

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



ITEM: 3.27  
(ID # 20902)

**MEETING DATE:**

Tuesday, February 07, 2023

**FROM :** TLMA-TRANSPORTATION:

**SUBJECT:** TRANSPORTATION AND LAND MANAGEMENT AGENCY/TRANSPORTATION:  
Approve Contract Change Order No. 9 – Between the County of Riverside and Granite Construction Company for the Construction of Jurupa Road/Union Pacific Railroad Grade Separation Project, District 2. [\$1,908,000 Total Cost – State Funds 100%]

**RECOMMENDED MOTION:** That the Board of Supervisors:

1. Approve Contract Change Order No. 9 with Granite Construction Company for the Jurupa Road/Union Pacific Railroad Grade Separation Project and authorize the Chair of the Board to execute the same; and
2. Authorize the Transportation Department to issue Contract Change Order No. 9 with Granite Construction Company for the Jurupa Road/Union Pacific Railroad Grade Separation Project.

**ACTION:Policy**

  
Mark Lancaster, Director of Transportation 1/12/2023

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**MINUTES OF THE BOARD OF SUPERVISORS**

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

Ayes: Jeffries, Spiegel, Washington, Perez and Gutierrez  
Nays: None  
Absent: None  
Date: February 7, 2023  
xc: Trans.

Kimberly Rector  
Clerk of the Board  
By:   
Deputy

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

| <b>FINANCIAL DATA</b>   | <b>Current Fiscal Year:</b> | <b>Next Fiscal Year:</b> | <b>Total Cost:</b>            | <b>Ongoing Cost</b> |
|---|-----------------------------|--------------------------|-------------------------------|---------------------|
| <b>COST</b>   | \$ 1,908,000                | \$ 0                     | \$ 1,908,000                  | \$ 0                |
| <b>NET COUNTY COST</b>  | \$ 0                        | \$ 0                     | \$ 0                          | \$ 0                |
| <b>SOURCE OF FUNDS:</b> SB-132 (100%). There are no General Funds used in this project. |                             |                          | <b>Budget Adjustment:</b> No  |                     |
| <b>C.E.O. RECOMMENDATION:</b> Approve   |                             |                          | <b>For Fiscal Year:</b> 22/23 |                     |

**BACKGROUND:**

**Summary**

By Minute Order 3.43 of July 20, 2021, the Board of Supervisors entered into a contract with Granite Construction Company of Indio, California for the construction of the Jurupa Road/Union Pacific Railroad Grade Separation Project in the City of Jurupa Valley.

The authorized amount of the contract was \$64,790,010. The total amount of the Contract Change Order No. 9 is \$1,908,000 (2.94% of the original contract amount) which exceeds the maximum change order amount that can be authorized by the Director of Transportation and requires Board of Supervisors approval in accordance with Resolution No. 2019-035.

Contract Change Order No. 9 compensates the Contractor for the extra costs associated with the furnishing, shop fabrication and delivery of the structural steel for the Jurupa Road Underpass (UPRR). These extra costs are based on the contract plan changes from the original bid plan set to the approved plan set for the Jurupa Road Underpass.

Not including Contract Change Order No. 9, The Transportation Department has issued 6 Contract Change Orders to date totaling, \$1,545,884.90 (0.99% of the original contract amount), which was the result of:

- Lead and asbestos material disposal: \$39,456
- Storm Drain redesign: \$25,230
- Differing site conditions, buried man-made objects and miscellaneous extra work: \$100,000
- Establish Dispute Resolution Board (DRB): \$36,000
- Compliance with the Construction General Permit: \$706,750
- Removal and disposal of contaminated soil material: \$638,449

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

**Impact on Residents and Businesses**

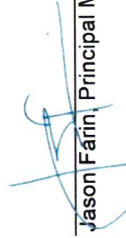
The project will provide uninterrupted and efficient access for motorists, residents, businesses, pedestrians and emergency vehicles in the area. Additionally, the project will eliminate conflicts between railroad operations and vehicular traffic.

**Additional Fiscal Information**

Contract Change Order No. 9 brings the total current authorized contract change order amount to \$3,453,884.90, which is 5.33% over the originally authorized contract amount of \$64,790,010.

**ATTACHMENTS:**

- Change Order Report
- Vicinity Map
- Letter of Transmittal

  
Jason Farin, Principal Management Analyst

2/1/2023

  
Kristine Bell-Valdez, Supervising Deputy County Counsel

1/25/2023

LETTER OF TRANSMITTAL

**Local Agency:** County of Riverside  
Transportation Department

**DATE:** December 20, 2022

**File:** Jurupa Road/Union Pacific  
Grade Separation Project

In the City of Jurupa Valley

**W.O. No.:** C8-0060

**State-Federal No.:** SB132L 6054 (086)

**C.C.O.:** 9

**TO:** Mark Lancaster

**From:** Cindi Wachi

**\$1,908,000.00 (2.94% of the original contract amount of \$64,790,010.00)**

This contract change order compensates the Contractor for the extra costs associated with the furnishing, shop fabrication and delivery of the structural steel for the Jurupa Road Underpass (UPRR Bridge).

These extra costs are based on the contract plan changes from the original bid plan set to the approved plan set for the Jurupa Road Underpass.

The amount of this Contract Change Order is \$1,908,000.00. The accumulation of all Contract Change Orders thus far, including this one, is \$3,453,884.90.

Previous Contract Change Order Amounts Approved:

See C.C.O. History  
(attached)

\$1,545,884.90



**File: Jurupa Road/Union Pacific Grade Separation Project**  
**In the City of Jurupa Valley**  
**W.O. No.: C8-0060**  
**C.C.O. No. 9**  
**Page 2**

This Contract Change Order was discussed with County Staff and they gave their concurrence to this change.

Adjustment of Time: 0 working days

| <b>ESTIMATE OF COST</b> |                       |
|-------------------------|-----------------------|
| Items                   | \$0.00                |
| Force Account           | \$0.00                |
| Agreed Price            | \$1,908,000.00        |
| Adjustment              | \$0.00                |
| <b>TOTAL</b>            | <b>\$1,908,000.00</b> |



**Cindi Wachi**  
 Engineering Division Manger



**Joseph Smith**  
 Resident Engineer

| CCO Category |                           |
|--------------|---------------------------|
| AFA          | Anticipated Force Account |
| CFC          | Changed Field Condition X |
| CME          | Contract Management Error |
| DO           | Design Omission           |
| OAM          | Outside Agency Mandate    |
| RWO          | Right-of-Way Obligation   |
| SE           | Survey Error              |
| UB           | Upgrade/Betterment        |
| UI           | Utility Interference      |



**COUNTY OF RIVERSIDE  
TRANSPORTATION DEPARTMENT**

SHEET 1 OF 1 SHEETS

Contract Change Order No. 009

|           |                                    |                   |                          |
|-----------|------------------------------------|-------------------|--------------------------|
| CONTRACT: | Jurupa Road/Union Pacific Railroad | WORK ORDER NO.    | <b>C8-0060</b>           |
|           | Grade Separation Project           | CAL TRANS EA NO.  | <b>N/A</b>               |
|           | In the City of Jurupa Valley       | LOCAL-FED AID NO. | <b>N/A</b>               |
|           |                                    | STATE-FED AID NO. | <b>SB132L 6054 (086)</b> |

**TO: Granite Construction CONTRACTOR: YOU ARE HEREBY DIRECTED TO MAKE THE HEREIN DESCRIBED CHANGES FROM THE PLANS AND SPECIFICATIONS OR DO THE FOLLOWING DESCRIBED WORK NOT INCLUDED IN THE PLANS AND SPECIFICATIONS ON THIS CONTRACT.**

Description of work to be done, estimate of quantities and prices to be paid. Segregated between additional work at contract price, agreed price and force account. Unless otherwise stated, rates for rental of equipment cover only such time as equipment is actually used and no allowance will be made for idle time.

**Payment Adjustment at Agreed Lump Sum Price:**

Compensate the Contractor for the extra costs associated with the furnishing, shop fabrication, and delivery of the structural steel for the Jurupa Road Underpass (UPRR Bridge).

These extra costs are based on the contract plan changes from the original bid plan set to the approved plan set (EXHIBIT 'A' - Jurupa\_GS\_Jurupa\_Rd\_UP\_Plans\_100p\_R2 - Dated June 03,2022) for the Jurupa Road Underpass. For this work the contractor will be paid the agreed lump sum of \$1,908,000 which constitutes full and complete compensation for the extra costs including but are not limited to all materials changes, material price escalations, labor cost escalations, delivery cost escalations, additional detailing, inefficiencies, mark-ups, incidentals, drafting fees, cost increases and overhead.

Payment Adjustment at Agreed Lump Sum Price = \$1,908,000.00

Estimated Cost:      Decrease \$ \_\_\_\_\_      Increase \$ 1,908,000.00

Participating:    Yes:     No:     N/A:

WE, the undersigned contractor, have given careful consideration to the change proposed and hereby agree that we will provide all equipment, furnish all materials, except as may otherwise be noted above, and perform all services, necessary for the work above specified, and will accept as full payment therefor the prices shown above. By reason of this proposed change 0 days adjustment of time will be allowed.

|          |                      |      |                |
|----------|----------------------|------|----------------|
| Accepted |                      | Date | <u>10/6/22</u> |
|          | Granite Construction |      |                |

NOTE: This change order is not effective until approved by County. If the Contractor does not sign acceptance of this order, his attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest with the time therein specified.

Cindl Wachi

Approval Recommended  
Cindl Wachi, Engineering Division Manager

Date

12/21/2022

Mark Lancaster

Approved  
Mark Lancaster, Director of Transportation

Date

Kevin Jeffries

Approved  
Chairman, Riverside County Board of Supervisors

**KEVIN JEFFRIES**

FOR APPROVED COUNTY COUNSEL

BY: Danielle D. Maland

ATTEST:

**KIMBERLY A. RECTOR, Clerk**

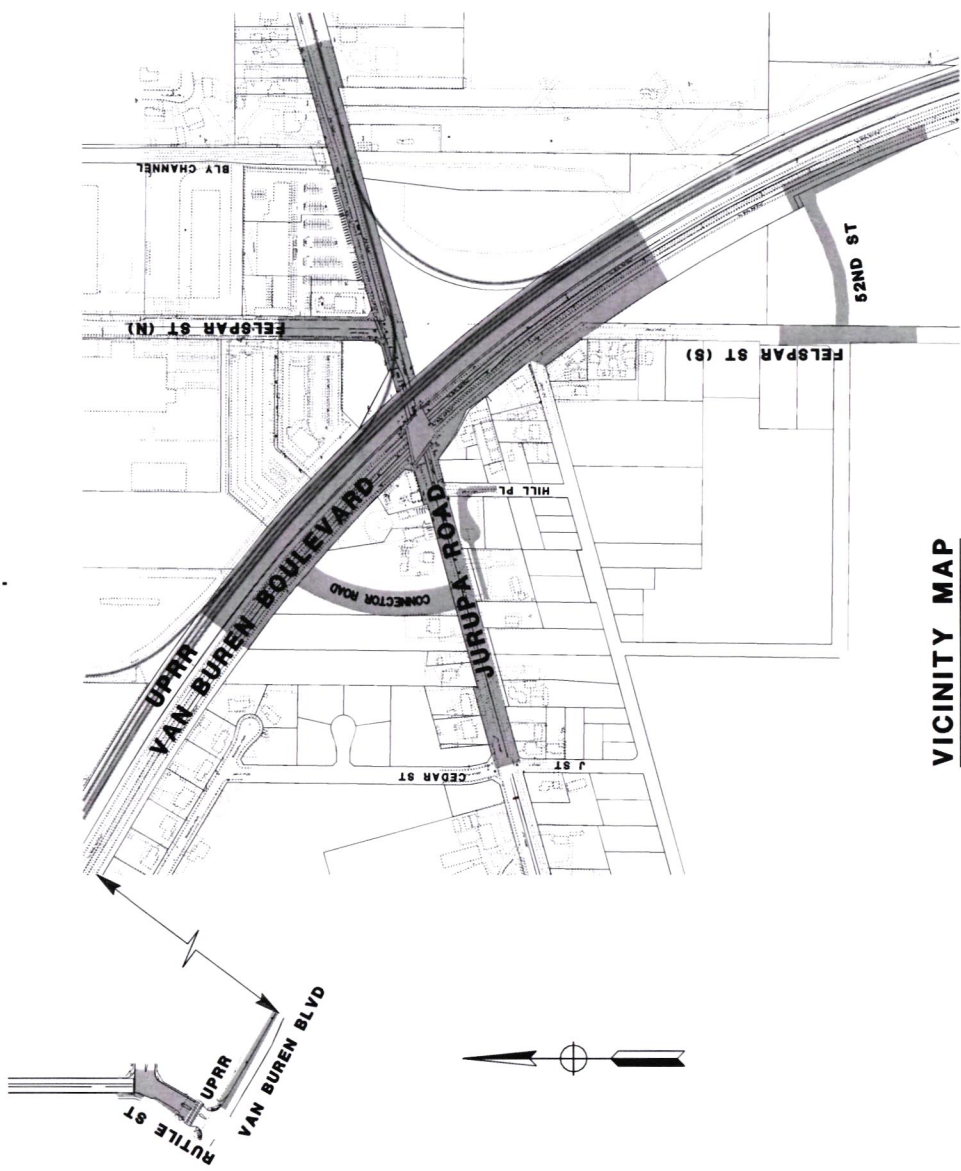
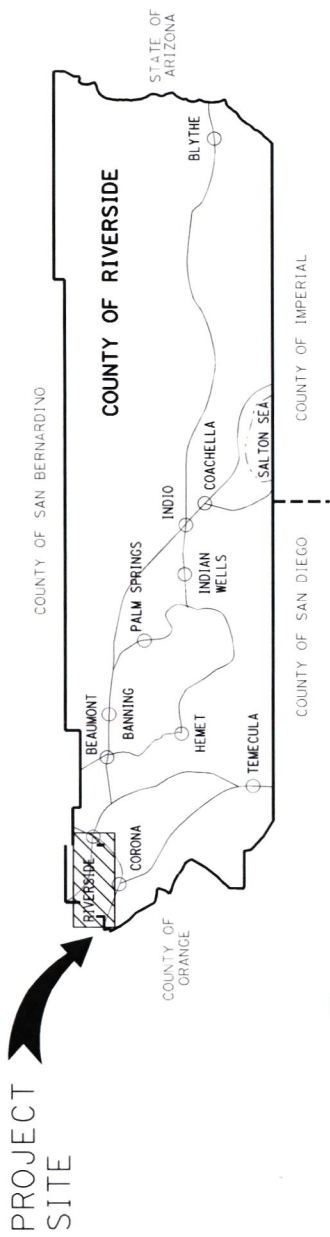
BY: Kimberly A. Rector  
DEPUTY

