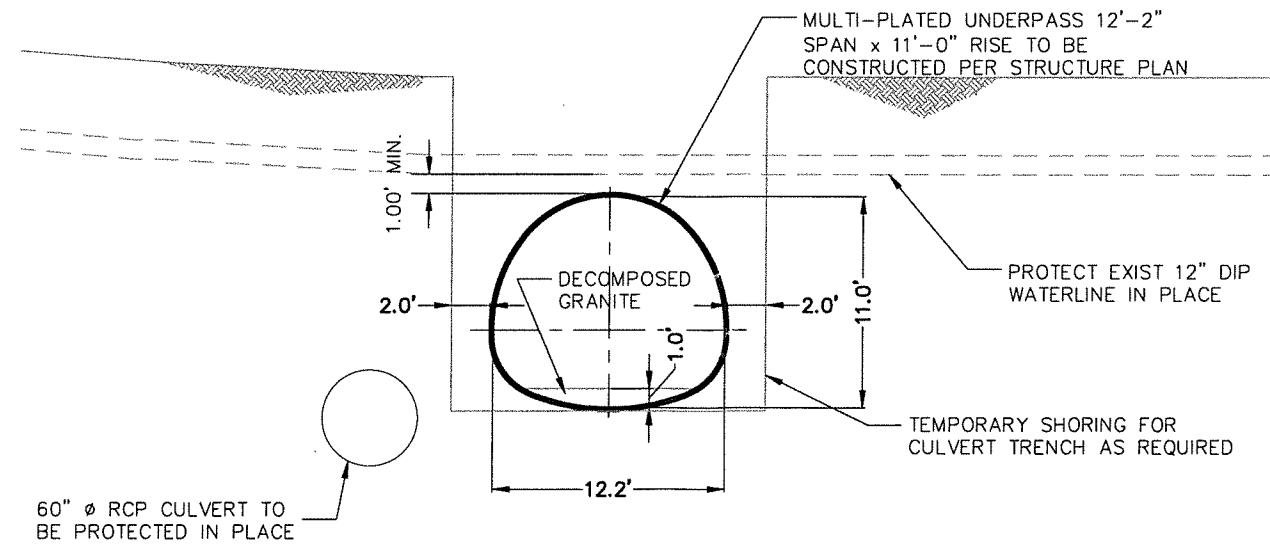
LAYOUT
L-1

CONSTRUCTION STARTED:	PROJECT ENGINEER: <i>Chris Sneddon</i>	DATE 6/24/22		COUNTY OF SANTA BARBARA DEPARTMENT OF PUBLIC WORKS TRANSPORTATION DIVISION		DESIGN BY: L. CADENA	CHECKED BY: D. ESTORGA	SCALE 1" = 30'	PROJECT NO. 862423	SHEET NO. 3 OF 5
CONSTRUCTION COMPLETED:	RECORD DRAWING APPROVED BY:	DATE		FOR REDUCED PLANS ORIGINAL SCALE IN INCHES	0 1 2 3	DRAWN BY: L. CADENA	CONSTRUCTABILITY REVIEW BY: NAME	DISREGARD PRINTS BEARING EARLIER REVISION DATES	REVISION DATES (PRELIMINARY STAGE ONLY)	

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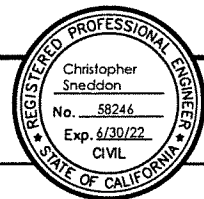
UNDERPASS PROFILE
SCALE: 1"=10'



CONSTRUCTION DETAILS
C-1

CONSTRUCTION STARTED:
CONSTRUCTION COMPLETED:
RECORD DRAWING APPROVED BY:
SURVEY CHECKED BY:

PROJECT ENGINEER:
Chris Sneddon
DATE: 6/24/22



COUNTY OF SANTA BARBARA
DEPARTMENT OF PUBLIC WORKS
TRANSPORTATION DIVISION

DESIGN BY:
L. CADENA
DRAWN BY:
L. CADENA

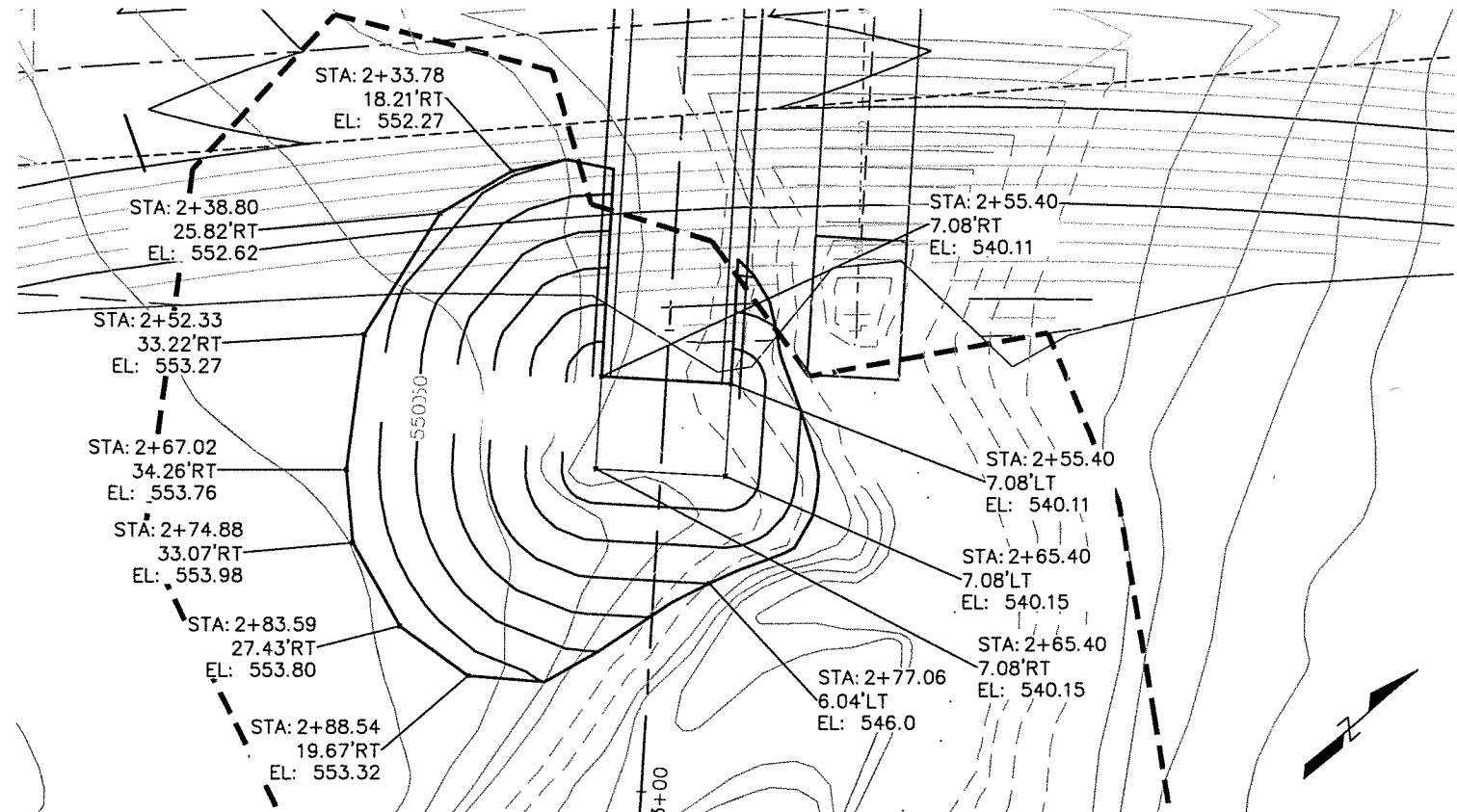
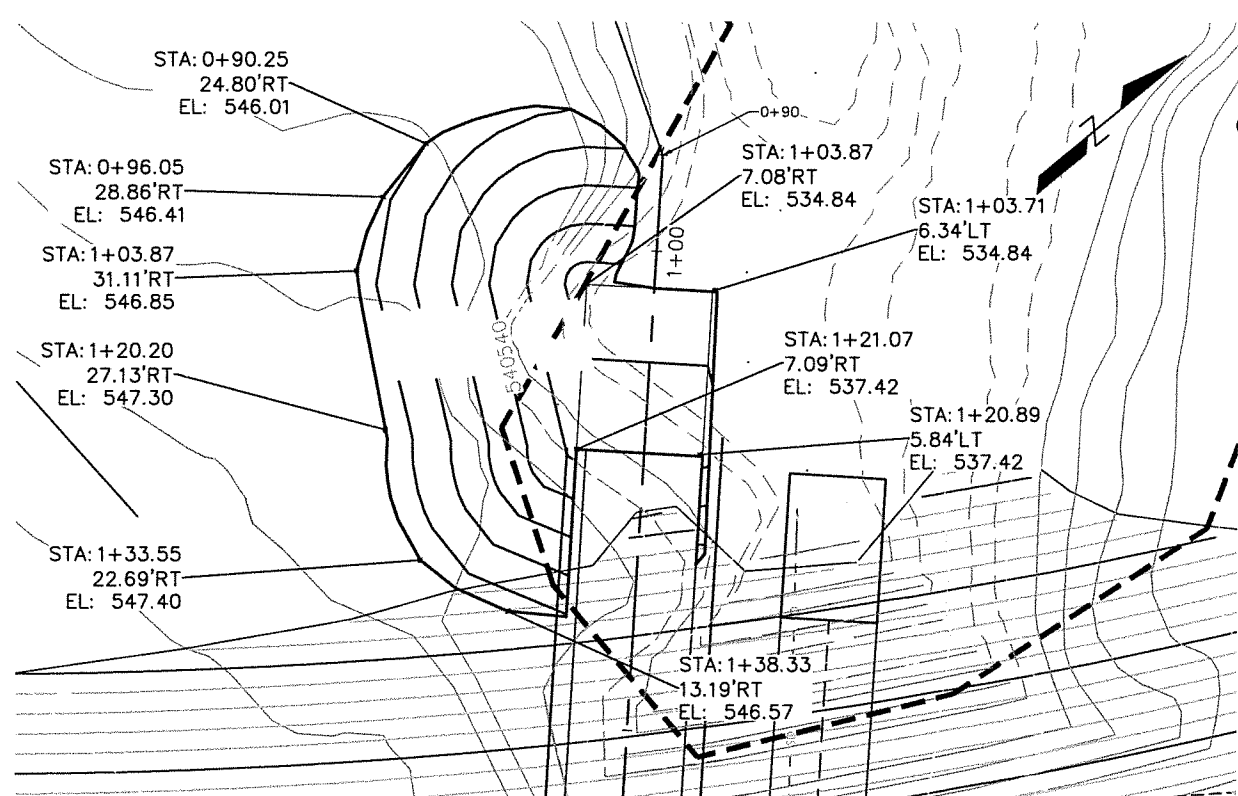
CHECKED BY:
D. ESTORGA
CONSTRUCTABILITY REVIEW BY:
NAME