RD FORM 77 (Rev 8/15)

FEB 7 2023 3:27

COUNTY OF RIVERSIDE  
TRANSPORTATION DEPARTMENT

**JURUPA ROAD / UNION PACIFIC RAILROAD  
GRADE SEPARATION PROJECT  
IN THE CITY OF JURUPA VALLEY  
PROJECT No. C8-0060  
STATE PROJECT No. - SB132L 6054 (086)**



VICINITY MAP

NO SCALE



**CHANGE ORDER REPORT**  
**(Jurupa Road/ Union Pacific Railroad Grade Separation Project)**

| CCO #                    | Amount                   | Percent | Description  |
|--------------------------|--------------------------|---------|--|
|                          | Original Contract Amount |         |  |
|                          | \$64,790,010             |         |  |
| 1                        | \$39,456                 | 0.06%   | Abatement and proper disposal of hazardous lead and asbestos construction materials associated with demolition of properties located in Jurupa Rd. Lead and asbestos report was not included in the bid documents. |
| 2                        | \$0.00                   | 0%      | Modification of retaining walls to be in accordance with the Division of Construction Memorandum CPD 06-7.   |
| 3                        | \$25,230                 | 0.04%   | Redesign of the 36-inch reinforced concrete pipe (RCP) storm drain within Connector Road was needed to avoid utility conflicts to keep the project on schedule.  |
| 4                        | \$100,000                | 0.15%   | Extra work regarding differing site conditions, buried man-made objects and miscellaneous extra work.  |
| 6                        | \$36,000                 | 0.06%   | Established a Dispute Resolution Board (DRB), a three-member board established by the Department and contractor to assist in the resolution of disputes.   |
| Authorized Change Orders | \$200,686                | 0.31%   |  |
| 5                        | 706,750                  | 1.09%   | A sediment risk calculation error was made causing the project to change from Risk Level 1 to Risk Level 2, to keep the project in compliance with the Construction General Permit.                                |
| 8                        | \$638,449                | 0.99%   | Removal and disposal of contaminated soil material at Jurupa Road/Hill Place and Jurupa Road UC (BR-2) Abutment No. 2 (Stage 1).   |
| 9                        | 1,908,000                | 2.94%   | Furnishing, shop fabrication and delivery of the structural steel for the Jurupa Road Underpass (UPRR Bridge).   |
| Total Change Orders      | \$3,453,884.90           | 5.33%   |  |
| Revised Contract Amount  | \$68,243,894.90          |         |  |



**Jurupa Road Grade Separation Project**  
**Contract CCO History**

Contract No. 21-05-013  
 Work Order No. C8-0060, SB132L 6054(086)  
 Contract Amount \$64,790,010.00

Single Maximum CCO \$210,000.00  
 Maximum CCO's \$6,479,001.00

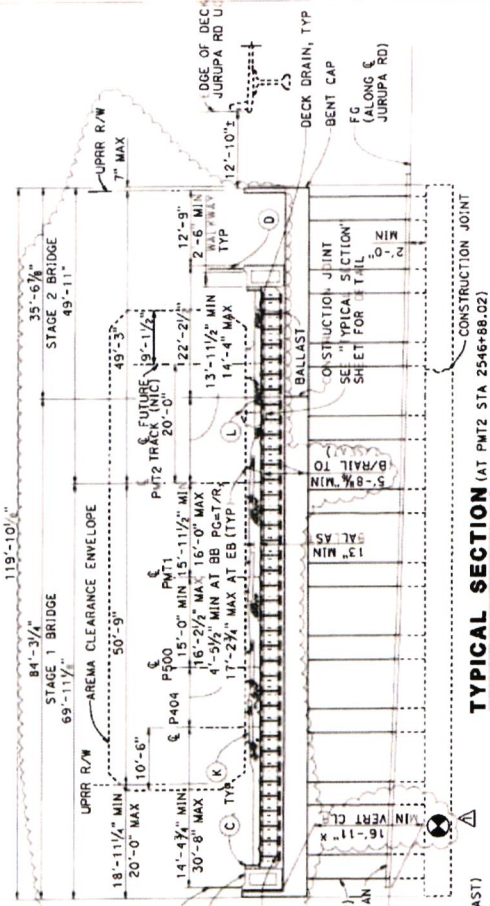
| CCO Category Legend |                           |
|---------------------|---------------------------|
| AFA                 | Anticipated Force Account |
| CFC                 | Changed Field Condition   |
| CME                 | Contract Management Error |
| DO                  | Design Omission           |
| OAM                 | Outside Agency Mandate    |
| RWO                 | Right-of-Way Obligation   |
| SE                  | Survey Error              |
| UB                  | Upgrade/Betterment        |
| UI                  | Utility Interference      |

| CCO No. | Amount This CCO | Authority | Cumulative CCO's | % Authorized | Original Cumulative CCO % | CCO Category | Classification |
|---------|-----------------|-----------|------------------|--------------|---------------------------|--------------|----------------|
| 1       | \$39,455.90     | Director  | \$39,455.90      | 0.06%        | 0.06%                     | DO           | Avoidable      |
| 2       | \$0.00          | Director  | \$39,455.90      | 0.00%        | 0.06%                     | CFC          | Unavoidable    |
| 4       | \$100,000.00    | Director  | \$139,455.90     | 0.15%        | 0.22%                     | AFA          | Unavoidable    |
| 3       | \$25,230.90     | Director  | \$164,686.80     | 0.04%        | 0.25%                     | UI           | Unavoidable    |
| 6       | \$36,000.00     | Director  | \$200,686.80     | 0.06%        | 0.31%                     | CFC          | Unavoidable    |
| 5       | \$706,749.60    | Board     | \$907,436.40     | 1.09%        | 1.40%                     | CFC          | Unavoidable    |
| 8       | \$638,448.50    | Board     | \$1,545,884.90   | 0.99%        | 2.39%                     | CFC          | Unavoidable    |
| 9       | \$1,908,000.00  | Board     | \$3,453,884.90   | 2.94%        | 5.33%                     | CFC          | Unavoidable    |
|         | \$3,453,884.90  |           |                  | 5.33%        |                           |              |                |

New Authorized Contract Total  
 Total CCO Dollars To Date  
 Total % Increased by CCO's

\$68,243,894.90  
 \$3,453,884.90  
 5.33%

**EXHIBIT 'A'**  
**CCO #09**



**CURVE DATA**

| No. | R        | Δ         | TANGENT LENGTH | REMARK   |
|-----|----------|-----------|----------------|----------|
| 1   | 1500.00' | 19°52'29" | 262.80'        | 520.32'  |
| 2   | 5729.65' | 2°40'47"  | 2238.50'       | 4268.04' |
| 3   | 5729.65' | 2°40'49"  | 2238.52'       | 4268.08' |

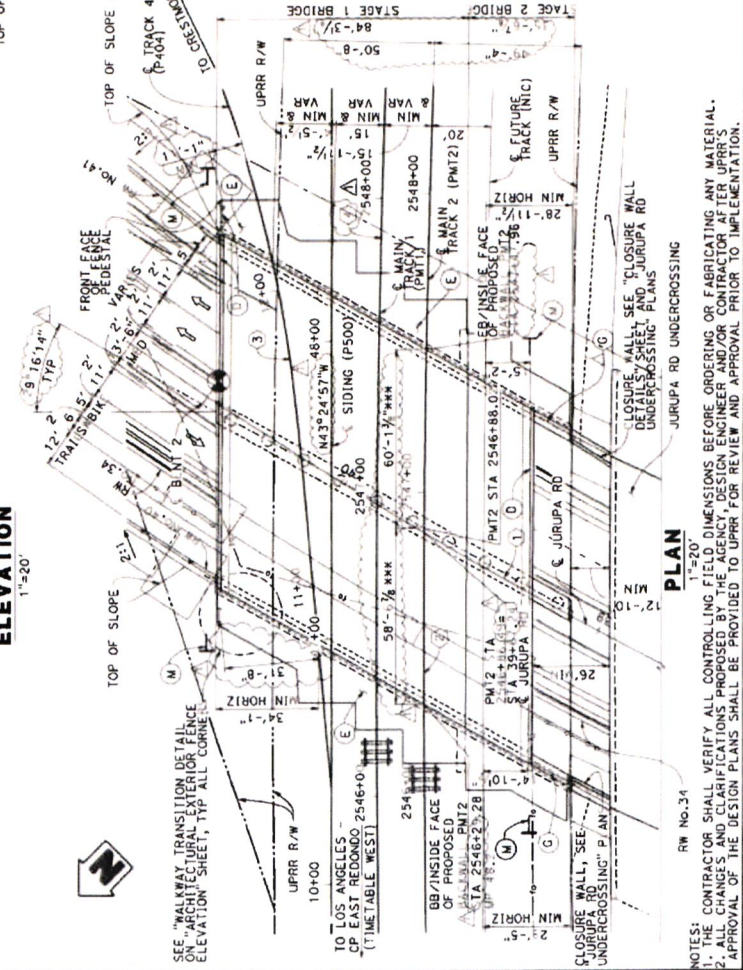
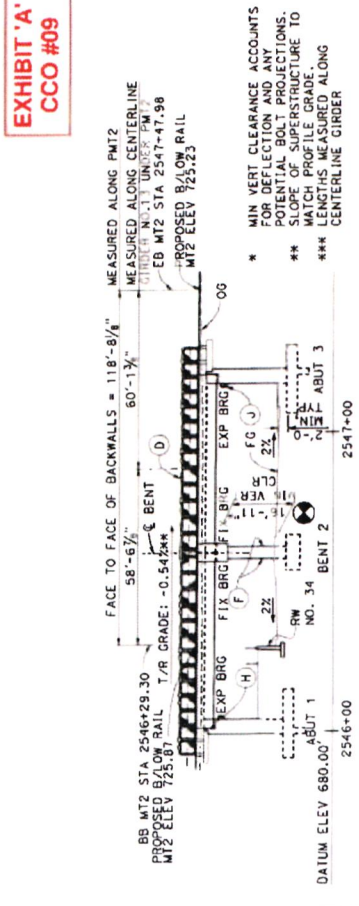
VC=570.00'  
EVC 41+46.86  
ELEV 707.23

**JURUPA ROAD PROFILE**

- ABBREVIATIONS:**
- ABUT
  - BB
  - BCNSF
  - BR
  - BRG
  - BS
  - BYC
  - CLR
  - CONT
  - DIA
  - ELEV
  - EVC
  - EXIST
  - EXP
  - FG
  - FIX
  - GAGE
  - GA
  - GALV
  - HORIZ
  - ID
  - INSIDE
  - LOL
  - LAYOUT
  - LINE
  - MAX
  - MIN
  - MINI
  - MIC
  - OG
  - CONTRACT
  - ORIGINAL
  - GROUND
  - REIN
  - REINFORCEMENT
  - RW
  - RETAINING
  - WALL
  - TOP
  - TOP OF RAIL
  - TEMPORARY
  - BALLAST
  - RETAINER
  - TREATED
  - PERMEABLE
  - BASE
  - VERT
  - VERTICAL
  - W/P
  - WATERPROOFING

**LEGEND:**

- (A) INDICATES POINT OF MINIMUM VERTICAL CLEARANCE
- (B) DIRECTION VEHICLE TRAFFIC
- (C) STEEL DECK PLATE WITH STEEL W40X324 GIRDER
- (D) PRECAST CONCRETE FASCIA BEAM
- (E) STEEL BALLAST CURB
- (F) ARCHITECTURAL FENCE
- (G) APPROACH SLAB
- (H) PAINT "JURUPA ROAD UNDERPASS BR. NO. 48.24"
- (I) CABLE RAILING
- (J) CAST-IN YEAR CONSTRUCTED
- (K) WALL MOUNTED LUMINAIRE
- (L) BALLAST, TIES, RAIL BY OTHERS
- (M) TEMPORARY BALLAST RETAINER
- (N) COMPOSITE "NO TRESPASSING" SIGN AND POST PER UPRR STD DWG 0528 AND 0589. LOCATE 5'-0" BEYOND APPROACH SLAB



**NOTES:**

- CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.
- ALL CHANGES AND CLARIFICATIONS PROPOSED BY THE AGENCY DESIGN ENGINEER AND/OR CONTRACTOR AFTER UPRR'S APPROVAL OF THE DESIGN PLANS SHALL BE PROVIDED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.

| MARK | DATE                | DESCRIPTION | BY           | CHECKED BY   |
|------|---------------------|-------------|--------------|--------------|
| 4/22 | UPRR FINAL APPROVAL |             | R. KINGSBURY | L. KINGSBURY |

**BR. 48.24 - JURUPA ROAD GRADE SEPARATION JURUPA ROAD UNDERPASS GENERAL PLAN**

SCALE: SEE DRAWING

NO. 00000

COUNTY FILE NO.

**HNTB**

REGISTERED PROFESSIONAL ENGINEER

PROJECT ENGINEER

DATE: 05-11-28

| DATE     | DESCRIPTION | BY           | CHECKED BY   |
|----------|-------------|--------------|--------------|
| 05-11-28 | DESIGN      | R. KINGSBURY | L. KINGSBURY |
| 05-11-28 | CHECKED     | R. KINGSBURY | L. KINGSBURY |







**STRUCTURAL STEEL:**

1. MATERIALS, FABRICATION AND ERECTION SHALL BE IN ACCORDANCE WITH THE 2018 EDITION OF CHAPTER 15: STEEL STRUCTURES OF THE AREMA MANUAL FOR RAILWAY ENGINEERING.
2. FABRICATION OF STRUCTURAL STEEL SHALL BE PERFORMED BY A MANUFACTURER CERTIFIED UNDER AISC QUALITY CERTIFICATION PROGRAM, FOR INTERMEDIATE STEEL BRIDGES UNDER AISC QUALITY CERTIFICATION PROGRAM, FOR INTERMEDIATE STEEL BRIDGES UNDER AISC QUALITY CERTIFICATION PROGRAM, FOR INTERMEDIATE STEEL BEAMS, DECK PLATES, ANCHOR BOLTS AND ANCHORS.
3. MATERIALS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:  
ASTM A709 GRADE 50W T2 (PAINTED)  
ASTM A53 GRADE B (GALVANIZED)  
ASTM A487  
ASTM A486  
ASTM A1554  
ASTM F1554  
STEEL REINFORCED ELASTOMER BEARING PAD (60 DUROMETER)  
ANCHOR BOLTS AND ANCHORS SHALL BE IN ACCORDANCE WITH THE AREMA MANUAL FOR RAILWAY ENGINEERING.  
ASTM A53 GRADE B  
ASTM A588  
ASTM A709, GRADE 50W OR 50  
ASTM A588  
FY = 50,000 PSI  
ASTM A709, GRADE 50W OR 50  
FY = 50,000 PSI
4. DESIGN STRESSES FOR THE FOLLOWING MATERIALS ARE IN ACCORDANCE WITH THE AREMA MANUAL FOR RAILWAY ENGINEERING:  
ASTM A53 GRADE B  
ASTM A588  
ASTM A709, GRADE 50W OR 50  
ASTM A588  
FY = 50,000 PSI  
ASTM A709, GRADE 50W OR 50  
FY = 50,000 PSI
5. UNLESS OTHERWISE NOTED, ALL SHOP AND FIELD BOLTED CONNECTIONS SHALL USE 7/8" DIA HIGH STRENGTH BOLTS WITH NUT AND HARDENED STEEL WASHER. HIGH STRENGTH BOLTS SHALL CONFORM TO ASTM F3125 GRADE A325, TYPE 3. NUTS SHALL CONFORM TO ASTM F3125 GRADE A325, TYPE 3. NUTS SHALL CONFORM TO ASTM F3125 GRADE A325, TYPE 3. NUTS SHALL CONFORM TO ASTM F3125 GRADE A325, TYPE 3. NUTS SHALL CONFORM TO ASTM F3125 GRADE A325, TYPE 3. NUTS SHALL CONFORM TO ASTM F3125 GRADE A325, TYPE 3. NUTS SHALL CONFORM TO ASTM F3125 GRADE A325, TYPE 3.

**STRUCTURAL STEEL (CONT.):**

15. THE FABRICATOR SHALL BE RESPONSIBLE FOR THE SPAN(S) COMPLETE PRIOR TO SHIPPING. DURING ASSEMBLY AND BEAMING, ALL BOLTS SHALL BE PLACED IN HOLES AS WORK PROGRESSES TO ASSURE PROPER FIT.
16. SHOP ASSEMBLY SPAN(S) SHALL BE MADE AVAILABLE FOR INSPECTION BY THE SUPERVISOR AND FABRICATOR PRIOR TO SHIPMENT. ALL SPAN(S) SHALL BE DISASSEMBLED AND SHIPPED TO THE ERECTION SITE AT THE AGENCY'S AND UPRR'S DISCRETION. PIECES SHALL BE MATCH-MARKED AS REQUIRED.
17. BEAMING OF HOLES DURING FIELD ERECTION IS NOT ALLOWED. PHOTOGRAPHS OF BEAMING OPERATIONS SHALL BE SUBMITTED TO THE AGENCY AND UPRR.
18. ALL FABRICATOR'S PROGRESS SHALL BE INSPECTED BEFORE SHIPMENT. PHOTOGRAPHS OF FABRICATOR'S PROGRESS SHALL BE SHIPPED WITH THE FABRICATOR'S PROGRESS.
19. BEARING PADS SHALL BE SHIPPED FLAT.
20. MANUAL FOR RAILWAY ENGINEERING REQUIREMENTS OF TABLE 15-5-5 OF THE AREMA MANUAL FOR RAILWAY ENGINEERING SHALL BE FOLLOWED.
21. GALVANIZED ELEMENTS SHALL BE ISOLATED FROM UNCOATED WEATHERING STEEL WITH EPOXY PAINT IN ORDER TO MITIGATE THE POTENTIAL GALVANIC CORROSION BETWEEN THE UNCOATED WEATHERING STEEL AND THE GALVANIZED ELEMENTS.
22. ALL UNCOATED WEATHERING STEEL SHALL BE PAINTED PER THE SPECIAL PROVISIONS, UNLESS SHOWN OTHERWISE ON THE PLANS.
23. ALL WELDING PROCEDURES SHALL BE REVIEWED BY UPRR AND APPROVED BY THE SUPERVISOR PRIOR TO WELDING. ALL WELDING SHALL USE FILLER METAL WITH MINIMUM TENSILE STRENGTH OF 70 KSI.

**GALVANIZING:**

1. ALL ANCHOR BOLTS, DECK DRAINAGE AND MISCELLANEOUS STEEL AS SHOWN ON THE PLANS SHALL BE GALVANIZED AND SHALL BE APPLICABLE TO THE FOLLOWING:
  - A. AFTER GALVANIZING, ALL ITEMS SHALL BE FREE OF FINES, ABRASIONS, ROUGH OR SHARP EDGES AND OTHER SURFACE DEFECTS.
  - B. EXCEPT WHEN USED IN HANDRAILS, NUTS SHALL BE APPROPRIATELY NOTED.
  - C. SCRATCHES AND ABRASIONS OF THE GALVANIZED FINISH SHALL BE TOUCHED UP IN THE FIELD BY "COLD APPLIED GALVANIZING" AS DIRECTED BY THE ENGINEER.

**WATERPROOFING:**

1. WATERPROOFING AND PROTECTIVE LAYER SHALL COMPLY WITH THE RECOMMENDATIONS OF THE AREMA 2022 AND SHALL BE THE FOLLOWING TYPE, AS APPROVED BY UPRR:
  - A. COLD LIQUID SPRAY ON WATERPROOFING MEETING AREMA REQUIREMENTS, AS APPROVED BY UPRR.
  - B. PROTECTION DETECTED WITH AN ADDITIONAL SPRAY ON INTEGRATED BALLAST SIX (6) INCHES OF BALLAST SHALL BE PLACED OVER WATERPROOFING IMMEDIATELY UPON ACCEPTANCE BY UPRR. CONSTRUCTION TRAFFIC IS NOT ALLOWED ON WATERPROOFING UNTIL THE BALLAST COVERING IS IN PLACE.
2. MANUFACTURER'S REPRESENTATIVE SHALL BE OBSERVED AND APPROVED BY THE CONTRACTOR TO SUBMIT MATERIAL SPECIFICATIONS AND INSTALLATION PROCEDURES PER PROJECT SPECIFICATIONS TO UPRR AT LEAST TWO WEEKS PRIOR TO BEGINNING WATERPROOFING INSTALLATION.

**PRECAST CONCRETE:**

**MANUFACTURE:**

1. THE FABRICATOR SHALL STENCIL THE FABRICATOR'S NAME, DATE OF FABRICATION, THE BRIDGE NUMBER, LIFTING WEIGHT AND PIECE MARK ON EACH COMPONENT.
2. THE BRIDGE NUMBER, LIFTING WEIGHT AND PIECE MARK SHALL BE IN ACCORDANCE WITH THE MANUFACTURE OF PRECAST MEMBERS SHALL BE IN ACCORDANCE WITH AREMA 116 AND THE CURRENT EDITION OF THE PRECAST CONCRETE INSTITUTE'S MANUAL 116 FOR QUALITY CONTROL.
3. DIMENSIONAL TOLERANCES GOVERNING THE MANUFACTURE OF PRECAST MEMBERS SHALL CONFORM TO AREMA 116 FOR QUALITY CONTROL. TOLERANCE FOR LOCATION OF LIFTING ANCHORS TO BE DESIGNED BY THE CONTRACTOR SHALL BE +/- 3/8".
4. THE AREA AROUND ALL LIFTING ANCHORS SHALL BE RECESSED SO THAT THE ANCHORS CAN BE REMOVED TO DETAIL FOR LIFTING AND GROUTED PROPERLY SECURING THE PRECAST CONCRETE MEMBERS FOR SHIPMENT. ALL CONCRETE COMPONENTS SHALL BE MADE AVAILABLE, AT THE RAILROAD'S DISCRETION, FOR INSPECTION BY THE ENGINEER-OF-RECORD AND THE RAILROAD'S REPRESENTATIVE PRIOR TO SHIPMENT.
5. FLOW USED TO CREATE INTERNAL VOIDS IN FASCIA BEAM SHALL BE SECURELY TIED DOWN TO PREVENT DISPLACEMENT DURING CONCRETE PLACEMENT.

**CONCRETE:**

1. ALL CONCRETE MATERIAL, PLACEMENT AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH CHAPTER 8 OF AREMA.
2. MINIMUM COMPRESSIVE STRENGTH - 4000 LB. PER SQUARE INCH AT 28 DAYS.
3. CEMENT SHALL BE TYPE 1 OR 11 PORTLAND CEMENT PER ASTM C150.
4. THE MAXIMUM FREE WATER TO CEMENT RATIO SHALL NOT EXCEED 0.44. CONCRETE MUST CONTAIN A MINIMUM RATIO (BY WEIGHT) DOES NOT EXCEED 0.44.
5. AGGREGATES SHALL BE GRADED IN ACCORDANCE WITH ASTM C33 SPECIFICATIONS. SANDS AND AGGREGATE SHALL BE SIZE NO. 67. FINE AGGREGATE SHALL BE NATURAL SAND.
6. BEARING PADS FOR FASCIA BEAMS SHALL BE CLEANED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND GLOUED TO THE ABUTMENT AND BENT CAP BEAMS. EXPOSED EDGES OF CONCRETE SHALL BE PLASTERED OR FINISHED IN A MANNER THAT WILL PRODUCE A SMOOTH AND UNIFORM APPEARANCE WITHOUT RUBBING OR PLASTERING. EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4"x3/4". WALKING SURFACE OF FASCIA BEAMS TO HAVE A BROOM FINISH.

**REINFORCING STEEL:**

1. REINFORCING STEEL SHALL BE DEFORMED NEW BILLET BARS PER ASTM A615 SPECIFICATIONS AND MEET GRADE 60 REQUIREMENTS.
2. MANUAL OF STANDARD PRACTICE. DIMENSIONS OF BENDING DETAILS SHALL BE OUT TO THE CENTER OF BARREL IS TO BE LOCKED TO PROPER LOCATION AND SECURELY WIRE D TO BE IN PROPER ALIGNMENT. TACK WELDING OF REINFORCING IS PROHIBITED. MINIMUM CONCRETE COVER NOT OTHERWISE NOTED SHALL MEET CURRENT AREMA REQUIREMENTS.