SCALE: AS SHOWN
PROJECT NO.: 862423

SHEET NO.: 4 OF 5
FILE NO.:

FOR REDUCED PLANS ORIGINAL SCALE IN INCHES
0 1 2 3

DISREGARD PRINTS BEARING EARLIER REVISION DATES
REVISION DATES (PRELIMINARY STAGE ONLY)



GRADING PLAN
G-1

CONSTRUCTION STARTED: _____
 CONSTRUCTION COMPLETED: _____
 RECORD DRAWING APPROVED BY: _____
 SURVEY CHECKED BY: _____

PROJECT ENGINEER:
Chris Sneddon 6/24/22
 DATE



COUNTY OF SANTA BARBARA
 DEPARTMENT OF PUBLIC WORKS
 TRANSPORTATION DIVISION

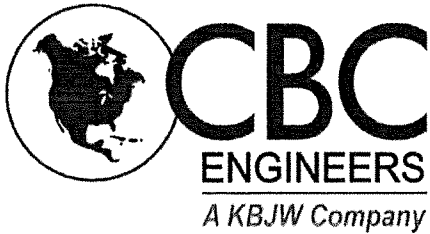
FOR REDUCED PLANS ORIGINAL SCALE IN INCHES 0 1 2 3

DESIGN BY: D. GONZALEZ
 CHECKED BY: D. ESTORGA
 DRAWN BY: D. GONZALEZ
 CONSTRUCTABILITY REVIEW BY: NAME

SCALE: AS SHOWN
 PROJECT NO.: 862423

SHEET NO. 5 OF 5
 FILE NO.

DISREGARD PRINTS BEARING EARLIER REVISION DATES
 REVISION DATES (PRELIMINARY STAGE ONLY)



Dayton Office

ENGINEERING REPORT

TO: Contech Engineered Solutions LLC
9025 Centre Pointe Drive
Suite 400
West Chester, OH 45069

DATE: May 23, 2022

CBC NO: 24985D-1-0522-05

ATTN: Mr. Zach Moore, P.E.
Project Engineer

Re: Review of AASHTO LRFD Calculations and Shop Drawings for a Proposed MULTI-PLATE Underpass Structure (703615); Blacks Road Crossing, Santa Maria, California; CBC Report No. 24985D-1-0522-05

The purpose of this report is to provide an evaluation of the AASHTO structural calculations and shop drawings for the above referenced proposed MULTI-PLATE underpass structure (6" x 2" galvanized steel corrugation). The structure is proposed to be a 12'-2" span by 11'-0" rise underpass structure with 12 gage (0.111") plate thickness. The height of cover over the structure is reported to vary from a minimum of 2.0 feet to a maximum of 18.0 feet at 120 pcf with HL-93 live load at the ground surface. The AASHTO LRFD calculations have been performed for these minimum and maximum cover heights. We have evaluated the structural calculations and the shop drawings, and agree they conform to accepted industry standards for this structure type. We have not made an independent verification of the data used to perform the design calculations, and understand all initial assumptions and data are correct as presented to us. Others are responsible for all other aspects of the design of the structure, including but not limited to hydraulics, scour/abrasion/corrosion evaluation and remedial measures, end treatments, bedding/backfill evaluation, settlement, any required temporary bracing, and structure connections, and the only responsibility of CBC Engineers & Associates, Ltd. is as listed above.

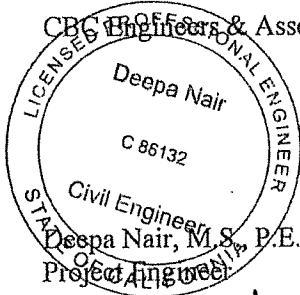
It is the responsibility of the Contractor to ensure that the select backfill around the structure is the proper material type and is placed in accordance with the project specifications, the manufacturer's requirements, and accepted industry standards. The backfill differential level between sides of the structure should not exceed 16 inches. Contractor is also responsible for any required bracing/shoring to prevent any distortion of the structure during installation and backfilling, and for knowing and following all applicable safety requirements. Care must be exercised to maintain balanced loading on the structure during any backfilling or construction operations, and the structure must be properly backfilled to

maintain this balanced loading. The dimension of the structure should be within 2% of the design dimensions at all locations during and at the completion of installation, and this should be verified by field measuring during construction. The foundation soil and embankment material below and beside the proposed structure must be a uniform non-yielding material meeting the project requirements (by others) with a minimum allowable bearing capacity of at least 4000 psf. This must be verified in the field by a geotechnical engineer before the installation of the structure. Scour is not addressed herein and is the responsibility of others than CBC Engineers & Associates, Ltd.

We have accordingly signed and sealed the shop drawings, and they are attached along with the calculations. Our professional services have been performed and our findings obtained in accordance with generally accepted engineering principles and practices. No other warranty, express or implied, is made. This report has been prepared for the exclusive use of Contech Engineered Solutions LLC and its designees for specific application to the project herein described. Anyone reviewing this report must interpret and draw their own conclusions regarding specific construction techniques and methods chosen. CBC Engineers & Associates, Ltd. is not responsible for the independent conclusions, opinions or recommendations made by others. If you have any questions, please contact us.

Respectfully submitted,

CBC Engineers & Associates, Ltd.



Deepa Nair
5/23/2022

Mitchell T. Hardert, P.E.
Chief Engineer

DN/MTH/mt

ec: Client (zach.moore@conteches.com)
ec: Darrell Sanders (darrell.sanders@conteches.com)
ec: Melinda Fugate (melinda.fugate@conteches.com)

1-File

APPENDIX A
CALCULATIONS

Structural Design Check for Corrugated Steel Plate Pipe

Per AASHTO LRFD Bridge Design Specifications, Section 12, 9th Edition 2020

Project Name: Blacks Road UndercrossingCRM #: 703,615Location: Santa Maria, CADate: 5/23/2022

Structure Shape	<input type="text" value="Pipe Arch"/>		Select Shape Below
Corrugation Type	<input type="text" value="6 X 2 in."/>		
Loading Case	<input type="text" value="1"/>	(lanes)	<input 11'-0"="" type="text" value="12'-2" x=""/>
Gage	<input type="text" value="12"/>		
Bolting Type	<input type="text" value="4 Bolts/ft."/>		
H, Height of Cover	<input type="text" value="2.0"/>	(ft.)	S, Span <u>146</u> (in.)
SB, Maximum Soil Bearing Pressure	<input type="text" value="4.00"/>	(ksf)	Note: Please enter Soil Bearing Pressure value in space at left
ρ , Density of Cover Material (120 pcf default)	<input type="text" value="0.12"/>	(kcf)	(Table 3.5.1-1)
Design Truck (LRFD Highway Load is HL-93)	<input type="text" value="HL-93"/>		

A_w , Pipe Wall Area	<u>1.556</u>	(sq. in./ft.)	(Table A12-3)
I, Moment of Inertia	<u>0.0604</u>	(in. ⁴ /in.)	(Table A12-3)
r, Radius of Gyration	<u>0.682</u>	(in.)	(Table A12-3)
R _t , Top Radius	<u>67</u>	(in.)	(See Shapes Sheet)
R _c , Corner Radius	<u>38</u>	(in.)	(See Shapes Sheet)
E_m , Modulus of Elasticity	<u>29000</u>	(ksi)	(Table A12-10)
F_u , Tensile Strength	<u>45</u>	(ksi)	(Table A12-10)
F_y , Yield Strength	<u>33</u>	(ksi)	(Table A12-10)
L_p , Surface Load Contact Length	<u>0.833</u>	(ft.)	(3.6.1.2.5)
w_t , Surface Load Contact Width	<u>1.667</u>	(ft.)	(3.6.1.2.5)

HS20 Controls

s_w , Wheel	<u>6.00</u>	(ft)	
s_a , axle spacing	<u>14.00</u>	(ft)	
LLDF	<u>1.15</u>		(Table 3.6.1.2.6a-1)
H_{int-t} , Wheel Interaction Depth	<u>3.13</u>	(ft)	(3.6.1.2.6b-1)
W_w , live load patch length	<u>4.70</u>	(ft)	(3.6.1.2.6b-3)
$W_w = w_t/12 + s_w + LLDF \times H + 0.06 D/12$			
H_{int-p} , Axle Interaction Depth	<u>11.45</u>		
Number of Interacting Wheels	<u>1</u>		
DL, Design Lane Load	<u>0.64</u>	(klf)	(3.6.1.2.4)
l_w , live load patch length	<u>3.13</u>	(ft)	(3.6.1.2.6b-5)
$l_w = l/12 + LLFD(H)$			
A_{LL} , Area of live load patch at H	<u>14.72</u>	(ft ²)	(3.6.1.2.6a-1)
FFR, Flexibility Factor Required	<u>30</u>	(in./kip)	(Table 12.5.6.1-1)
k, Soil Stiffness Factor	<input type="text" value="0.22"/>		(12.7.2.4)
IM, Dynamic Load Factor	<u>24.75</u>	(%)	(3.6.2.2-1)
$IM = 33(1.0 - 0.125H)$			
m, Multiple Presence Factor	<u>1.2</u>		(Table 3.6.1.1.2-1)