**CONTRACTOR RESPONSIBILITIES:**

1. COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE RAILROAD.
2. THE CONTRACTOR SHALL VERIFY IN ADVANCE ALL PERTINENT DIMENSIONS AND ELEVATIONS THAT MIGHT DIRECTLY AFFECT FABRICATION OR CONSTRUCTION OF THE BRIDGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD MEASUREMENTS AND CORRECTIONS. BEGIN PRIOR TO THE VERIFICATION OF FIELD MEASUREMENTS AND CORRECTIONS BY THE CONTRACTOR. ANY VARIATIONS IN DIMENSIONS OR ELEVATIONS FROM THOSE SHOWN ON THE DRAWINGS SHALL BE REPORTED IMMEDIATELY TO RCTO.
3. MODIFICATIONS TO THIS DESIGN SHALL BE APPROVED BY UPRR AYP BRIDGE MAINTENANCE DIVISION. THIS DESIGN SHALL BE APPROVED BY UPRR AYP BRIDGE MAINTENANCE DIVISION. THIS DESIGN SHALL BE APPROVED BY UPRR AYP BRIDGE MAINTENANCE DIVISION.
4. ALL UTILITIES AFFECTED BY THE CONSTRUCTION OF THE STRUCTURE AND EMBANKMENT AND COORDINATE THESE ACTIVITIES WITH THE APPROPRIATE UTILITY AGENCIES.
5. APPLY FOR AND OBTAIN ALL CONSTRUCTION PERMITS NECESSARY TO PERFORM THE WORK.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL MATERIAL, NOT PROVIDED BY RAILROAD, REQUIRED TO COMPLETE THE WORK.
7. A DETAILED CONSTRUCTION PLAN FOR EACH ACTIVITY, SCHEDULE AND PROCEDURE FOR EACH PORTION OF THE WORK, MUST BE SUBMITTED TO THE AGENCY AND UPRR PRIOR TO THE BEGINNING OF THE WORK. CONSTRUCTION SHALL NOT BEGIN UNTIL THE CONSTRUCTION PLAN HAS BEEN APPROVED BY THE RAILROAD.
8. ACCOMPLISH ALL CONSTRUCTION WITHIN THE SCHEDULE SPECIFIED IN THE APPROVED CONSTRUCTION PLAN.


**NOTES:**

1. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.
2. ALL CHANGES AND CORRECTIONS TO DRAWINGS SHALL BE APPROVED BY THE AGENCY AND UPRR. THE DESIGN PLANS SHALL BE PROVIDED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.

EXHIBIT 'A'  
CCO #09

| MARK | DATE | REVISION            | DESCRIPTION | BY | APP |
|------|------|---------------------|-------------|----|-----|
|      | 1/22 | UPRR FINAL APPROVAL |             | RE | NY  |

|                            |                            |
|----------------------------|----------------------------|
| SECTION BY: R. ENHAFER/BCI | CHECKED BY: M. BALLE       |
| DETAILS BY: L. KINGSBURY   | CHECKED BY: R. ENHAFER/BCI |
| QUANTITIES BY: L. RU       | CHECKED BY: A. ADRIKARI    |
| ISSUED NO. 1               | DATE 1/22/2025             |

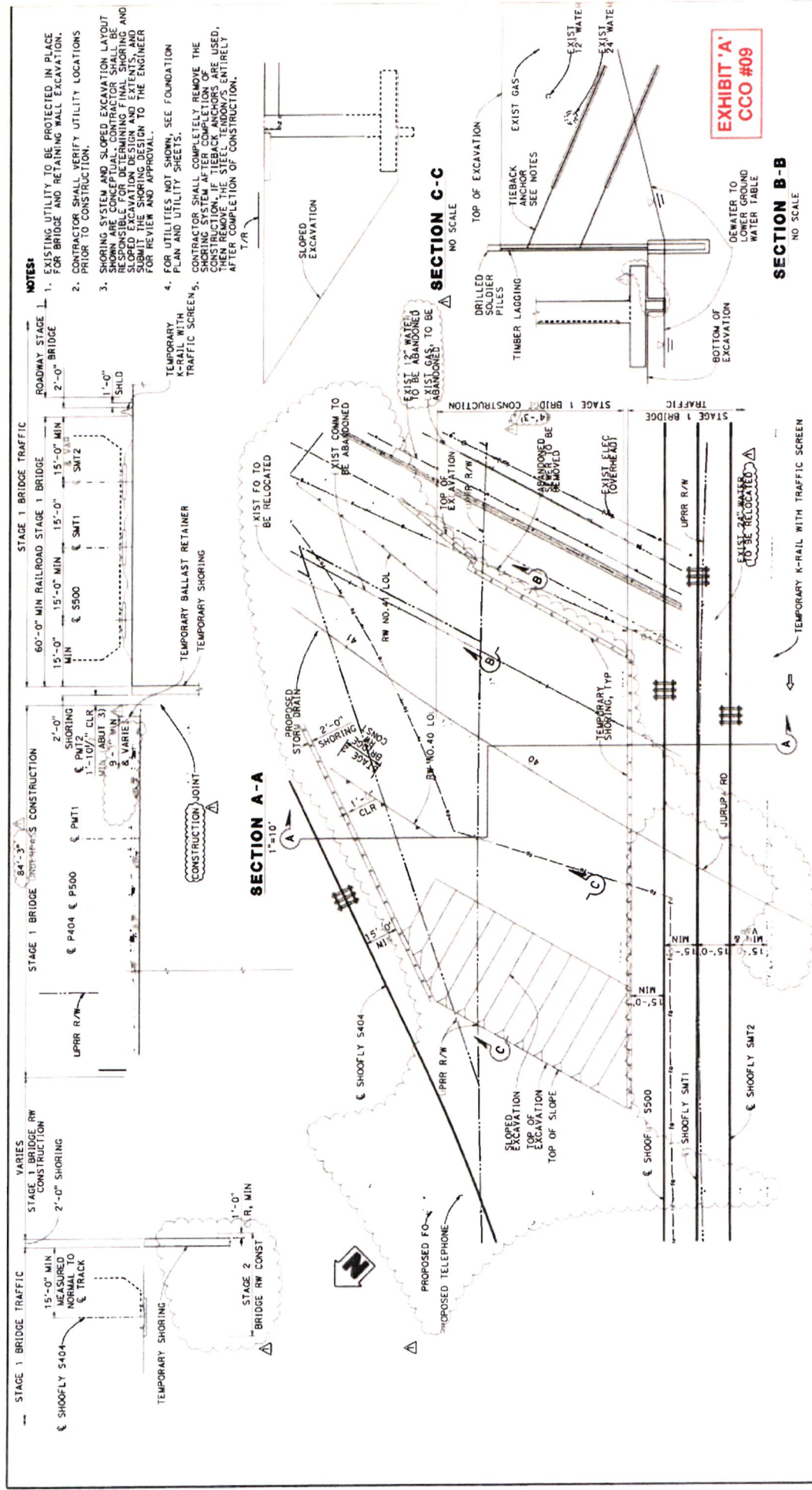
  
 Michael V. Dwyer, P.E.  
 PROJECT ENGINEER  
**HNTB**  
 PROJECT MANAGER  
 500 SOUTH MAIN, SUITE 200  
 SAUTTER, CA 95076  
 (916) 488-1000

**BR. 48.24 - JURUPA ROAD  
GRADE SEPARATION  
JURUPA ROAD UNDERPASS  
GENERAL NOTES NO. 2**

SHEET NO. BR1-02A  
 NO. 3 OF 30  
 DATE: 05-11-22  
 SHEET NO. 422A  
 566

SCALE: SEE DRAWING  
 COUNTRY: FILE NO.





**NOTES:**  
 1. EXISTING UTILITY TO BE PROTECTED IN PLACE FOR BRIDGE AND RETAINING WALL EXCAVATION.  
 2. CONTRACTOR SHALL VERIFY UTILITY LOCATIONS PRIOR TO CONSTRUCTION.  
 3. SHORING SYSTEM AND SLOPED EXCAVATION LAYOUT SHOWN ARE CONCEPTUAL. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING FINAL SHORING AND SLOPED EXCAVATION DESIGN AND EXTENTS, AND FOR OBTAINING THE NECESSARY APPROVALS FROM THE ENGINEER FOR REVIEW AND APPROVAL.  
 4. FOR UTILITIES NOT SHOWN, SEE FOUNDATION PLAN AND UTILITY SHEETS.  
 5. CONTRACTOR SHALL COMPLETELY REMOVE THE SHORING SYSTEM AFTER COMPLETION OF CONSTRUCTION. ALL EXCAVATIONS SHALL BE FULLY BACKFILLED AND THEN REMOVE THE STEEL TENDONS ENTIRELY AFTER COMPLETION OF CONSTRUCTION.

TEMPORARY K-RAIL WITH TRAFFIC SCREEN,  
 60'-0" MIN RAILROAD STAGE 1 BRIDGE  
 15'-0" MIN 15'-0" MIN 15'-0" MIN  
 2'-0" SHORING  
 1'-10 1/2" CLR  
 9'-0" MIN  
 & VARIETY  
 MIN (ABOUT 3)

TEMPORARY BALLAST RETAINER  
 TEMPORARY SHORING  
 2'-0" SHORING  
 1'-10 1/2" CLR  
 9'-0" MIN  
 & VARIETY  
 MIN (ABOUT 3)

STAGE 1 BRIDGE TRAFFIC  
 60'-0" MIN RAILROAD STAGE 1 BRIDGE  
 15'-0" MIN 15'-0" MIN 15'-0" MIN  
 2'-0" SHORING  
 1'-10 1/2" CLR  
 9'-0" MIN  
 & VARIETY  
 MIN (ABOUT 3)

**SECTION A-A**  
 1"=10'

**SECTION B-B**  
 NO SCALE

**SECTION C-C**  
 NO SCALE

**EXHIBIT 'A'**  
**CCO #09**

**LEGEND:**  
 <--- INDICATES TRAFFIC DIRECTION  
 --- TEMPORARY SHORING

**PLAN**  
 1"=20'

NOTES:  
 1. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.  
 2. ALL CHANGES AND CLARIFICATIONS PROPOSED BY THE AGENCY, DESIGN ENGINEER AND/OR CONTRACTOR AFTER UPRR'S APPROVAL OF THE DESIGN PLANS SHALL BE PROVIDED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.

| REVISION | DATE | DESCRIPTION         | BY | APP'D |
|----------|------|---------------------|----|-------|
| 1        | 1/22 | UPRR FINAL APPROVAL | RK | MV    |

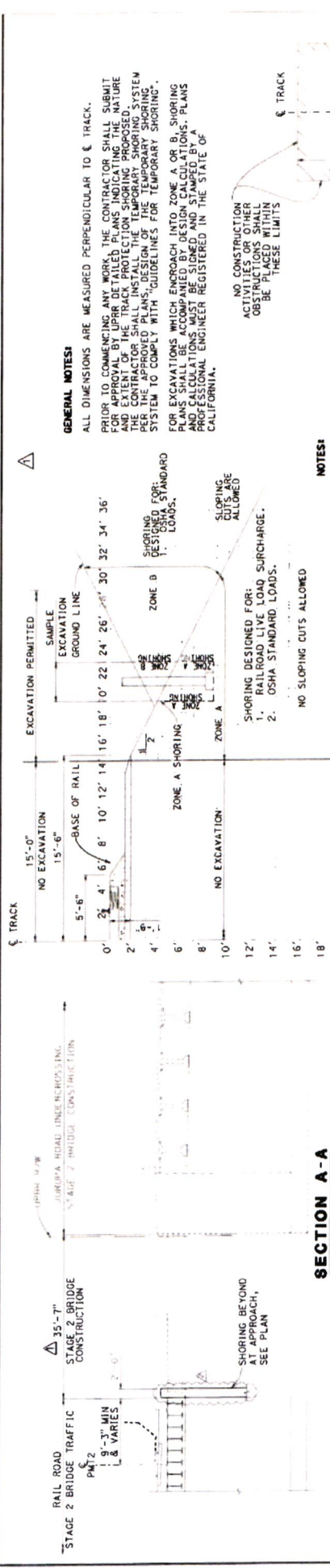
|                |                |             |                |
|----------------|----------------|-------------|----------------|
| DESIGNED BY:   | R. KHALAFBEIGI | CHECKED BY: | M. BALLE       |
| DETAILS BY:    | L. KINGSBURY   | CHECKED BY: | R. KHALAFBEIGI |
| QUANTITIES BY: | L. WU          | CHECKED BY: | A. ABDIKARI    |
| DESIGNED NO.:  | X              | DATE:       |                |

|                        |  |        |          |
|------------------------|--|--------|----------|
| PROJECT ENGINEER       | PROJECT NO.  | SCALE  | DATE     |
| Michael V. Lopez, P.E. | BR. 48.24 - JURUPA ROAD GRADE SEPARATION JURUPA ROAD UNDERPASS | 1"=20' | 05-11-22 |

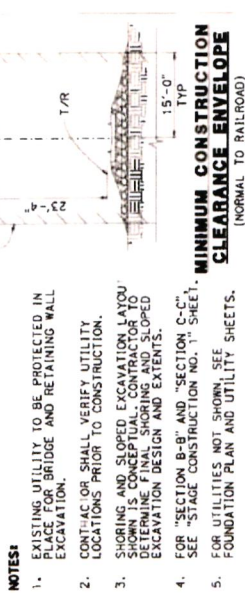
|                        |  |        |          |
|------------------------|--|--------|----------|
| PROJECT ENGINEER       | PROJECT NO.  | SCALE  | DATE     |
| Michael V. Lopez, P.E. | BR. 48.24 - JURUPA ROAD GRADE SEPARATION JURUPA ROAD UNDERPASS | 1"=20' | 05-11-22 |

**HNTB**  
 HNTB ENGINEERS ARCHITECTS  
 1400 K STREET, N.W.  
 WASHINGTON, D.C. 20004  
 PHONE: (202) 775-0800  
 FAX: (202) 775-0800

**BR. 48.24 - JURUPA ROAD GRADE SEPARATION JURUPA ROAD UNDERPASS**  
**STAGE CONSTRUCTION NO. 1**  
 SCALE: SEE DRAWING  
 SHEET NO. **BR1-03**  
 SHEETS 4 OF 30  
 DATE: 05-11-22  
 DRAWN BY: 423  
 CHECKED BY: 565



**GENERAL EXCAVATION ZONES** SCALE:  $\square = 1' \text{ SQUARE}$



**GENERAL EXCAVATION ZONES** SCALE:  $\square = 1' \text{ SQUARE}$

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**GENERAL EXCAVATION ZONES** SCALE:  $\square = 1' \text{ SQUARE}$

**GENERAL NOTES:**  
ALL DIMENSIONS ARE MEASURED PERPENDICULAR TO  $\epsilon$  TRACK.  
PRIOR TO COMMENCING ANY WORK, THE CONTRACTOR SHALL SUBMIT PROTECTIVE SHIELDING, SHORING, PROTECTIVE SHIELDING, NATURE AND EXTENT OF THE TRACK OR PROTECTIVE SHIELDING, SHORING, AND THE CONTRACTOR SHALL INSTALL THE TEMPORARY SHORING SYSTEM PER THE APPROVED PLANS, DESIGN OF THE TEMPORARY SHORING SYSTEM TO COMPLY WITH "GUIDELINES FOR TEMPORARY SHORING".  
FOR EXCAVATIONS WHICH ENDOACH INTO ZONE A OR B, SHORING PLANS SHALL BE ACCOMPANIED BY DESIGN CALCULATIONS. PLANS SHALL BE APPROVED BY THE REGISTERED PROFESSIONAL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA.

NO CONSTRUCTION ACTIVITIES OR OTHER OPERATIONS SHALL BE PLACED WITHIN THESE LIMITS.

**NOTES:**  
1. EXISTING UTILITY TO BE PROTECTED IN PLACE FOR BRIDGE AND RETAINING WALL EXCAVATION.  
2. CONT'AC OR SHALL VERIFY UTILITY LOCATIONS PRIOR TO CONSTRUCTION.  
3. SHORING AND SLOPED EXCAVATION LAYOUT SHOWN IS CONCEPTUAL. CONTRACTOR TO DETERMINE FINAL SHORING AND SLOPED EXCAVATION DESIGN AND EXTENTS.  
4. FOR "SECTION B-B" AND "SECTION C-C", SEE "STAGE CONSTRUCTION NO. 1" SHEET, "MINIMUM CONSTRUCTION CLEARANCE ENVELOPE (NORMAL TO RAILROAD)".  
5. FOR UTILITIES NOT SHOWN, SEE FOUNDATION PLAN AND UTILITY SHEETS.

**SHOP DRAWINGS**  
THE CONTRACTOR SHALL PROVIDE THE FOLLOWING SHOP DRAWINGS/SUBMITTALS TO THE ENGINEER FOR APPROVAL IN ACCORDANCE WITH SPECIFICATIONS AND SPECIFIC PROVISIONS:  
SHOP DRAWINGS: (DESIGNED AND SIGNED BY A CALIFORNIA REGISTERED CIVIL OR STRUCTURAL ENGINEER)  
1. ALL CONSTRUCTION TEMPORARY SUPPORTS.  
2. SHORING FOR EXCAVATION.  
3. PRECAST RECTANGULAR GIRDER.  
4. AS REQUIRED BY THE ENGINEER AT NO ADDITIONAL COST TO THE COUNTY.

**SUBMITTALS:**  
1. CONCRETE MIX DESIGNS.  
2. FORMWORK CALCULATIONS AND/OR CURING COMPOUNDS.  
3. CURING COMPOUND CALCULATIONS.  
4. METHOD OF CURING CONCRETE ELEMENTS.  
5. FORMWORK.  
6. BEARING AND SPECIFICATIONS.  
7. CONSTRUCTION PHASING PLAN.  
8. SHORING.  
9. ERECTION CONTROL.  
10. CONSTRUCTION MATERIAL CERTIFICATION.  
11. STRUCTURAL STEEL AND REBAR CERTIFICATIONS.  
12. 28 DAY COMPRESSIVE STRENGTH TEST OF CONCRETE STRENGTH.  
13. 28 DAY TENSILE AND INSTALLATION AND INSPECTION CERTIFICATION.  
14. WORK PLANS.  
15. STRUCTURAL STEEL.  
16. REINFORCING STEEL.  
17. MONITORING PROGRAM.  
18. NON-COMFORMANCE REPORTS.  
19. INSPECTION AND FIELD TESTING.  
20. AS-BUILT PLANS.  
21. OTHER PROJECT SPECIFIC INFORMATION AS REQUIRED BY UPRR.

**EXHIBIT 'A'**  
**CCO #09**

**PLAN**  
1"=20'

NOTES:  
1. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.  
2. ALL CHANGES AND CLARIFICATIONS PROPOSED BY THE AGENCY, DESIGN ENGINEER AND/OR CONTRACTOR AFTER UPRR'S APPROVAL OF THE DESIGN PLANS SHALL BE SUBMITTED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.

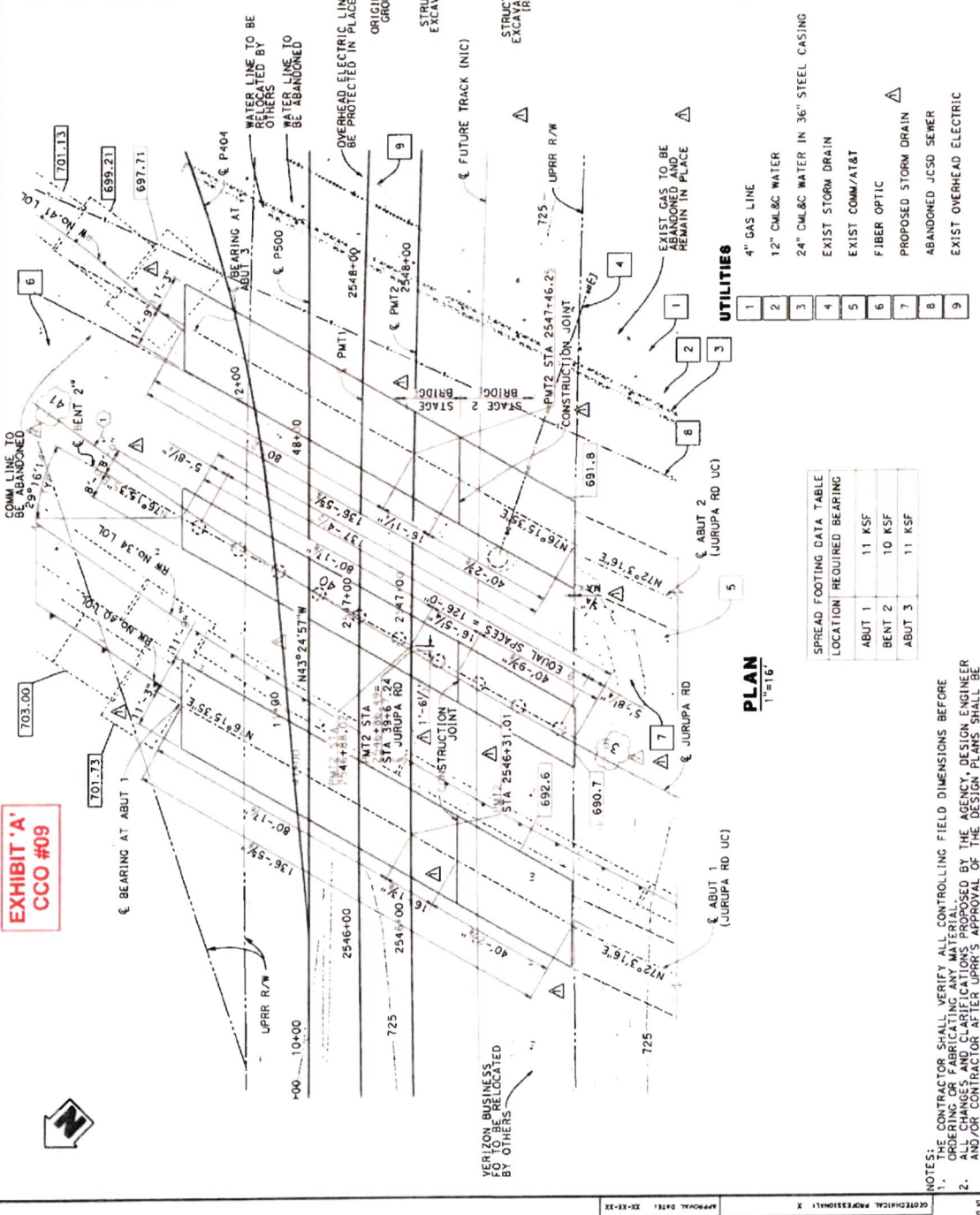
| REVISIONS |      | DESIGN BY           |    | CHECKED BY |    | DATE |    |
|-----------|------|---------------------|----|------------|----|------|----|
| NO.       | DATE | DESCRIPTION         | BY | DATE       | BY | DATE | BY |
| 1         | 1/22 | UPRR FINAL APPROVAL | RB | 1/22       | RB | 1/22 | RB |
| 2         | 5/22 | UPRR FINAL APPROVAL | RB | 5/22       | RB | 5/22 | RB |

|                  |                                  |              |                 |
|------------------|----------------------------------|--------------|-----------------|
| DESIGN BY        | R. KHALAF BEIGI                  | CHECKED BY   | M. BALLE        |
| DETAILS BY       | L. KINGSBURY                     | CHECKED BY   | R. KHALAF BEIGI |
| QUANTITIES BY    | L. WU                            | CHECKED BY   | A. ADHIKARI     |
| SCALE            | AS SHOWN                         | DATE         | 06-03-22        |
| PROJECT NO.      | BR. 48-24 - JURUPA ROAD          | SHEET NO.    | BR1-04          |
| STAGE            | STAGE CONSTRUCTION NO. 2         | TOTAL SHEETS | 5               |
| DATE             | 06-03-22                         | DATE         | 06-03-22        |
| PROJECT ENGINEER | Michael Vallejo                  | DATE         | 06-03-22        |
| HNTB             | REGISTERED PROFESSIONAL ENGINEER | DATE         | 06-03-22        |
| SCALE            | SEE DRAWING                      | DATE         | 06-03-22        |
| COUNTY           | ALameda                          | DATE         | 06-03-22        |
| FILE NO.         | 18106407                         | DATE         | 06-03-22        |



**EXHIBIT 'A'**  
**CCO #09**

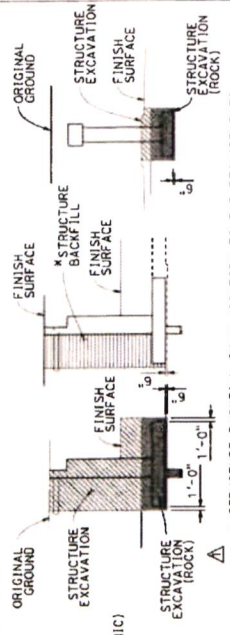


**BENCH MARKS**

THIS PROJECT IS BASED ON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88) BENCHMARK: U# 622 PID: EY9273, ELEVATION: 746.24' PER NGS DATA SHEET.  
DESCRIPTION: FOUND ALUMINUM DISK STAMPED "MWDSC UF 622 1922" SET ON TOP OF 7 FOOT LONG HEADWALL 0.5 FEET NORTH OF SOUTH END INTERSECTION OF PEDELEY ROAD & CALLEN STREET 10.5 FEET WEST OF THE CENTERLINE OF PEDELEY ROAD & SOUTHEASTERLY OF POWER POLE NO. 4063785E.

**LEGEND:**

XXXXX BOTTOM OF FOOTING ELEVATION  
RETAINING WALL



\* STRUCTURE BACKFILL SHALL CONFORM TO THE REQUIREMENTS UNDER "SOIL BACKFILL AND COMPACTION" ON BR1-02 SHEET.

**LIMITS OF PAYMENT FOR STRUCTURE EXCAVATION AND BACKFILL**  
NOT TO SCALE

- NOTE:
- CONTRACTOR TO CONFIRM EXISTENCE AND LOCATION OF FO LINE WITH RAILROAD PRIOR TO START OF WORK. REFER TO UTILITY PLANS FOR ADDITIONAL DETAIL OF ALL UTILITIES.
  - CONTACT THE UNION PACIFIC CALLS BEFORE YOU DIG" NUMBER 800-431-1500. CONSTRUCTION SHALL BE STOPPED IMMEDIATELY IF ANY UTILITIES ARE LOCATED PRIOR TO CONSTRUCTION. CONFIRM THAT ALL NECESSARY RELOCATIONS HAVE BEEN COMPLETED. THE CBVD NUMBER IS: 1-800-336-9193.
  - SEE "GIRDER LAYOUT NO. 1" SHEET "BR1-11".
  - SEE "GENERAL PLAN" FOR CURVE AND TRACK DATA.
  - THE EXPOSED GRANITIC ROCK SHALL REMAIN CLEAN OF ANY OUTSIDE SEDIMENTS PRIOR TO THE PLACEMENT OF THE LEAN CONCRETE. THE SURFACE SHALL BE PROPERLY PREPARED TO BE ADEQUATELY LEVEL SO THAT THE TEXTURED MEMBRANE WATERPROOFING SYSTEM REMAINS IN CONTACT WITH IN SITU ROCK. SEE SHEET NO. RW-15 FOR ADDITIONAL DETAILS.