Structural Design Check for Corrugated Steel Plate Pipe

Per AASHTO LRFD Bridge Design Specifications, Section 12, 9th Edition 2020



P, Design Truck Load (HS20)	<input type="text" value="16"/>	(kip/wheel group)		(3.6.1.2.2)
PT, Design Tandem Load	<input type="text" value="12.5"/>	(kip/wheel group)		(3.6.1.2.3)
SS, Seam Strength	<input type="text" value="43"/>	(kip/ft.)		(Table A12-8)
Φ_w , Wall Area and Buckling	<input type="text" value="1.00"/>			(Table 12.5.5-1)
Φ_{SS} , Seam Strength	<input type="text" value="0.67"/>			(Table 12.5.5-1)
Φ_{BP} , Backfill Bearing Resistance	<input type="text" value="1.00"/>			(Table 12.5.5-1)
η_{EV} , Redundancy Factor	<input type="text" value="1.05"/>			(1.3.4, 12.5.4)
η_{LL} , Redundancy Factor	<input type="text" value="1.00"/>			(1.3.4, 12.5.4)
γ_{EV} , Dead Load Factor	<input type="text" value="1.95"/>			(Table 3.4.1-2)
γ_{LL} , Live Load Factor	<input type="text" value="1.75"/>			(Table 3.4.1-1)
$P_L = (P(1+IM/100)m)/ALL$	<input type="text" value="1.63"/>	(ksf)		(3.6.1.2.6b-7)
P_{FD} , Factored Dead Load Crown Pressure $= \eta_{EV} \gamma_{EV} \times H \times p$	<input type="text" value="0.4914"/>	(ksf)		(3.5.1)
P_{FL} , Factored Live Load Crown Pressure $= \eta_{LL} \gamma_{LL} P_L$	<input type="text" value="2.85"/>	(ksf)		
P_{DL} , Factored Design Lane Load $= \eta_{LL} \gamma_{LL} m DL / 10$	<input type="text" value="0.134"/>	(ksf)		
Factored Thrust (standard structures)				
F_{min} = greater of 15/S or 1	<input type="text" value="1.00"/>	(dimensionless)		(12.7.2.2-4)
F_1 = greater of 0.75S/lw or F_{min}	<input type="text" value="2.91"/>	(dimensionless)		(12.7.2.2-3)
C_L , Width of Culvert on which LL is applied $= lw \leq S$	<input type="text" value="3.13"/>	(ft)		(12.7.2.2-2)
T_L , Factored Thrust $= (P_{FD} + P_{DL})S / 2 + (P_{FL} C_L F_1) / 2$	<input type="text" value="16.802"/>	(kip/ft)		(12.7.2.2-1)
EV, Vertical Earth Load $EV = pH$	<input type="text" value="0.24"/>	(ksf)		(3.5.1)
R_w , Wall Resistance $R_w = \Phi_w F_y A_w$	<input type="text" value="51.348"/>	(kip/ft.)	> T	<input type="text" value="16.802"/> OK (12.7.2.3-1)
F_{cr} , Critical Buckling Stress	<input type="text" value="41.773"/>	(ksi)		
if: $S < \frac{r}{k} \sqrt{\frac{24 E_m}{F_u}}$	Then:	$F_{cr} = F_u - \frac{(F_u k S)^2}{48 E_m}$		(12.7.2.4-1)
But if: $S > \frac{r}{k} \sqrt{\frac{24 E_m}{F_u}}$	Then:	$F_{cr} = \frac{12 E_m}{(r/k)^2}$		(12.7.2.4-2)
R_b , Buckling Resistance $R_b = \Phi_w F_{cr} A_w$	<input type="text" value="41.773"/>	(ksi)	>	<input type="text" value="33"/>
R_b , Buckling Resistance $R_b = \Phi_w F_{cr} A_w$	<input type="text" value="51.348"/>	(kip/ft.)	> T	<input type="text" value="16.802"/> OK (12.7.2.3-1)
FF, Flexibility Factor $FF = S^2 / (E_m I)$	<input type="text" value="12.169"/>	(in./kip)	< FFR	<input type="text" value="30"/> OK (12.7.2.6-1)
R_s , Factored Seam Strength $R_s = \Phi_{SS} SS$	<input type="text" value="28.810"/>	(kip/ft.)	> T	<input type="text" value="16.802"/> OK (12.7.2.5)
Consider the trench width to reduce the corner bearing pressure?	<input type="text" value="Yes"/>			
Default to AASHTO trench width?	<input type="text" value="Yes"/>			
W_T , Trench Width	<input type="text" value="12"/>	(in.)		(Table C12.6.6.2-1)
$L_1 = 40 + (12H - 12)1.75$	<input type="text" value="61"/>	(in.)		
$L_2 = L_1 + 1.375$	<input type="text" value="261.02"/>	(in.)		
$L_3 = L_2 + 72$	<input type="text" value="333.02"/>	(in.)		
$C1 = 2 \times L1 / L3$	<input type="text" value="0.3663"/>			
P_C , Corner Bearing Pressure $P_C = (EV + C_1(P_L + DL/10)) \times R_T / [\Phi_{BP}(R_C + W_T)]$	<input type="text" value="1.152"/>	(ksf)	< SB	<input type="text" value="4.000"/> OK (12.6.3.2, NCSPA 7-22)

Structural Design Check for Corrugated Steel Plate Pipe

Per AASHTO LRFD Bridge Design Specifications, Section 12, 9th Edition 2020



Project Name: Blacks Road Undercrossing

CRM #: 703,615

Location: Santa Maria, CA

Date: 5/23/2022

Structure Shape	<u>Underpass</u>		Select Shape Below
Corrugation Type	<u>6 X 2 in.</u>		
Loading Case	<u>2</u>	(lanes)	<u>12'-2" X 11'-0"</u>
Gage	<u>12</u>		
Bolting Type	<u>4 Bolts/ft.</u>		
H, Height of Cover	<u>18.0</u>	(ft.)	S, Span <u>146</u> (in.)
SB, Maximum Soil Bearing Pressure	<u>4.00</u>	(ksf)	Note: Please enter Soil Bearing Pressure value in space at left
ρ , Density of Cover Material (120 pcf default)	<u>0.12</u>	(kcf)	(Table 3.5.1-1)
Design Truck (LRFD Highway Load is HL-93)	<u>HL-93</u>		

A_w , Pipe Wall Area	<u>1.556</u>	(sq. in./ft.)	(Table A12-3)
I, Moment of Inertia	<u>0.0604</u>	(in. ⁴ /in.)	(Table A12-3)
r, Radius of Gyration	<u>0.682</u>	(in.)	(Table A12-3)
Rt, Top Radius	<u>67</u>	(in.)	(See Shapes Sheet)
	<u>38</u>	(in.)	(See Shapes Sheet)
E_m , Modulus of Elasticity	<u>29000</u>	(ksi)	(Table A12-10)
F_u , Tensile Strength	<u>45</u>	(ksi)	(Table A12-10)
F_y , Yield Strength	<u>33</u>	(ksi)	(Table A12-10)
L_p , Surface Load Contact Length	<u>0.833</u>	(ft.)	(3.6.1.2.5)
w_t , Surface Load Contact Width	<u>1.667</u>	(ft.)	(3.6.1.2.5)

Tandem Controls

s_w , Wheel	<u>6.00</u>	(ft)	
s_a , axle spacing	<u>4.00</u>	(ft)	
LLDF	<u>1.15</u>		(Table 3.6.1.2.6a-1)
H_{int-w} , Wheel Interaction Depth	<u>3.13</u>	(ft)	(3.6.1.2.6b-1)
W_w , live load patch length $W_w = w/12 + s_w + LLDF \times H + 0.06 D_i/12$	<u>29.10</u>	(ft)	(3.6.1.2.6b-3)
H_{int-p} , Axle Interaction Depth	<u>2.75</u>		
Number of Interacting Wheels	<u>4</u>		
DL, Design Lane Load	<u>0.64</u>	(klf)	(3.6.1.2.4)
l_w , live load patch length $l_w = l/12 + s_a + LLDF(H)$	<u>25.53</u>	(ft)	(3.6.1.2.6b-6)
A_{LL} , Area of live load patch at H	<u>742.93</u>		
FFR, Flexibility Factor Required	<u>20</u>	(in./kip)	(Table 12.5.6.1-1)
k, Soil Stiffness Factor	<u>0.22</u>		(12.7.2.4)
IM, Dynamic Load Factor $IM = 33(1.0 - 0.125H)$	<u>0</u>	(%)	(3.6.2.2-1)
m, Multiple Presence Factor	<u>1</u>		(Table 3.6.1.1.2-1)

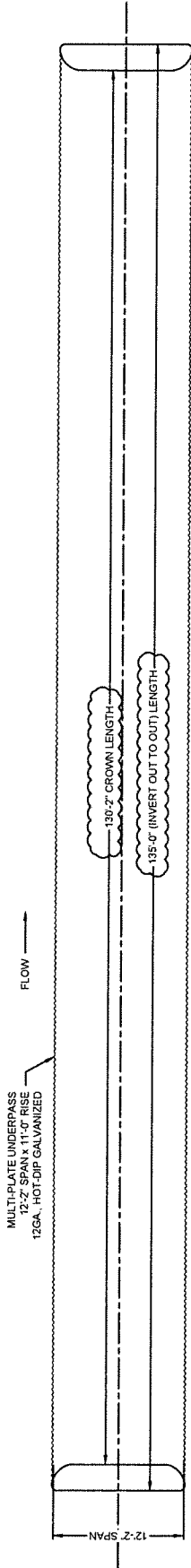
Structural Design Check for Corrugated Steel Plate Pipe

Per AASHTO LRFD Bridge Design Specifications, Section 12, 9th Edition 2020



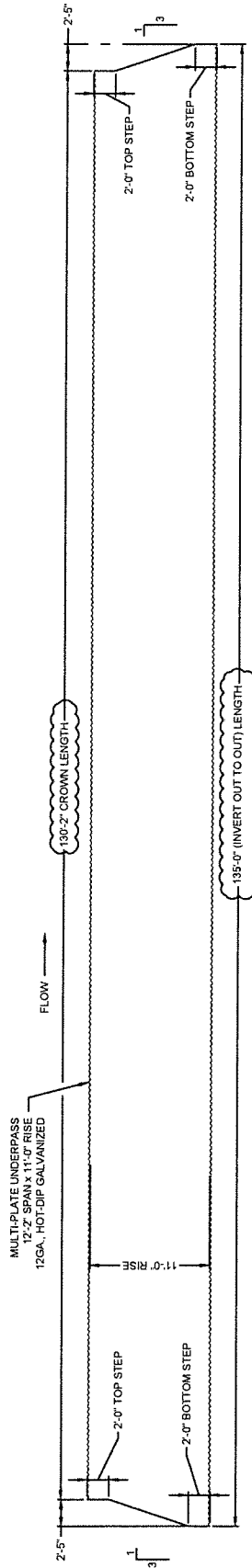
P, Design Truck Load (HS20)		<input type="text" value="16"/>	(kip/wheel group)		(3.6.1.2.2)
PT, Design Tandem Load		<input type="text" value="12.5"/>	(kip/wheel group)		(3.6.1.2.3)
SS, Seam Strength		<input type="text" value="43"/>	(kip/ft.)		(Table A12-8)
Φ_w , Wall Area and Buckling		<input type="text" value="1.00"/>			(Table 12.5.5-1)
Φ_{SS} , Seam Strength		<input type="text" value="0.67"/>			(Table 12.5.5-1)
Φ_{BP} , Backfill Bearing Resistance		<input type="text" value="1.00"/>			(Table 12.5.5-1)
η_{EV} , Redundancy Factor		<input type="text" value="1.05"/>			(1.3.4, 12.5.4)
η_{LL} , Redundancy Factor		<input type="text" value="1.00"/>			(1.3.4, 12.5.4)
γ_{EV} , Dead Load Factor		<input type="text" value="1.95"/>			(Table 3.4.1-2)
γ_{LL} , Live Load Factor		<input type="text" value="1.75"/>			(Table 3.4.1-1)
$P_L = (P(1+IM/100)m)/ALL$		0.07	(ksf)		(3.6.1.2.6b-7)
P_{FD} , Factored Dead Load Crown Pressure $= \eta_{EV} \gamma_{EV} \times H \times p$		4.4226	(ksf)		(3.5.1)
P_{FL} , Factored Live Load Crown Pressure $= \eta_{LL} \gamma_{LL} P_L$		0.00	(ksf)		
P_{DL} , Factored Design Lane Load $= \eta_{LL} \gamma_{LL} mDL/10$		0.112	(ksf)		
Factored Thrust (standard structures)					
F_{min} = greater of 15/S or 1		1.00	(dimensionless)		(12.7.2.2-4)
F_1 = greater of 0.75S/lw or F_{min}		1.00	(dimensionless)		(12.7.2.2-3)
C_L , Width of Culvert on which LL is applied $= lw \leq S$		12.17	(ft)		(12.7.2.2-2)
T_L , Factored Thrust $= (P_{FD} + P_{DL})S/2 + (P_{FL} C_L F_1)/2$		27.585	(kip/ft)		(12.7.2.2-1)
EV, Vertical Earth Load $EV = \rho H$		2.16	(ksf)		(3.5.1)
R_w , Wall Resistance $R_w = \Phi_w F_y A_w$		51.348	(kip/ft.)	> T	<u>27.585</u> OK (12.7.2.3-1)
F_{cr} , Critical Buckling Stress		41.773	(ksi)		
If: $S < \frac{r}{k} \sqrt{\frac{24 E_m}{F_u}}$	Then:				$F_{cr} = F_u - \left(\frac{F_u k S}{r} \right)^2$ (12.7.2.4-1)
		upper case controls			$48 E_m$
But if: $S > \frac{r}{k} \sqrt{\frac{24 E_m}{F_u}}$	Then:				$F_{cr} = \left(\frac{k S}{r} \right)^2$ (12.7.2.4-2)
R_b , Buckling Resistance $R_b = \Phi_w F_{cr} A_w$	If: $F_{cr} > F_y$, then $F_{cr} = F_y$	41.773	(ksi)	>	33
		51.348	(kip/ft.)	> T	<u>27.585</u> OK (12.7.2.3-1)
FF, Flexibility Factor $FF = S^2/(E_m I)$		12.169	(in./kip)	< FFR	<u>20</u> OK (12.7.2.6-1)
R_s , Factored Seam Strength $R_s = \Phi_{SS} SS$		28.810	(kip/ft.)	> T	<u>27.585</u> OK (12.7.2.5)
Consider the trench width to reduce the corner bearing pressure?		<input type="text" value="Yes"/>			
Default to AASHTO trench width?		<input type="text" value="No"/>			
W_T , Trench Width		<input type="text" value="12"/>			
		12			
	$L_1 = 40 + (12H - 12)1.75$	397	(in.)		
	$L_2 = L_1 + 1.37S$	597.02	(in.)		
	$L_3 = L_2 + 72$	669.02	(in.)		
	$C1 = 2 \times L1/L3$	1.1868			
P_C , Corner Bearing $P_C = (EV + C_1(P_L + DL/10)) \times R_T / (\Phi_{BP}(R_C + W_T))$		3.103	(ksf)	< SB	<u>4.000</u> OK (12.6.3.2, NCSPA 7-22)

APPENDIX B
SHOP DRAWINGS

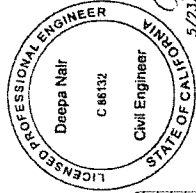


UNDERPASS PLAN

NOTE:
STRUCTURE ENDS TO BE
FIELD CUT BY CONTRACTOR.



UNDERPASS PROFILE



CBC Engineers

INLET	OUTLET	TYPE STRUCTURE	UNDERPASS
90	90	SIZE	141
0	0	SPAN	12'-2"
0	0	LENGTH	140'-0"

Approved By: MTH Date: 5/23/22
 Project No: CBC-24985
 Rev: -

Rev	Date	By	Description
1	5/20/2022		REV BACKFILL DETAIL
2	5/20/2022		REVISED PER REVIEWER COMMENTS
1	5/20/2022		REVISED PER REVIEWER COMMENTS

FOR APPROVAL



CONTECH
ENGINEERED SOLUTIONS LLC
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800-338-1122 513-645-7000 513-645-7023 FAX

REVISION DESCRIPTION

DATE

APPROVED BY

DATE

PROJECT NO. 703615

DATE 4/22/2022

REGION XXX

DRAWN SCC

CHECKED ZMM

APPROVED XXX

SHEET NO 1

OF 4

703615-010-MPIP-COIN-B

MULTI-PLATE UNDERPASS

12'-2" SPAN X 11'-0" RISE

BLACKS ROAD UNDERCROSSING

SANTA MARIA, CA

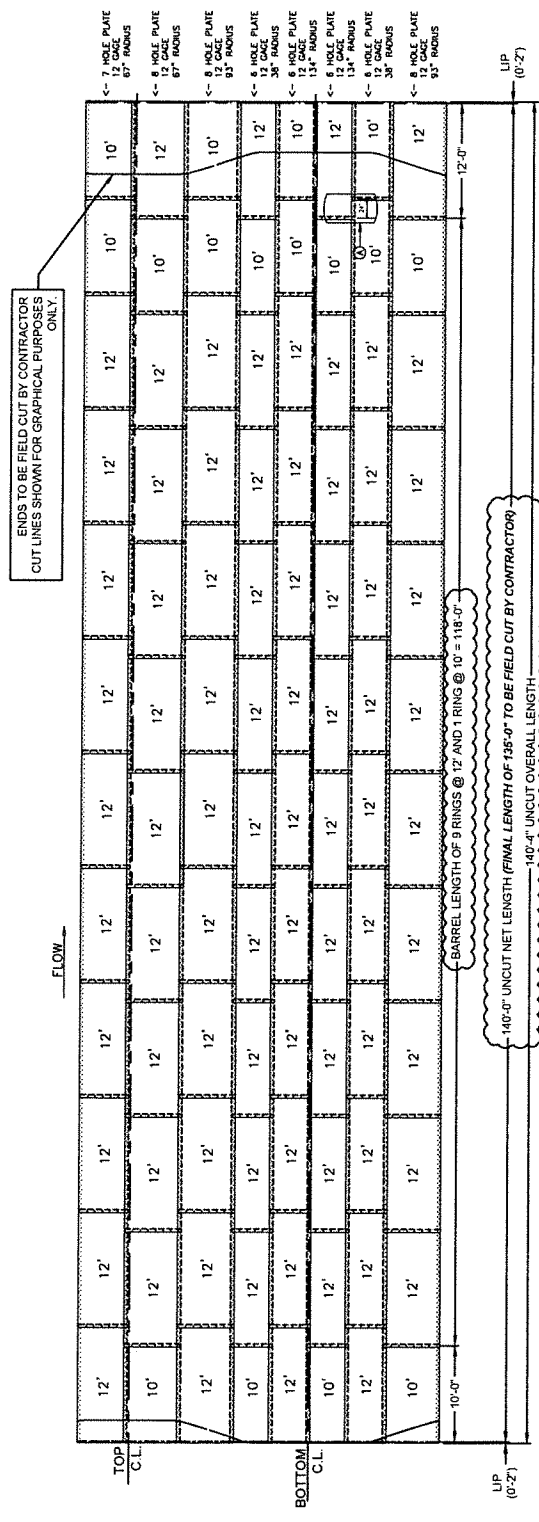


PLATE MAKE-UP
 TOP PLS: 1 @ 18PI, 1 @ 21PI
 SIDE PLS: 1 @ 21PI
 CORNER PLS: 1 @ 18PI
 BOTTOM PLS: 2 @ 18PI
 TOTAL PLS: 4 @ 18PI, 1 @ 21PI, 3 @ 21PI
 AREA = 102.3 SF
 STRUCTURE 141 PI