**UTILITIES**

- 4" GAS LINE
- 12" CML&C WATER
- 24" CML&C WATER IN 36" STEEL CASING
- EXIST STORM DRAIN
- EXIST COMM/AT&T
- FIBER OPTIC
- PROPOSED STORM DRAIN
- ABANDONED JCSD SEWER
- EXIST OVERHEAD ELECTRIC

**PLAN**  
1"=16'

NOTES:  
1. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING FABRICATIONS.  
2. ORDERING FABRICATIONS PROPOSED BY THE AGENCY DESIGN ENGINEER AND/OR CONTRACTOR AFTER UPRR'S APPROVAL OF THE DESIGN PLANS SHALL BE PROVIDED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.

| NO. | DATE | DESCRIPTION         | BY | APP'D | REVISION     |
|-----|------|---------------------|----|-------|--------------|
| 1   | 4/22 | UPRR FINAL APPROVAL | RK | MM    | 1988(NAVD88) |
| 2   | 6/22 | UPRR FINAL APPROVAL | RK | MM    | 1988(NAVD88) |

**HNTB**  
PROJECT ENGINEER  
DATE: 06-03-22  
SCALE: 1"=16'

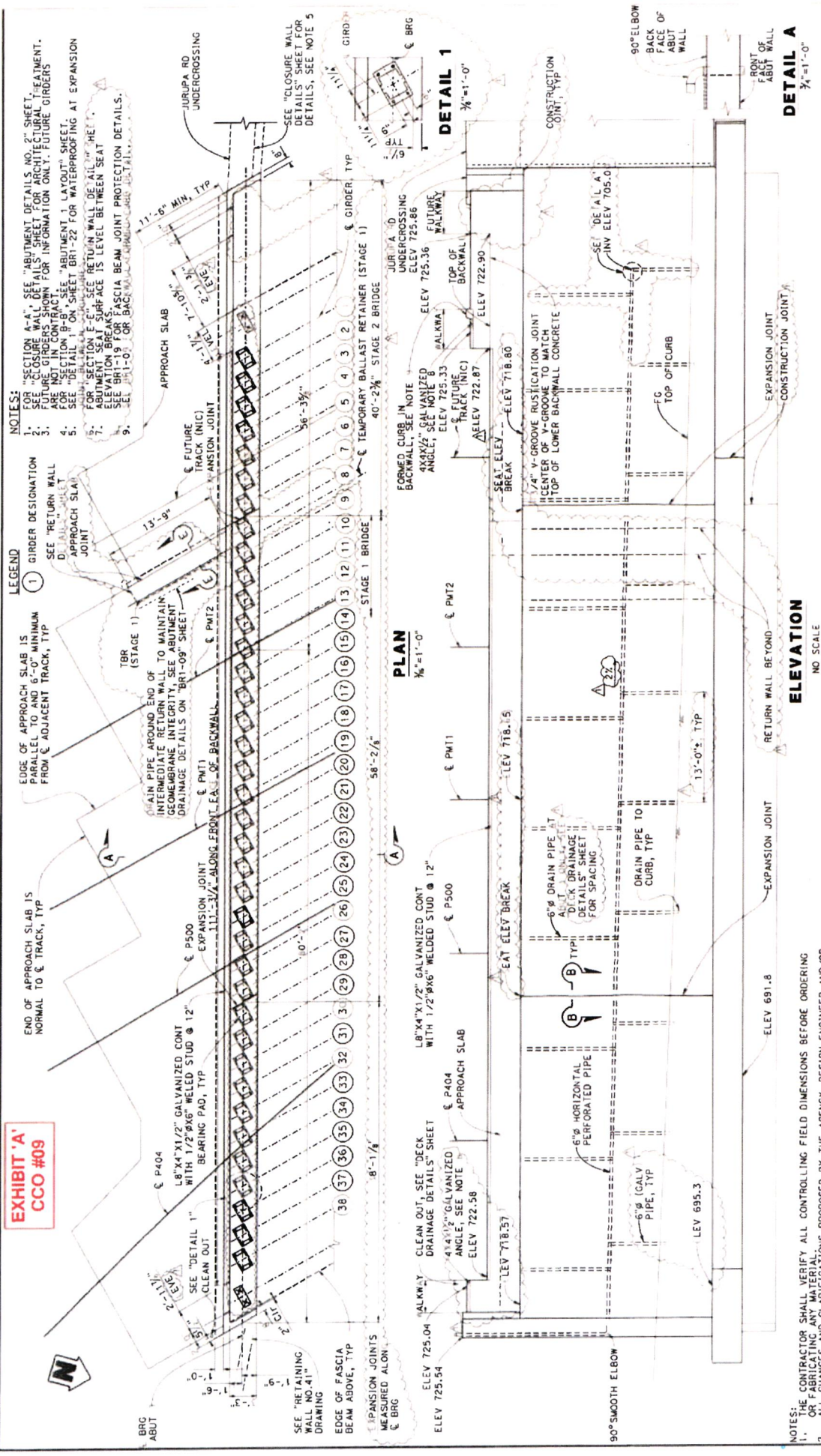
**BR. 48-24 - JURUPA ROAD GRADE SEPARATION JURUPA ROAD UNDERPASS FOUNDATION PLAN**  
SHEET NO. **BR1-05**  
DATE: 6/22/22  
SCALE: 1"=16'







**EXHIBIT 'A'**  
**CCO #09**



NOTES:  
1. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.  
2. ALL CHANGES AND CLARIFICATIONS PROPOSED BY THE AGENCY, DESIGN ENGINEER AND/OR CONTRACTOR AFTER UPRR'S APPROVAL OF THE DESIGN PLANS SHALL BE PROVIDED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.

| NO.   | DATE         | DESCRIPTION         | BY           | APP'D |
|---|--------------|---------------------|--------------|-------|
| 1   | 4/22         | UPRR FINAL APPROVAL | BR           | BR    |
| REVISIONS   |              |                     |              |       |
| DESIGN BY:  | R. EHALFBERG | CHECKED BY:         | M. BALLE     |       |
| DETAILS BY:   | L. KINGSBURY | CHECKED BY:         | R. EHALFBERG |       |
| QUANTITIES BY:  | L. BU        | CHECKED BY:         | A. ADHARI    |       |
| DRAWING NO.:  | X            |                     |              |       |
| ORIGINAL SCALE IN INCHES FOR REVISIONS ONLY<br>CON FILE # 1-UP-1-001-1002-000 |              |                     |              |       |

**HNTB**  
 PROJECT ENGINEER  
 MICHAEL V. ...  
 17741 JEFFERSON  
 BAY AREA, CA 94134  
 (415) 350-1500

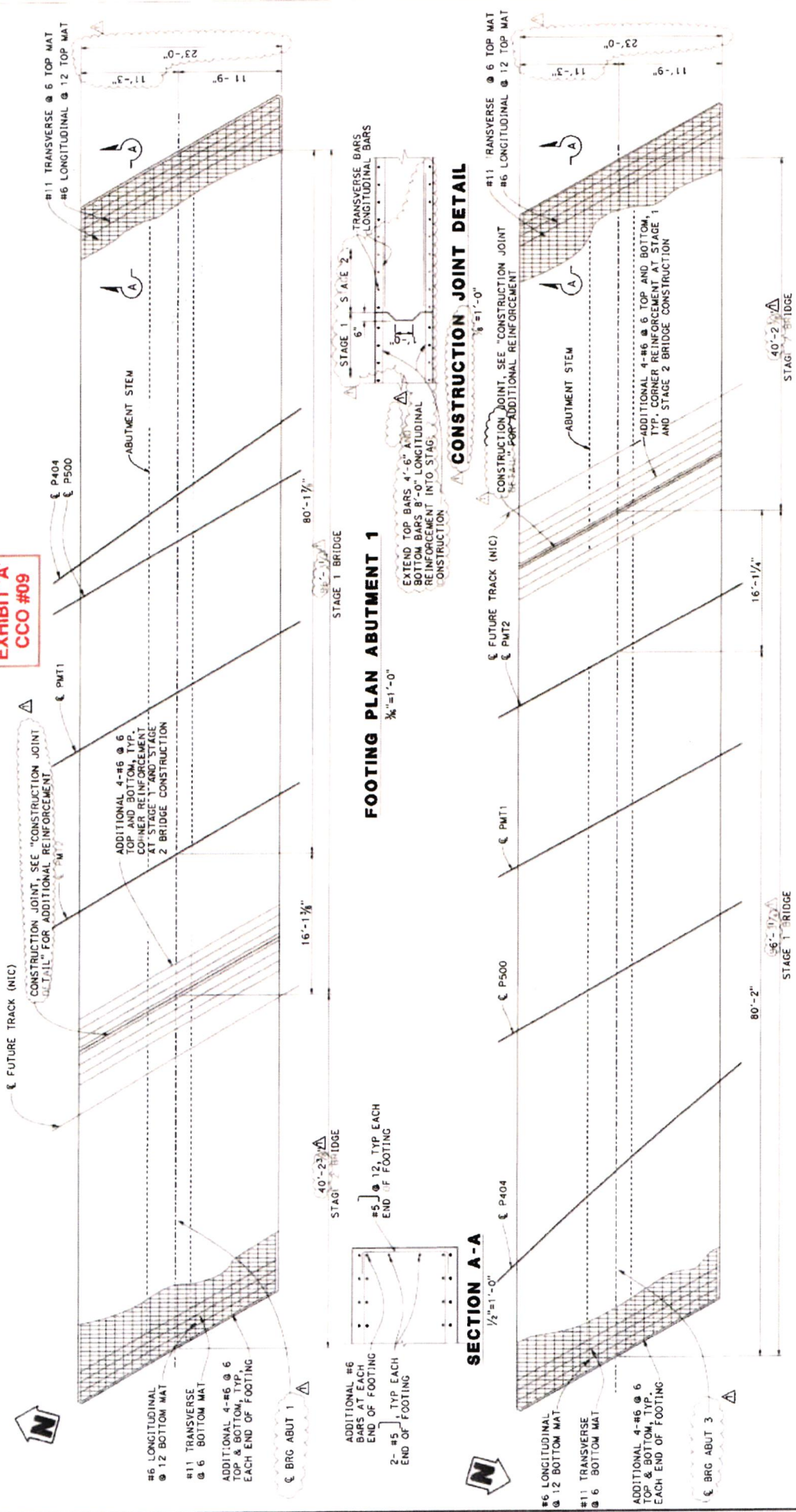
BR. 48-24 - JURUPA ROAD  
 GRADE SEPARATION  
 JURUPA ROAD UNDERPASS  
 ABUTMENT 3 LAYOUT

SCALE: SEE DRAWING  
 COUNTY FILE NO. 00000

SHEET NO. BR1-07  
 BRCT B OF 3  
 SHEET NO. 427  
 DATE 5/65



**EXHIBIT 'A'**  
**CCO #09**



**FOOTING PLAN ABUTMENT 3**

NOTES:  
 1. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS FOR ALL CONSTRUCTION. ALL DIMENSIONS SHALL BE TO THE CENTERLINE UNLESS OTHERWISE NOTED. ALL CHANGES AND CLARIFICATIONS PROPOSED BY THE AGENCY DESIGN ENGINEER AND/OR CONTRACTOR AFTER UPRR'S APPROVAL OF THE DESIGN PLANS SHALL BE PROVIDED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.

| NO. | DATE | DESCRIPTION         | BY | APP'D |
|-----|------|---------------------|----|-------|
| 1   | 4/22 | UPRR FINAL APPROVAL | RK |       |
|     |      |                     |    |       |
|     |      |                     |    |       |
|     |      |                     |    |       |
|     |      |                     |    |       |

|                |                |             |                |
|----------------|----------------|-------------|----------------|
| DESIGN BY:     | R. KHALAFBEIGI | CHECKED BY: | M. DALLE       |
| DETAILS BY:    | L. KINGSBURY   | CHECKED BY: | R. KHALAFBEIGI |
| QUANTITIES BY: | L. RU          | CHECKED BY: | A. ADHILARI    |
| DRAWN BY:      | X              |             |                |

|                  |                                   |
|------------------|-----------------------------------|
| PROJECT NO.      | BR. 48-24 - JURUPA ROAD           |
| DATE             | 05-11-22                          |
| PROJECT ENGINEER | Michael U. Dyer                   |
| SCALE            | AS SHOWN                          |
| DATE             | 05-11-22                          |
| SCALE            | SEE DRAWING                       |
| PROJECT NO.      | BR. 48-24 - JURUPA ROAD UNDERPASS |
| DATE             | 05-11-22                          |
| PROJECT ENGINEER | Michael U. Dyer                   |
| SCALE            | SEE DRAWING                       |
| DATE             | 05-11-22                          |
| SCALE            | SEE DRAWING                       |