ALL DIMENSIONS ARE TO INSIDE CORRUGATION CRESTS, UNLESS OTHERWISE NOTED.
 ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.
 'E' IS THE MEASUREMENT FROM THE INVERT TO THE TOP OF THE CORNER PLATE.

PLATE LAYOUT -- INSIDE VIEW
 BARREL LENGTH OF 9 RINGS @ 12' AND 1 RING @ 10' = 118'-0"
 140'-0" UNCUT NET LENGTH (FINAL LENGTH OF 135'-0" TO BE FIELD CUT BY CONTRACTOR)

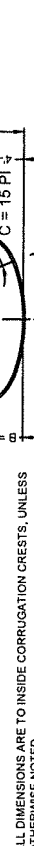
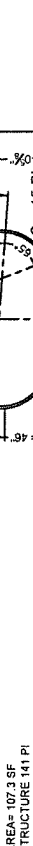
LOADING: HL-93
 MIN HOC: 2.0
 MAX HOC: 18.0
 HOT-DIP GALVANIZED

IMPORTANT
 ASSEMBLY INSTRUCTIONS WILL BE APPLIED TO THE STRUCTURE THEY ARE LOCATED AT THE BRIGHT COLORED BUCKET

IMPORTANT
 WHEN BEGINNING ASSEMBLY, BE SURE TO CHECK THE HOLE PATTERNS SHOWN ON THIS DRAWING AND ASSEMBLY INSTRUCTIONS

TORQUE NOTE
 PLATE LIMITS PERFORMANCE IN TENSION USING PROPER ALIGNMENT TECHNIQUES AND ANGLE OF BOLT HEADS TO THE PLATE SURFACE. AN INSTALLATION ON BOTH TOP AND BOTTOM PLATES, WHEN SPAN SEALANT TAPE OR ASPHALT SHOP COATING IS APPLIED TO THESE LIMITS AFTER 4 TO 6 SERVICE REQUIREMENTS.

IMPORTANT
 THE ASSEMBLY BOLTS AND NUTS ARE SPECIALLY FINISHED WITH ROUND END CONICAL POINTS TO FIT INTO EITHER THE CREST OR VALLEY OF THE CORRUGATIONS. THE USE OF WASHERS IS NOT PERMITTED. THE BOLTS AND NUTS MUST BE CONTACT WITH THE PLATES.



INLET	OUTLET	TYPE STRUCTURE	UNDERPASS
90	90	SIZE 141	
0	0	SPAN = 12'-2"	
0	0	LENGTH = 140'-0"	

REV	DATE	DESCRIPTION
1	5/23/22	REVISED PER REVIEWER COMMENTS
2	5/20/22	REV BACKFILL DETAIL
3	5/20/22	REV PER REVIEWER COMMENTS

APPROVED: **CBC Engineers**
 Project No: CBC-24985
 Date: 5/23/22

FOR APPROVAL
CONTECH ENGINEERED SOLUTIONS LLC
 DEEPA NAIK
 C-#6132
 Civil Engineer
 LICENSED PROFESSIONAL ENGINEER
 STATE OF CALIFORNIA
 5/23/22

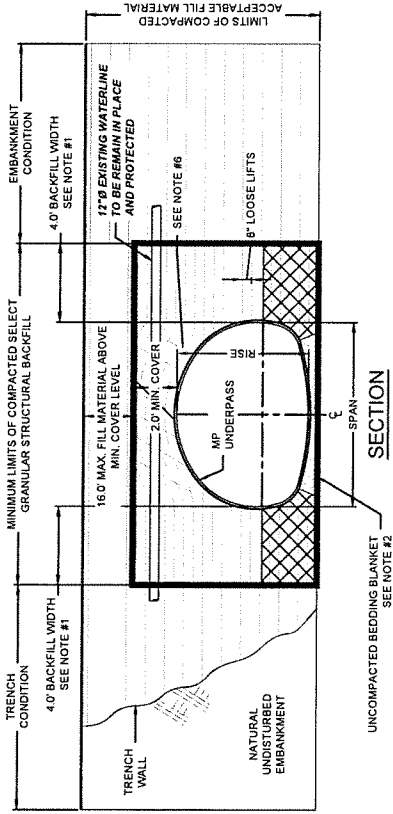
SALES ORDER NO. 703615-010-MUP-CON-B
 PROJECT NO. 703615
 DATE 4/22/2022
 DRAWN BY
 CHECKED BY
 APPROVED BY
 SHEET NO. 2 OF 4

MULTI-PLATE UNDERPASS
 12'-2" SPAN X 11'-0" RISE
 BLACKS ROAD UNDERCROSSING
 SANTA MARIA, CA

CONTECH ENGINEERED SOLUTIONS LLC
 www.conteches.com
 9025 Centex Pointe Dr., Suite 400, West Chester, OH 45069
 800-336-1122 513-645-7933 FAX

CONTECH CONTRACT CRAWLING

NO.	DATE	REVISION DESCRIPTION	BY
1	5/23/22	REVISED PER REVIEWER COMMENTS	SCC
2	5/20/22	REV PER REVIEWER COMMENTS	SCC
3	5/20/22	REV BACKFILL DETAIL	SCC



ADDITIONAL SELECT GRANULAR STRUCTURAL BACKFILL NOTES:
 SATISFACTORY BACKFILL MATERIAL, PROPER PLACEMENT, AND COMPACTION ARE KEY FACTORS IN OBTAINING MAXIMUM STRENGTH AND STABILITY.
 THE BACKFILL MATERIAL SHOULD BE FREE OF ROCKS, FROZEN LUMPS, AND FOREIGN MATERIAL THAT COULD CAUSE HARD SPOTS OR DECOMPOSE TO CREATE VOIDS. BACKFILL MATERIAL SHOULD BE WELL GRADED GRANULAR MATERIAL THAT MEETS THE REQUIREMENTS OF AASHTO M-145. RECYCLED CONCRETE/BRICKS ARE NOT RECOMMENDED FOR STRUCTURAL BACKFILL MATERIAL. SEE THE STRUCTURAL PLATE BACKFILL GROUP CLASSIFICATION TABLE ON THIS SHEET. BACKFILL MUST BE PLACED SYMMETRICALLY ON EACH SIDE OF THE STRUCTURE IN 8" LOOSE LIFTS. EACH LIFT IS TO BE COMPACTED TO A MINIMUM OF 95% DENSITY PER AASHTO T-180.
 A HIGH PERCENTAGE OF SILT OR FINE SAND IN THE NATIVE SOILS SUGGESTS THE NEED FOR A WELL GRADED GRANULAR BACKFILL MATERIAL TO PREVENT SOIL MIGRATION. IF THE PROPOSED NATIVE SOILS ARE FOUND TO BE HEAVY CLAY OR SILTY CLAY, A GEOTEXTILE FABRIC SHALL BE PLACED BETWEEN THE SELECT BACKFILL AND THE IN SITU MATERIAL.
 DURING BACKFILL ONLY LIGHTWEIGHT TRACKED VEHICLES (D-4 OR LIGHTER) SHOULD BE NEAR THE STRUCTURE. HEAVY EQUIPMENT SHOULD BE USED AT A DISTANCE FROM THE STRUCTURE. THE ENGINEER AND CONTRACTOR ARE CAUTIONED THAT THE MINIMUM COVER MAY NEED TO BE INCREASED TO HANDLE TEMPORARY CONSTRUCTION VEHICLE LOADS (HEAVIER THAN D-4).