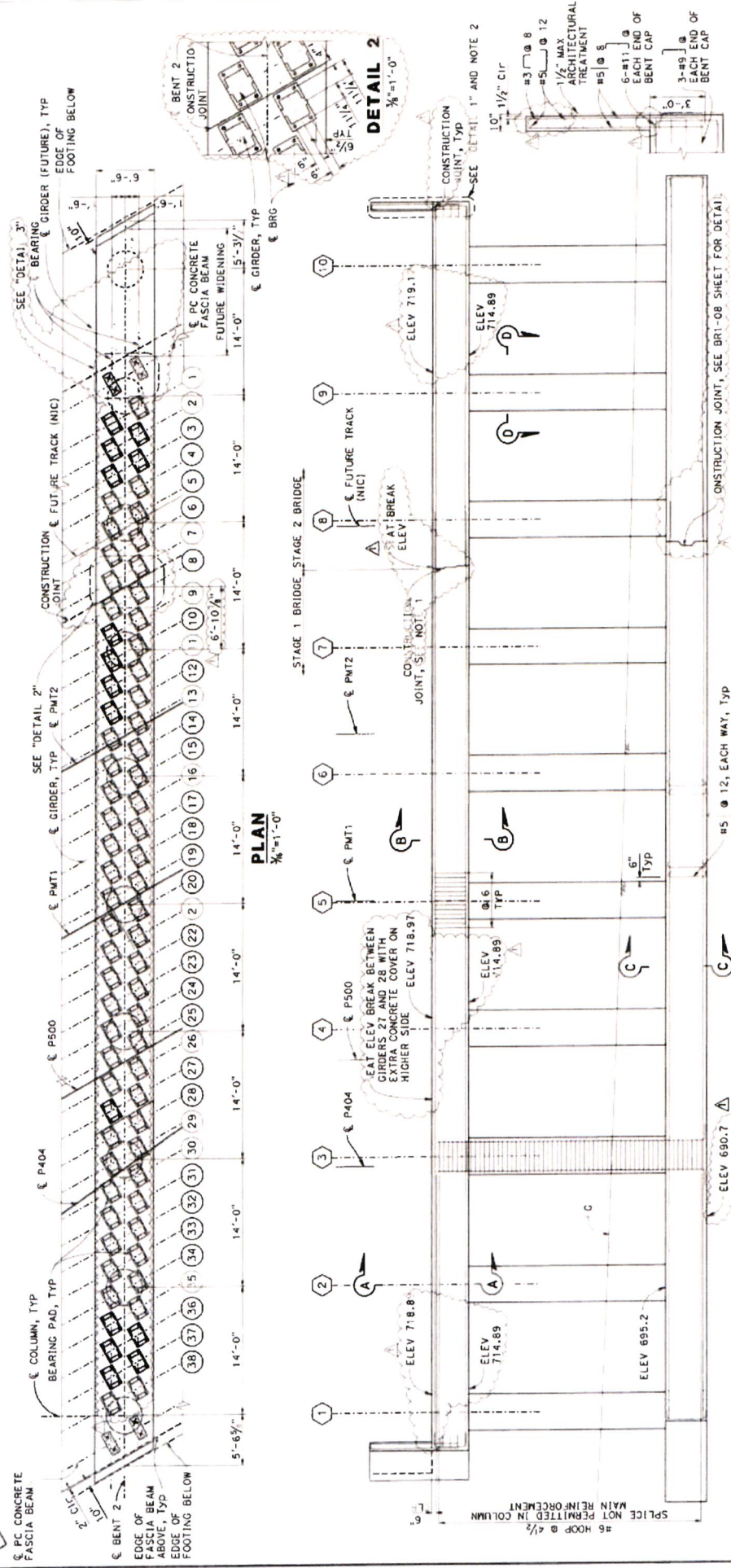




**EXHIBIT 'A'**  
**CCO #09**

**NOTES:**

- FOR "SECTION A-A", "SECTION B-B", "SECTION C-C", "SECTION D-D", "SECTION E-E", AND "CONSTRUCTION JOINT DETAILS", SEE "BENT DETAILS NO. 1" SHEET.
- SEE "BENT DETAILS NO. 1" SHEET FOR BENT AESTHETIC DETAILS.
- SEE "BENT DETAILS NO. 1" SHEET FOR BENT AND FUTURE TRACK ELEVATION BREAKS.
- BENT CAP TOP SURFACE IS 1/2" BELOW FUTURE TRACK ELEVATION BREAKS.
- NOT ALL REINFORCEMENT SHOWN FOR CLARITY.
- FOR "DETAIL 3", SEE "FASCIA BEAM DETAILS NO. 2" SHEET.



**DETAIL 1**  
1/4" = 1'-0"

- LEGEND
- (1) GIRDER DESIGNATION
  - (1) COLUMN DESIGNATION

**ELEVATION**  
NO SCALE

NOTES: THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING.

- ALL CHANGES AND CLARIFICATIONS PROPOSED BY THE AGENCY, DESIGN ENGINEER AND/OR CONTRACTOR AFTER UPRR'S APPROVAL OF THE DESIGN PLANS SHALL BE PROVIDED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.

| DATE | DESCRIPTION         | BY | APP'D |
|------|---------------------|----|-------|
| 4/22 | UPRR FINAL APPROVAL | RE | MR    |

| REVISIONS | DATE | DESCRIPTION | BY | APP'D |
|-----------|------|-------------|----|-------|
|           |      |             |    |       |

| DESIGN BY        | CHECKED BY       | DESIGN BY        | CHECKED BY       |
|------------------|------------------|------------------|------------------|
| R. BHALLABESINGI | M. BALLE         | R. BHALLABESINGI | M. BALLE         |
| L. KINGSBURY     | R. BHALLABESINGI | L. KINGSBURY     | R. BHALLABESINGI |

| QUANTITIES BY | CHECKED BY | QUANTITIES BY | CHECKED BY |
|---------------|------------|---------------|------------|
| L. BH         | A. JONHART | L. BH         | A. JONHART |

| BRIDGE NO. | SCALE       | DATE    |
|------------|-------------|---------|
| 430        | SEE DRAWING | 4/22/08 |

| BR. 48-24 - JURUPA ROAD GRADE SEPARATION JURUPA ROAD UNDERPASS BENT 2 LAYOUT | SHEET NO. |
|--|-----------|
| BR 1-10  | 430       |

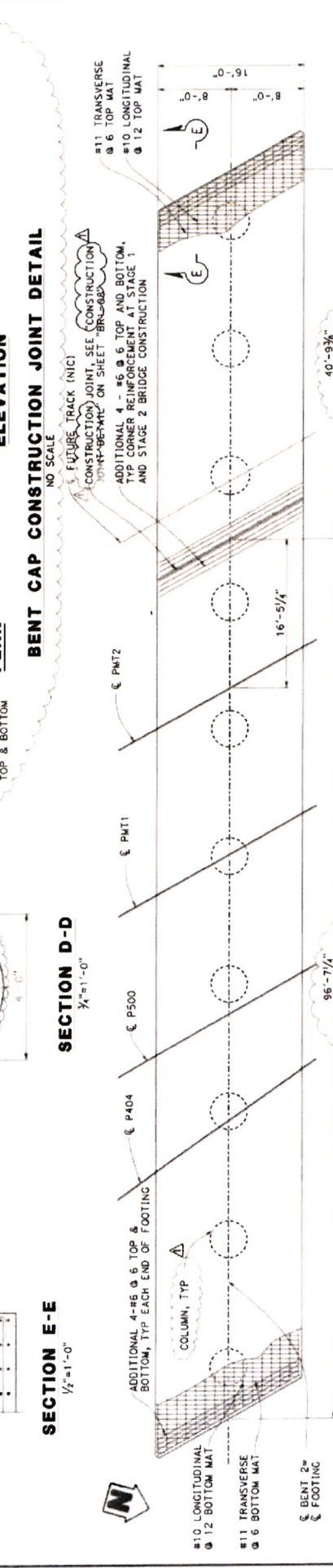
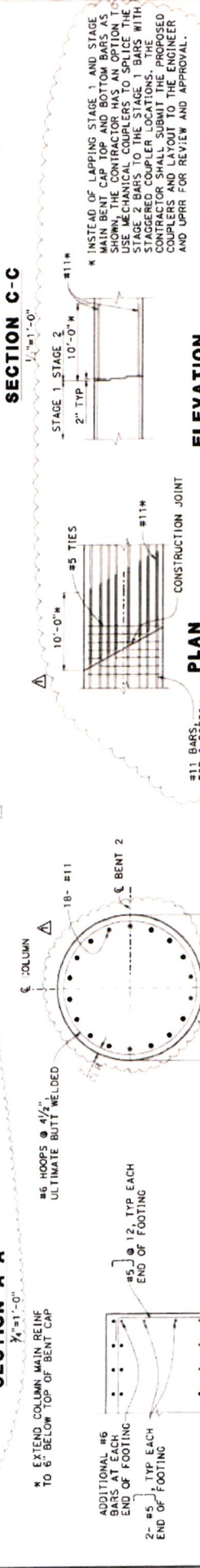
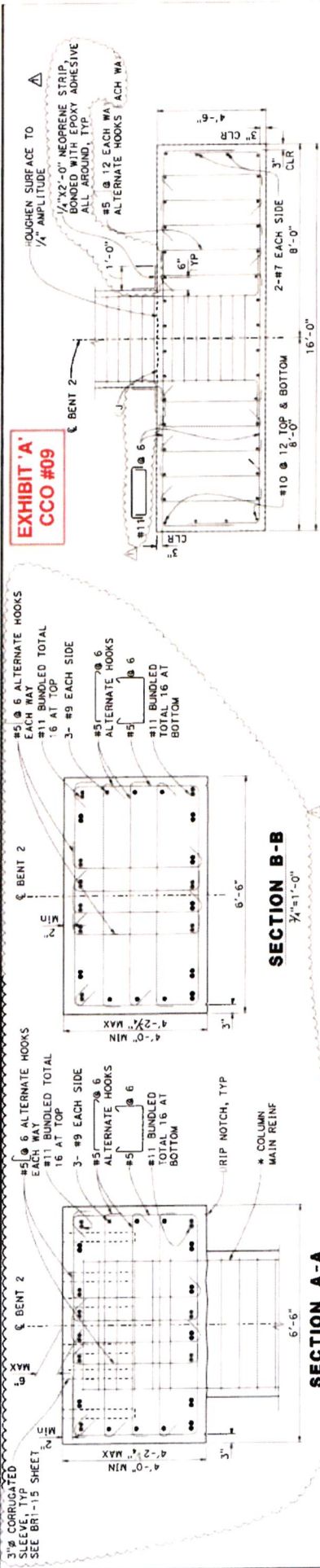
  

SCALE: SEE DRAWING

NO 00000 COUNTY FILE NO.



**EXHIBIT 'A'**  
**CCO #09**



NOTES:  
1. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING MATERIALS.  
2. ALL CHANGES AND CLARIFICATIONS PROPOSED BY THE AGENCY, DESIGN ENGINEER AND/OR CONTRACTOR AFTER UPRR'S APPROVAL OF THE DESIGN PLANS SHALL BE PROVIDED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.

| DATE | REVISION            | BY | APP'D |
|------|---------------------|----|-------|
| 4/22 | UPRR FINAL APPROVAL | RE | MT    |

| DESIGN BY:   | CHECKED BY: | DESIGN BY:   | CHECKED BY:  |
|--------------|-------------|--------------|--------------|
| R. KINGSOURY | M. BALLE    | R. KINGSOURY | R. KINGSOURY |
| L. NU        | A. ADILARI  | L. NU        | A. ADILARI   |

| BRIDGE NO. | SCALE       |
|------------|-------------|
| 431        | SEE DRAWING |

| BRIDGE NO.   | SCALE       |
|--|-------------|
| BR. 48-24 - JURUPA ROAD GRADE SEPARATION JURUPA ROAD UNDERPASS | SEE DRAWING |

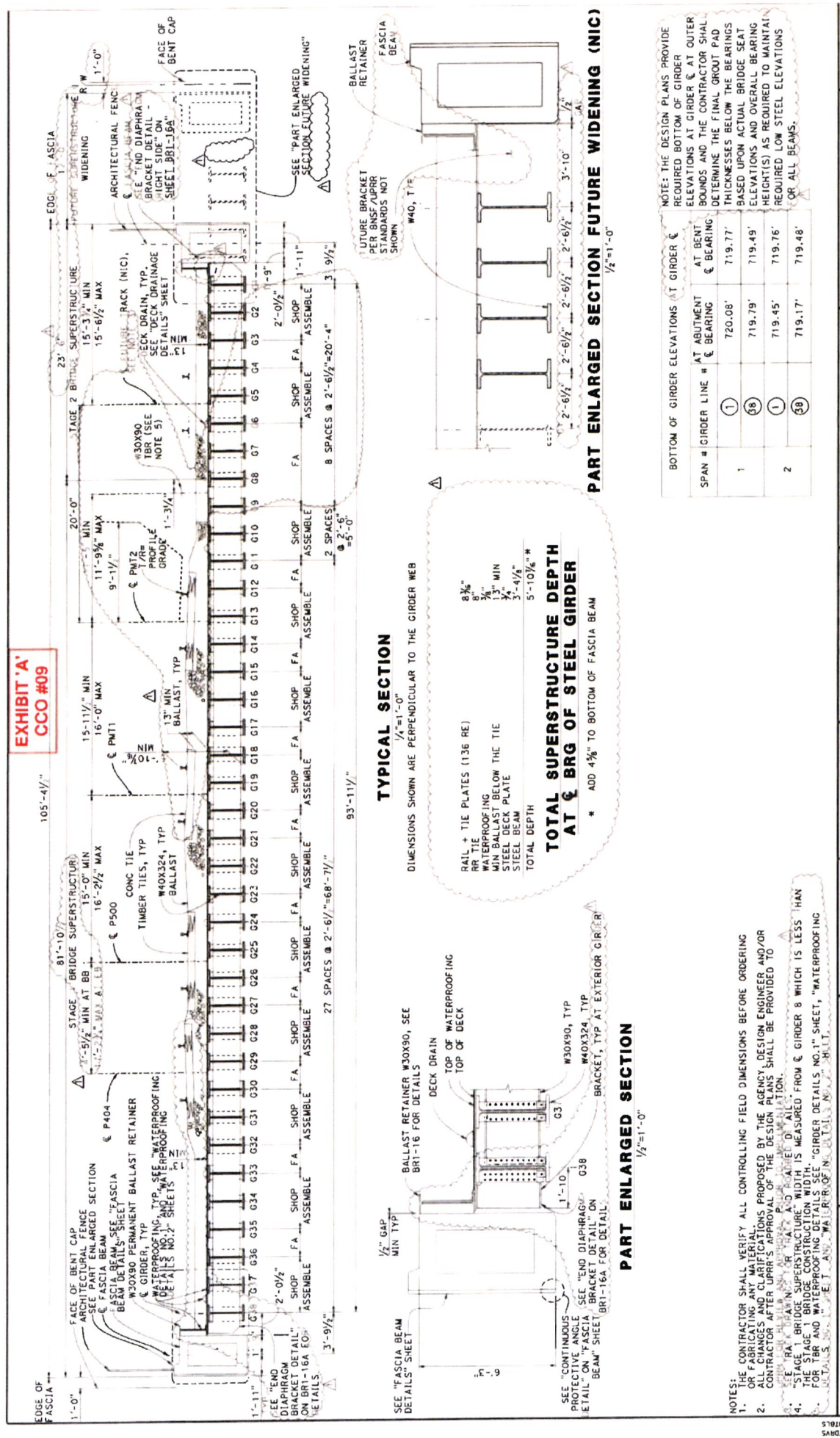
| PROJECT NO. | DATE    |
|-------------|---------|
| 431         | 5/11/08 |