SELECT GRANULAR STRUCTURAL BACKFILL LIMITS:
 CRITICAL HAUNCH AREA BACKFILL ZONE, PRESSURE ON SOIL GREATEST HERE.
 INITIAL LIFTS OVER THE CROWN OF STRUCTURE AS INDICATED BY SHADDED AREA TO BE COMPACTED TO REQUIRED DENSITY (95% DENSITY) WITH LIGHTWEIGHT (D-4 OR LIGHTER) EQUIPMENT.
 TRENCH CONDITION
 4.0' BACKFILL WIDTH
 SEE NOTE #1
 16.0' MAX. FILL MATERIAL ABOVE MIN. COVER LEVEL
 2.0' MIN. COVER
 MP UNDERPASS
 RISE
 SPAN
 SECTION
 UNCOMPACTED BEDDING BLANKET
 SEE NOTE #2
 NATURAL UNDISTURBED EMBANKMENT
 4.0' BACKFILL WIDTH
 SEE NOTE #1
 EMBANKMENT CONDITION
 MINIMUM LIMITS OF COMPACTED SELECT GRANULAR STRUCTURAL BACKFILL
 17' EXISTING WATERLINE
 16.0' MAX. FILL MATERIAL ABOVE MIN. COVER LEVEL
 2.0' MIN. COVER
 MP UNDERPASS
 RISE
 SPAN
 SECTION
 UNCOMPACTED BEDDING BLANKET
 SEE NOTE #2
 NATURAL UNDISTURBED EMBANKMENT
 4.0' BACKFILL WIDTH
 SEE NOTE #1
 EMBANKMENT CONDITION
 MINIMUM LIMITS OF COMPACTED SELECT GRANULAR STRUCTURAL BACKFILL

STRUCTURAL PLATE BACKFILL GROUP CLASSIFICATION, REFERENCE AASHTO M-145

GROUP CLASSIFICATION	A-1-b	A-1-c	A-2-b	A-2-c	A-3
Size Analyzed Percent Passing					
No. 10 (2.000 mm)	50 max.	50 max.	50 max.	50 max.	50 max.
No. 40 (9.525 mm)	30 max.	30 max.	30 max.	30 max.	30 max.
No. 200 (0.075 mm)	15 max.	15 max.	15 max.	15 max.	10 max.
Liquid Limits	40 max.	40 max.	40 max.	40 max.	41 min.
Plasticity Index	6 max.	6 max.	6 max.	6 max.	Non Plastic
Usual Materials	Stone Fragment, Gravel and Sand	Stone Fragment, Gravel and Sand	Stone Fragment, Gravel and Sand	Stone Fragment, Gravel and Sand	Clayey Gravel and Sand

*Modified from AASHTO M-145.
 Fine beach sands, windblown sands, stream-deposited sands, etc., exhibiting fine, rounded particles and typically classified by AASHTO M-145 as A-3 Materials should not be used.
 Reference the most current version of ASTM D2487, Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System), for comparable soil groups.

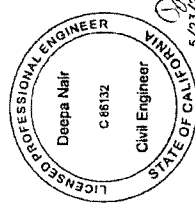
- NOTES:**
- TRENCH WIDTH AND/OR SELECT BACKFILL WIDTH SHALL BE AS SHOWN. THE MINIMUM COVER OVER THE STRUCTURE SHALL BE 2.0 FEET FOR STRUCTURE SPANS 14 FEET AND LESS, AND 6 FEET FOR STRUCTURE SPANS GREATER THAN 14 FEET.
 - SHAPED BEDDING IS REQUIRED FOR A MINIMUM WIDTH OF SPAN/2. THE MINIMUM BEDDING THICKNESS SHALL BE 8 INCHES.
 - ALL SELECT GRANULAR BACKFILL TO BE PLACED IN A BALANCED FASHION IN THIN LIFTS (8" LOOSE TYPICALLY) AND COMPACTION TO 90 PERCENT DENSITY PER AASHTO T-180.
 - COMPLETE AND REGULAR MONITORING OF THE MULTI-PLATE UNDERPASS STRUCTURE IS NECESSARY THROUGHOUT THE CONSTRUCTION PROCESS TO AT LEAST THE MINIMAL COVER LEVEL.
 - PREVENT DISTORTION OF SHAPE AS NECESSARY BY VARYING COMPACTION METHODS AND EQUIPMENT.
 - PLACE SELECT GRANULAR BACKFILL IN RADIAL LIFTS AT APPROXIMATELY 85% OF THE RISE OF THE UNDERPASS STRUCTURE.

FOR APPROVAL



CONTECH ENGINEERED SOLUTIONS LLC
 9025 Capone Pointe Dr., Suite 400, West Chester, OH 45388
 603-338-1122 913-645-7000 513-645-7931 FAX

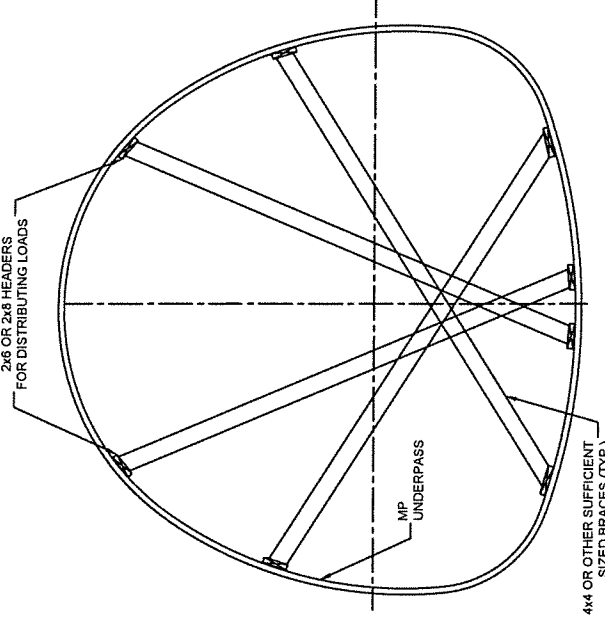
Rev	Date	By	Description
1	5/20/2022	REV. BACKFILL DETAIL	SCC
2	5/20/2022	REVISED PER REVIEWER COMMENTS	SCC
1	5/3/2022	REVISED PER REVIEWER COMMENTS	SCC
		REVISION DESCRIPTION	BY



Approved By: MTH Date: 5/3/2022
 Project No: CBC-24885 Rev: 1
 The engineer on this project is duly licensed and qualified by the State of Georgia to perform the services herein. The engineer's seal and signature are required for the project to be approved. The engineer's seal and signature are required for the project to be approved. The engineer's seal and signature are required for the project to be approved.

PROJECT No.	SEG. No.	DATE
70915	010	4/22/2022
DESIGNED	XXX	EMW/WT
CHECKED	ZMM	APPROVED
DRAWN	XXX	SCC
SHEET NO.	3	of 4

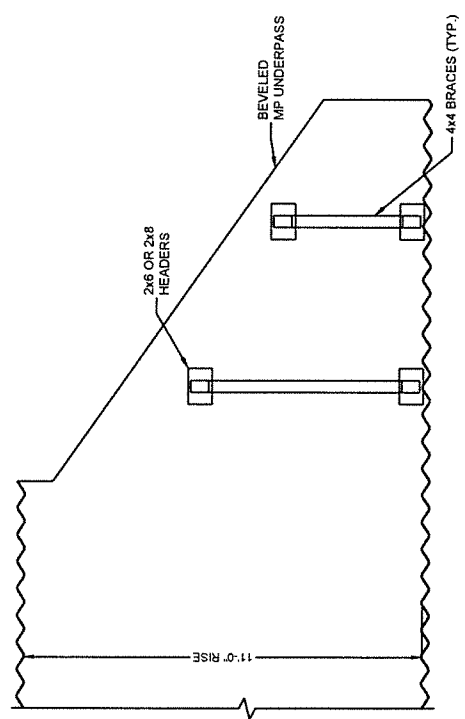
MULTI-PLATE UNDERPASS
 12'-2" SPAN X 11'-0" RISE
 BLACKS ROAD UNDERCROSSING
 SANTA MARIA, CA



END VIEW
NOT TO SCALE

- NOTES:
- 1) TIMBER BRACING/STRUTTING DEPICTED FOR CONCEPTUAL PURPOSES ONLY. REQUIRED SIZES AND GEOMETRY OF BRACING TO BE DETERMINED BY OTHERS.
 - 2) STRUT BRACING/STRUTTING TO BE TEMPORARY ONLY - TO BE REMOVED AFTER BACKFILLING OF STRUCTURE AND END TREATMENT CONSTRUCTION IS COMPLETED.
 - 3) BACKFILL ADJACENT TO CUT ENDS OF PLATE STRUCTURE TO BE PLACED IN A CONTROLLED AND BALANCED MANNER - IN THIN LIFTS - AND COMPACTED USING LIGHTWEIGHT, WALK BEHIND EQUIPMENT.

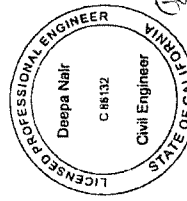
CONCEPTUAL BRACING SCHEMATIC
NOT TO SCALE



PROFILE
NOT TO SCALE

- NOTES:
- 1) TIMBER BRACING/STRUTTING DEPICTED FOR CONCEPTUAL PURPOSES ONLY. REQUIRED SIZES AND GEOMETRY OF BRACING TO BE DETERMINED BY OTHERS.
 - 2) STRUT BRACING/STRUTTING TO BE TEMPORARY ONLY - TO BE REMOVED AFTER BACKFILLING OF STRUCTURE AND END TREATMENT CONSTRUCTION IS COMPLETED.
 - 3) BACKFILL ADJACENT TO CUT ENDS OF PLATE STRUCTURE TO BE PLACED IN A CONTROLLED AND BALANCED MANNER - IN THIN LIFTS - AND COMPACTED USING LIGHTWEIGHT, WALK BEHIND EQUIPMENT.

CONCEPTUAL BRACING SCHEMATIC
NOT TO SCALE



Approved By	MTH	Date	5/23/22
Project No	CBC-24985	Rev	
Drawn		Scale	
Checked		By	
Reviewed		Date	



FOR APPROVAL



www.conteches.com
9025 Centre Pointe Dr., Suite 100, West Chester, OH 45669
800-338-1122 513-645-7000 513-645-7993 FAX

CONTECH CONTRACT SOLUTIONS

NO.	DATE	REVISION DESCRIPTION	BY
1	5/20/2022	REV. BACKFILL DETAIL	SCC
2	5/20/2022	REVISED PER REVIEWER COMMENTS	SCC
3	5/20/2022	REVISED PER REVIEWER COMMENTS	SCC

MULTI-PLATE UNDERPASS
12'-2" SPAN X 11'-0" RISE
BLACKS ROAD UNDERCROSSING
SANTA MARIA, CA

PROJECT No.	703615	REV. No.	01D	DATE	4/27/2022
DESIGNED BY	XXX	DRAWN BY	XXX	APPROVED BY	XXX
CHECKED BY	ZMM	DATE	4	OF	4
SHEET No.					

TECHNICAL PROVISIONS

STANDARD PLANS LIST

The standard plan sheets applicable to this Contract include those listed below. The applicable revised standard plans (RSPs) listed below are included in the project plans.

ABBREVIATIONS, LINES, SYMBOLS, AND LEGEND

A3A	Abbreviations (Sheet 1 of 3)
A3B	Abbreviations (Sheet 2 of 3)
A3C	Abbreviations (Sheet 3 of 3)
A10A	Legend - Lines and Symbols (Sheet 1 of 5)
A10B	Legend - Lines and Symbols (Sheet 2 of 5)
A10C	Legend - Lines and Symbols (Sheet 3 of 5)
A10D	Legend - Lines and Symbols (Sheet 4 of 5)
A10E	Legend - Lines and Symbols (Sheet 5 of 5)
A62A	Excavation and Backfill - Miscellaneous Details

5 CONTROL OF WORK

Replace section 5-1.24A of the RSS with:

Replace section 5-1.24 of the RSS with:

5-1.24 CONSTRUCTIONS SURVEYS

5-1.24A General

5-1.24A(1) Summary

Section 5-1.24 includes general specifications for construction surveys, furnishing, and setting construction stakes and marks to establish the lines and grades required to control the work.

Construction surveys must comply with Chapter 12, 'Construction Surveys', of the California Department of Transportation Surveys Manual as determined by the Engineer.

5-1.24A(2) Submittals

Submit name, license number, and contact information of the professional land surveyor prior to beginning staking.

Submit name, license number, and contact information of the professional land surveyor or civil engineer prior to beginning staking.

Submit proposed procedures, methods, and equipment to be used.

Submit all computations, notes, and other data used to accomplish the work.

5-1.24B Material

Not used

5-1.24C Construction

The construction staking for this project is referenced to the California Coordinate System. Perform construction staking under the direction of a professional land surveyor registered in the State of California.

The construction staking for this project is not required to be referenced to the California Coordinate System. Perform construction staking under the direction of a professional land surveyor or civil engineer registered in the State of California.

Within 2 working days of receiving notification to proceed with right-of-way staking, stake County right-of-way and property lines adjacent to project limits. Maintain property corner stakes throughout construction.

Furnish and set stakes and marks with accuracy adequate to assure completed work conforms to lines, grades, and sections shown.

Remove all stakes when no longer needed.

5-1.24D Payment

Not used

Replace *Reserved* in section 5-1.36C(2) with:

The utilities shown in the following table may interfere with the work and must be exposed or protected in place. During the progress of the work under this Contract, the Contractor must protect in place a portion of a water line for the utility shown in the following table. Notify the Engineer when the site is ready for utility work. Contractor must provide written notification to Golden State Water ten working days before the first working day in which the Contractor will excavate and expose water line. A Golden State Water representative must be on-site to conduct the inspection and supervision of the installed method of protection. Protection work must comply with section 79.

DIVISION II GENERAL CONSTRUCTION 12 TEMPORARY TRAFFIC CONTROL

Replace /section 12-3.11B(5) with the following

This site is not open to public vehicular traffic. Pedestrian trail use is allowed. Install barrier fencing and signage at each end of project indicating Trail Access is closed during construction.

14 ENVIRONMENTAL STEWARDSHIP

Add to the end of section 14-1.02:

An ESA exists on this project.

Before starting job site activities, install temporary silt fencing to protect the ESA and mark its boundaries.

Add to the 1st paragraph of section 14-6.03A:

This project is within or near habitat for the regulated species shown in the following table:

Regulated Species
Monarch Butterfly
California Red Legged Frog
Western Spadefoot Toad
Western Pond Turtle
California legless lizard
Coast Horned Lizard
American Badger

This project includes the sensitive habitats shown in the following table:

Sensitive Habitats
Monarch Butterfly

Replace item 1 in the 2nd paragraph of section 14-6.03A with:

1. Stop all work within a 100-foot radius of the discovery except as shown in the following table:

Regulated species	Protective radius (feet)
Monarch Butterfly	500

Add to section 14-6.03A:

At the end of each working day, construct temporary escape ramps at each end of trench to allow animals that may have become entrapped in the trench to climb out overnight. Construct ramps of either native fill or wood planks at an angle no great than 30 degrees.

Monitor regulated species according to the schedule shown in the following table:

Monitoring type	Schedule
Preconstruction survey: Monarch Butterflies	One week before construction start
Monitor for regulated species as described in the Streambed Alteration Agreement-EPIMS SBA-18630-R5	Minimum 14 days before ground disturbance

Replace the 2nd paragraph of section 14-6.03B with:

The Department anticipates nesting or attempted nesting by migratory and nongame birds from February 1 to September 1.

Add to section 14-6.03B:

A biological survey for nesting birds is required 14 before work begins.

Replace item 1 in the list in the 6th paragraph of section 14-6.03B with:

1. Stop all work within a 100-foot radius of the discovery except as shown in the following table:

Species	Protective radius (feet)
Raptor	500

Add to section 14-6.03D(1):

A Contractor-supplied biologist who performs specialized activities must have demonstrated field experience working with the regulated species or performing the specialized task. The biologist must have experience that complies with the requirements shown in the following table:

Specialized activity/species	Requirements
Finding nests and monitoring	Avion Biologist

The Contractor-supplied biologist must conduct tail-gate training to all contractor personnel associated with the project construction in recognizing biological resources and conditions, and any special-status resources that may occur in the project work area.

All contractor personnel associated with the project construction must receive training before the first working day of construction.

Within 30 days before starting job site activities, submit protocols for species protection surveys. Use protocols required in the PLACs.

Survey the job site for regulated species and submit a preconstruction survey report within 14 days before starting work.

The preconstruction survey report must include one of the following:

1. Detailed observations and locations where regulated species were observed
2. Statement that no regulated species were observed

Submit an initial monitoring report as an informational submittal within 12 hours after starting ground-disturbing activities.

Submit a biological resource incident report within 24 hours of the incident.

The incident report must include:

1. Description of any take of regulated species or any violation of a biological resource PLAC
2. Species name and number taken
3. Details of required notifications with contact information
4. Corrective actions proposed or taken
5. Disposition of taken species

Sisyrinchium bellum	Blue-eyed grass	2.00	78
Stipa pulchra	Purple needle grass	4.00	73
		49.00	

Add to section 21-2.03D:

Apply hydroseed at the following rates:

1. Seed at the rate shown under section 21-2.02F
2. Fiber at 500 lb/ac
3. Tackifier at 125 lb/ac

**DIVISION VII DRAINAGE FACILITIES
61 GENERAL**

67 STRUCTURAL PLATE CULVERTS

Replace Reserved in section 67-2.01D with:

Exercise care to maintain balanced loading on the structure during any backfilling or construction operations. The dimension of the structure should be within 2% of the design dimensions at all locations during and at the completion of installation, and this should be verified by field measuring during construction. The foundation soil and embankment material below and beside the proposed structure must be a uniform non-yielding material meeting the project requirements (by others) with a minimum allowable bearing capacity of at least 4000 psf. This must be verified in the field by a geotechnical engineer before the installation of the structure.

Add to section 67-2.02A:

Granular select backfill around the structure must comply with AASHTO M-145 and be placed in accordance with the project specifications, the manufacturer's requirements, and accepted industry standards. The backfill differential level between sides of the structure should not exceed 16 inches. Shoring must be provided to prevent any distortion of the structure during installation and backfilling, and for following all applicable safety requirements.

Replace 1st and 2nd paragraphs in section 67-2.01D with:

The lump sum payment for structural metal plate pipe includes offloading of culvert plates upon delivery; placing and assembling culvert; and preparing the subgrade placing bedding material.

79 NON-HIGHWAY FACILITY CONSTRUCTION

79-1 PROTECT UNDERGROUND FACILITIES

79-1.01 GENERAL

Section 79-1 includes specifications for protecting underground facilities.

79-1.02 MATERIALS

Not Used

79-2103 CONSTRUCTION

Existing 12" DIP Water Line-Supporting Exposed Water Line. Waterline exposed during culvert excavation must be supported and protected. Submit support and protection plan stamped by licensed engineer.

Native Soil Trench Backfill. Native soil compacted to 95% relative compaction is required above the select granular structural backfill limits to the top of the existing road structural section.

EXHIBIT B

PROGRESS PAYMENT ARRANGEMENTS

Compensation Upon Completion of Identified Project Deliverables

- A. Owner shall be reimbursed for the Work, including all cost expenditures, up to but not to exceed (\$430,298) ("Contract Maximum"), plus Owner's actual costs associated with any County-approved change order(s) that Owner completes.
- B. Progress payments for the Work shall be made periodically, but no more frequently than monthly, upon Owner's satisfactory completion of each project deliverable set forth in the EXHIBIT B-1 Scope and Payment Schedule, attached hereto and incorporated herein by reference, based upon the scope and methodology contained in EXHIBIT A as determined by the County.
- C. Upon completion of a project deliverable set forth in EXHIBIT B-1, and/or delivery to County of item(s) specified therein, Owner shall submit to the County Transportation Permits Section an invoice or certified claim on the County Treasury for payment of the cost associated with completion of the project deliverable. The invoice or claim must cite the assigned Board Contract Number. The County Transportation Permits Section shall evaluate the quality of the Work completed in compliance with the project deliverable and if found to be satisfactory shall initiate payment processing for that deliverable. County shall pay invoices or claims for satisfactory work within 30 days of receipt of correct and complete invoices or claims from Owner.
- D. County's failure to discover or object to any unsatisfactory work or billings prior to payment will not constitute a waiver of County's right to require Owner to correct such work or billings or seek any other legal remedy.

EXHIBIT B-1

SCOPE AND PAYMENT SCHEDULE

Item No.	Description	Amount	Entity
1	Plans, Specs, Estimates	N/A	County of SB
2	60" RCP (x2)- 16' Sections (County Supplied Material)	N/A	County of SB
3	Structural Steel Plate 140 Ft Underpass (County Supplied Material)	N/A	County of SB
4	Environmental/ Biological Services	\$35,500	CCB
5	Water Pollution Control Program -Reporting	\$4,500	CCB
6	Traffic Control System	\$2,500	CCB
7	Jobsite Management	\$5,000	CCB
8	Engineered Design for Shoring System	\$3,000	CCB
9	Engineered Design for Protecting 12" Waterline in Place	\$3,000	CCB
10	Silt fence, Junte Mesh, and Hydroseed and Water pollution Control Plan Implementation	\$18,500	CCB
11	Soils Engineer - Includes material testing	\$15,000	CCB
12	Surveying	\$8,880	CCB
13	Clearing and Grubbing	\$9,000	CCB
14	Roadway Excavation	\$58,700	CCB
15	Structural Backfill of Undercrossing - Material	\$49,000	CCB
16	Structural Backfill of Undercrossing - Install	\$20,000	CCB
17	Temporary Shoring - Installation	\$45,000	CCB
18	Temporary Waterline Support - Installation	\$6,000	CCB
19	Install of (x2)-16' RCP Sections	\$16,000	CCB
20	Install/Assemble Multiplate Undercrossing - Includes cutting culvert ends and installation bracing at 25' spacing	\$37,000	CCB
21	Offloading RCP material upon delivery	\$1,250	CCB
22	Offloading multi-plate undercrossing material upon delivery	\$2,900	CCB
23	Concrete Collar (x2) - Material	\$7,000	CCB
24	Concrete Collar(x2) - Install	\$2,000	CCB
25	Decomposed Granite - Material (120 Tons)	\$7,000	CCB
26	Decomposed Granite - Install	\$5,000	CCB

Total:	\$361,730
Total (less C of SB Costs)	\$361,730
10% OH:	\$36,173
Subtotal	\$397,903
Contingency (based off public contract code calculation)	\$32,395
Grand Total CCB Cost	\$430,298

EXHIBIT C
Indemnification and Insurance Requirements
(For Design/Build Construction Contracts)

INDEMNIFICATION

A. Indemnification pertaining to other than Design Professional Services: Owner agrees to indemnify, defend (with counsel reasonably approved by County) and hold harmless County and its officers, officials, employees, agents and volunteers from and against any and all claims, actions, losses, damages, judgments and/or liabilities arising out of this Agreement from any cause whatsoever, including the acts, errors or omissions of any person or entity and for any costs or expenses (including but not limited to attorneys' fees) incurred by County on account of any claim, except where such indemnification is caused by the active negligence, sole negligence, or willful misconduct of the County.

B. Indemnification pertaining to Design Professional Services: Owner agrees to fully indemnify and hold harmless County and its officers, officials, employees, agents and volunteers from and against any and all claims, actions, losses, suits damages, costs, expenses, judgments and/or liabilities that arise out of, or pertain to, or relate to the negligence, recklessness, or willful misconduct of the Owner and its employees, subcontractors, or agents in the performance of services under this Agreement, but this indemnity does not apply to liability for damages arising from the sole negligence, active negligence, or willful acts of the County. The indemnity includes the cost to defend County to the extent of the Owner's proportionate percentage of fault. Should one (or more) defendants be unable to pay its share of the defense costs due to bankruptcy or dissolution of the business, Owner shall meet and confer with other parties regarding unpaid defense costs and Owner shall pay County's cost of defense to the fullest extent permitted by law.

NOTIFICATION OF ACCIDENTS AND SURVIVAL OF INDEMNIFICATION PROVISIONS

Owner shall notify County immediately in the event of any accident or injury arising out of or in connection with this Agreement. The indemnification provisions in this Agreement shall survive any expiration or termination of this Agreement for the legally prescribed statute of limitations period.

INSURANCE

Owner shall procure and maintain prior to, and for the duration of construction, insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Work hereunder and the results of that work by the Owner, his agents, representatives, employees, contractors or subcontractors as required by this EXHIBIT C.

A. Minimum Scope and Limit of Insurance

Coverage shall be at least as broad as:

1. Commercial General Liability (CGL): Insurance Services Office (ISO) Form CG 00 01 covering CGL on an "occurrence" basis, including products-completed operations, personal & advertising injury, with limits no less than \$5,000,000 per occurrence and \$5,000,000 in the aggregate.

2. Automobile Liability: ISO Form Number CA 00 01 covering any auto (Code 1), with limit no less than \$2,000,000 per accident for bodily injury and property damage.

3. Workers' Compensation: as required by the State of California, with Statutory Limits, and Employers' Liability Insurance with limit of no less than \$1,000,000 per accident for bodily injury or disease.

4. Professional Liability: Insurance appropriate to the Owner's profession, with limit of no less than \$2,000,000 per occurrence or claim, \$3,000,000 aggregate.

5. Contractors' Pollution Legal Liability and/or Asbestos Legal Liability: (if project involves environmental hazards) with limits no less than \$1,000,000 per occurrence or claim, and \$2,000,000 policy aggregate.

If Owner maintains higher limits than the minimums shown above, the County requires and shall be entitled to coverage for the higher limits. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to the County.

B. Other Insurance Provisions

The insurance policies are to contain, or be endorsed to contain, the following provisions:

1. Additional Insured – County, its officers, officials, employees, agents and volunteers are to be covered as additional insureds on the CGL policy with respect to liability arising out of work or operations performed by or on behalf of the Owner including materials, parts, or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to the Owner's insurance at least as broad as ISO Form CG 20 10 11 85 or if not available, through the addition of both CG 20 10 and CG 20 37 if a later edition is used).

2. Primary Coverage – For any claims related to this Agreement, the Owner's insurance coverage shall be primary insurance as respects the County, its officers, officials, employees, agents and volunteers. Any insurance or self-insurance maintained by the County, its officers, officials, employees, agents or volunteers shall be excess of Owner's insurance and shall not contribute with it.

3. Notice of Cancellation – Each insurance policy required above shall provide that coverage shall not be cancelled, except with notice to the County.

4. Waiver of Subrogation Rights – Owner shall waive rights of subrogation which any insurer of Owner may acquire from Owner by virtue of the payment of any loss. Owner agrees to obtain any endorsement that may be necessary to affect this waiver of subrogation. **The Workers' Compensation policy shall be endorsed with a waiver of subrogation** in favor of the County for all work performed by the Owner, its employees, agents, contractors, and subcontractors. This provision applies regardless of whether or not the County has received a waiver of subrogation endorsement from the insurer.

5. Deductibles and Self-Insured Retention – Any deductibles or self-insured retentions must be declared to and approved by the County. At the option of the County, either: the Owner shall cause the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the County, its officers, officials, employees, agents and volunteers; or the Owner or Owner shall provide a financial guarantee satisfactory to the County guaranteeing payment of losses and related investigations, claim administration, and defense expenses.

6. Acceptability of Insurers – Unless otherwise approved by Risk Management insurance shall be written by insurers authorized to do business in the State of California and with a minimum A.M. Best's Insurance Guide rating of "A-VII".

7. Verification of Coverage – Owner shall furnish the County with proof of insurance, original certificates and amendatory endorsements as required by this Agreement. The proof of insurance, certificates and endorsements are to be received and approved by the County before work commences. However, failure to obtain the required documents prior to the work beginning shall not waive the Owner's obligation to provide them. The Owner shall furnish evidence of renewal of Owner's coverage throughout the term of the Agreement. The County reserves the right to require complete, certified copies of all required insurance policies, including endorsements required by these specifications, at any time.

8. Procure Coverage – In the event that any policy of insurance required under this Agreement does not comply with the requirements, is not procured, or is canceled and not replaced, County has the right but not the obligation or duty to terminate the Agreement. Maintenance of required insurance coverage is a material element of the Agreement and failure to maintain or renew such coverage or to provide evidence of renewal may be treated by County as a material breach of contract.

9. Contractors and Subcontractors – Owner shall require and verify that the contractors and subcontractors hired to perform the Work shall maintain insurance meeting all the requirements stated herein, and Owner shall ensure that County is an additional insured on insurance required under this Agreement. For CGL coverage subcontractors shall provide coverage with a format least as broad as CG 20 38 04 13.

10. Claims Made Policies – If any of the required policies provide coverage on a claims-made basis:

i. The Retroactive Date must be shown and must be before the date of the contract or the beginning of contract work.

ii. Insurance must be maintained and evidence of insurance must be provided for at least five (5) years after completion of contract work.

iii. If coverage is canceled or non-renewed, and not replaced with another claims-made policy form with a Retroactive Date prior to the contract effective date, the Owner must purchase "extended reporting" coverage for a minimum of five (5) years after completion of contract work.

11. Special Risks or Circumstances – County reserves the right to modify these requirements, including limits, based on the nature of the risk, prior experience, insurer, coverage, or other circumstances.

Any change requiring additional types of insurance coverage or higher coverage limits must be made by amendment to this Agreement. Owner agrees to require his contractor to execute any such amendment within thirty (30) days of receipt.

Any failure, actual or alleged, on the part of County to monitor or enforce compliance with any of the insurance and indemnification requirements will not be deemed as a waiver of any rights on the part of County.