PROJECT ENGINEER: *Michael V. ...*  
**HNTB**  
 1701 JEFFERSON ST., SUITE 1000, SAN FRANCISCO, CA 94109  
 (415) 774-2000



**EXHIBIT 'A'**  
**CCO #09**



**TYPICAL SECTION**  
 $\frac{1}{4}''=1'-0''$

DIMENSIONS SHOWN ARE PERPENDICULAR TO THE GIRDER WEB

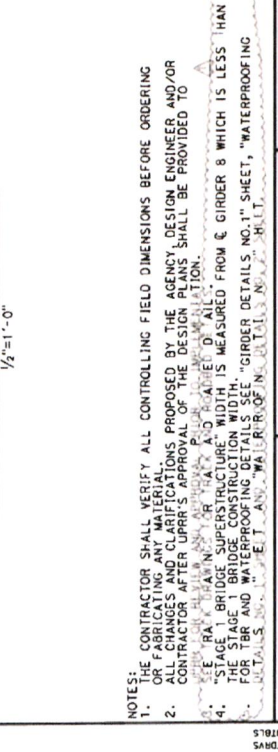
- RAIL + TIE PLATES (136 RE)  $8\frac{3}{8}''$
- WATERPROOFING  $9\frac{1}{4}''$
- MIN BALLAST BELOW THE TIE  $13''$  MIN
- STEEL DECK PLATE  $3\frac{1}{4}''-4\frac{1}{4}''$
- STEEL BEAM  $3''-4\frac{1}{4}''$
- TOTAL DEPTH  $5'-10\frac{3}{4}''$  \*

\* ADD  $4\frac{1}{4}''$  TO BOTTOM OF FASCIA BEAM

**TOTAL SUPERSTRUCTURE DEPTH**  
**AT & BRG OF STEEL GIRDER**

\* ADD  $4\frac{1}{4}''$  TO BOTTOM OF FASCIA BEAM

**PART ENLARGED SECTION**  
 $\frac{1}{2}''=1'-0''$



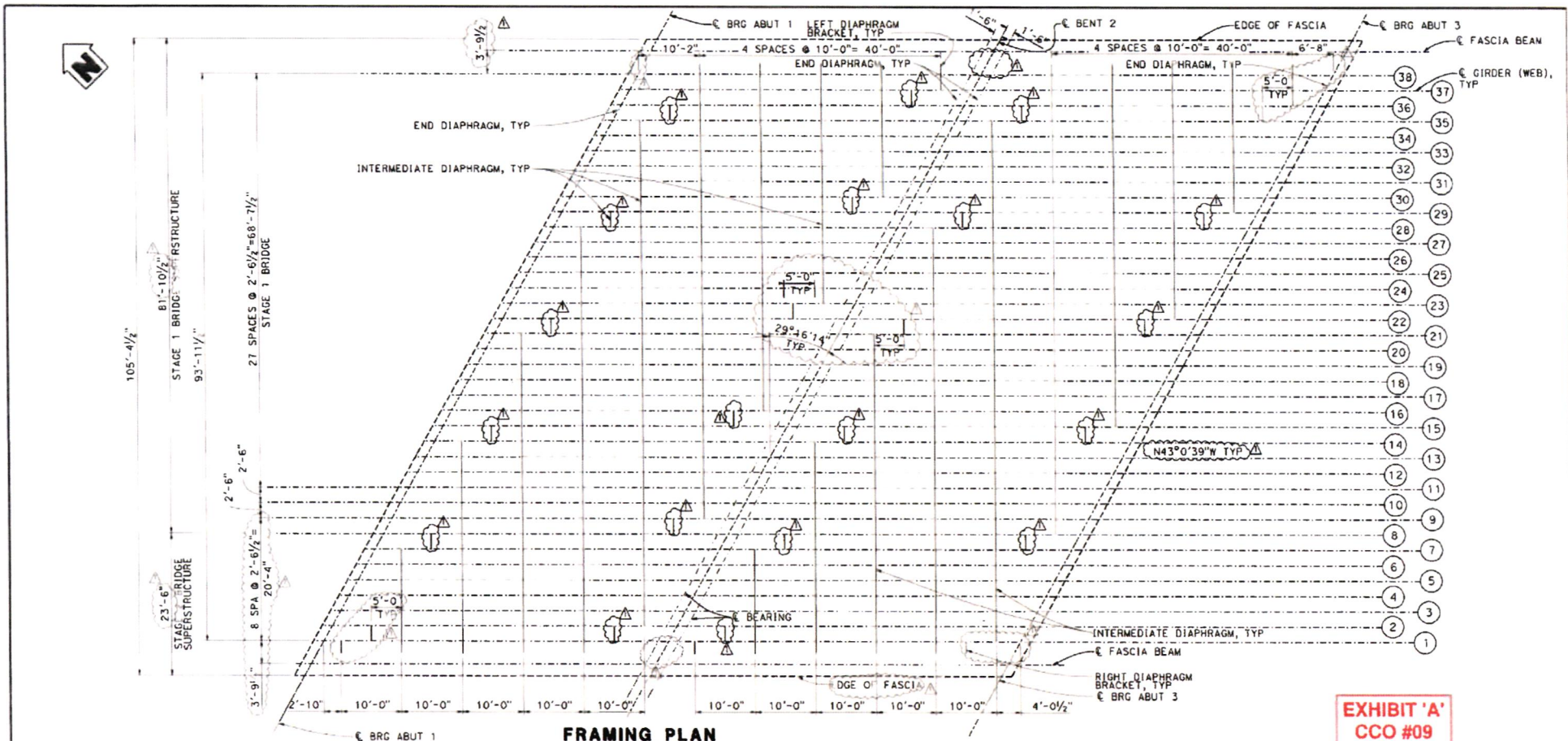
| SPAN # | GIRDER LINE # | AT ABUTMENT & BEARING | AT BEAT & BEARING |
|--------|---------------|-----------------------|-------------------|
| 1      | ①             | 720.08'               | 719.77'           |
|        | ②             | 719.79'               | 719.49'           |
| 2      | ①             | 719.45'               | 719.76'           |
|        | ②             | 719.17'               | 719.48'           |

NOTE: THE DESIGN PLANS PROVIDE ELEVATIONS AT GIRDER & AT OUTER BOUNDS AND THE CONTRACTOR SHALL DETERMINE THE FINAL GROUT PAD THICKNESSES BELOW THE BEARINGS BASED UPON ACTUAL BRIDGE SEAT ELEVATIONS AND OVERALL BEARING HEIGHT(S) AS REQUIRED TO MAINTAIN REQUIRED LOW STEEL ELEVATIONS FOR ALL BEAMS.

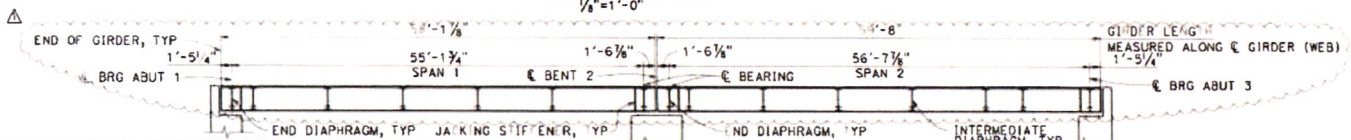
- NOTES:
- THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.
  - ALL CHANGES AND CLARIFICATIONS PROPOSED BY THE AGENCY DESIGN ENGINEER AND/OR CONTRACTOR AFTER UPRR'S APPROVAL OF THE DESIGN PLANS SHALL BE PROVIDED TO THE RAILROAD AND A CD AHEAD OF ALL WORK.
  - "STAGE 1 BRIDGE SUPERSTRUCTURE" WIDTH IS MEASURED FROM GIRDERS 8 WHICH IS LESS THAN FOR TIE AND WATERPROOFING DETAILS. "GIRDER DETAILS, NO. 1" SHEET, "WATERPROOFING DETAILS, NO. 2" SHEET, "BALLAST RETAINERS, NO. 3" SHEET.

|   |  |                                 |  |
|---|--|---------------------------------|--|
| <b>BR. 48-24 - JURUPA ROAD GRADE SEPARATION</b><br><b>JURUPA ROAD UNDERPASS</b>             |  | SHEET NO.<br><b>BR1-12</b>      |  |
| <b>TYPICAL SECTION</b>  |  | SCALE: SEE DRAWING<br>NO. 00000 |  |
|   |  |                                 |  |
| <b>HNTB</b>   |  | COUNTY FILE NO.<br>432 965      |  |
| PROJECT ENGINEER<br><i>M. J. HNTB</i>   |  | DATE<br>05-11-22                |  |
| APPROVED BY: <i>[Signature]</i><br>PROJECT MANAGER  |  |                                 |  |
| CHECKED BY: M. DALLE, R. KHALAF/EI/CI<br>L. KINSBURY, L. MU, X<br>QUANTITIES BY: A. ADICARI |  |                                 |  |
| DESIGNER: R. KHALAF/EI/CI<br>DATE: 05-11-22   |  | PROJECT MANAGER: M. J. HNTB     |  |
| SHEET NO.: 432  |  |                                 |  |
| TOTAL SHEETS: 30  |  |                                 |  |
| PROJECT NO.: 21110027   |  |                                 |  |
| DRAWING NO.: 111111   |  |                                 |  |





**EXHIBIT 'A'**  
**CCO #09**



- NOTES:**
1. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.
  2. ALL CHANGES AND CLARIFICATIONS PROPOSED BY THE AGENCY, DESIGN ENGINEER AND/OR CONTRACTOR AFTER UPRR'S APPROVAL OF THE DESIGN PLANS SHALL BE PROVIDED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.
  3. FOR TBR LOCATION, SEE TYPICAL SECTION SHEET.

**LEGEND:**  
(X) GIRDER DESIGNATION

PLAN DRIVER -> WPC/DBLS  
 PCN TABLE ->

| REVISIONS |      |                     |          |
|-----------|------|---------------------|----------|
| MARK      | DATE | DESCRIPTION         | BY APP'D |
| Δ         | 4/22 | UPRR FINAL APPROVAL | RK MW    |
|           |      |                     |          |
|           |      |                     |          |

THE SEAL OF THE ENGINEER OR ITS OFFICER OR AGENT'S SHALL BE PLACED IN THE LOWER RIGHT CORNER OF THIS PLAN SHEET.  
 ORIGINAL SCALE IN INCHES FOR REDUCED PLANS

|                |                 |             |                 |
|----------------|-----------------|-------------|-----------------|
| DESIGN BY:     | R. KHALAF BEIGI | CHECKED BY: | M. BALLE        |
| DETAILS BY:    | L. KINGSBURY    | CHECKED BY: | R. KHALAF BEIGI |
| QUANTITIES BY: | L. WU           | CHECKED BY: | A. ADHIKARI     |
| BRIDGE NO.     | X               |             |                 |

Michael Van Dyke  
 PROJECT ENGINEER  
 DATE: 05-11-22  
**HNTB**  
 8 HUTTON CENTRE DRIVE  
 SANTA ANA, CA 92707  
 (714) 460-1600

**BR. 48.24 - JURUPA ROAD GRADE SEPARATION JURUPA ROAD UNDERPASS**  
**GIRDER LAYOUT NO.1**  
 SCALE: SEE DRAWING  
 COUNTY FILE NO.

|                |               |
|----------------|---------------|
| SHEET NO.      | <b>BR1-13</b> |
| SHEET 14 OF 30 |               |
| DATE           | 05/11/22      |
| 433            | 565           |

USERNAME => lkingsbury

DCN FILE => 1-UP-1-g.1001.dgn

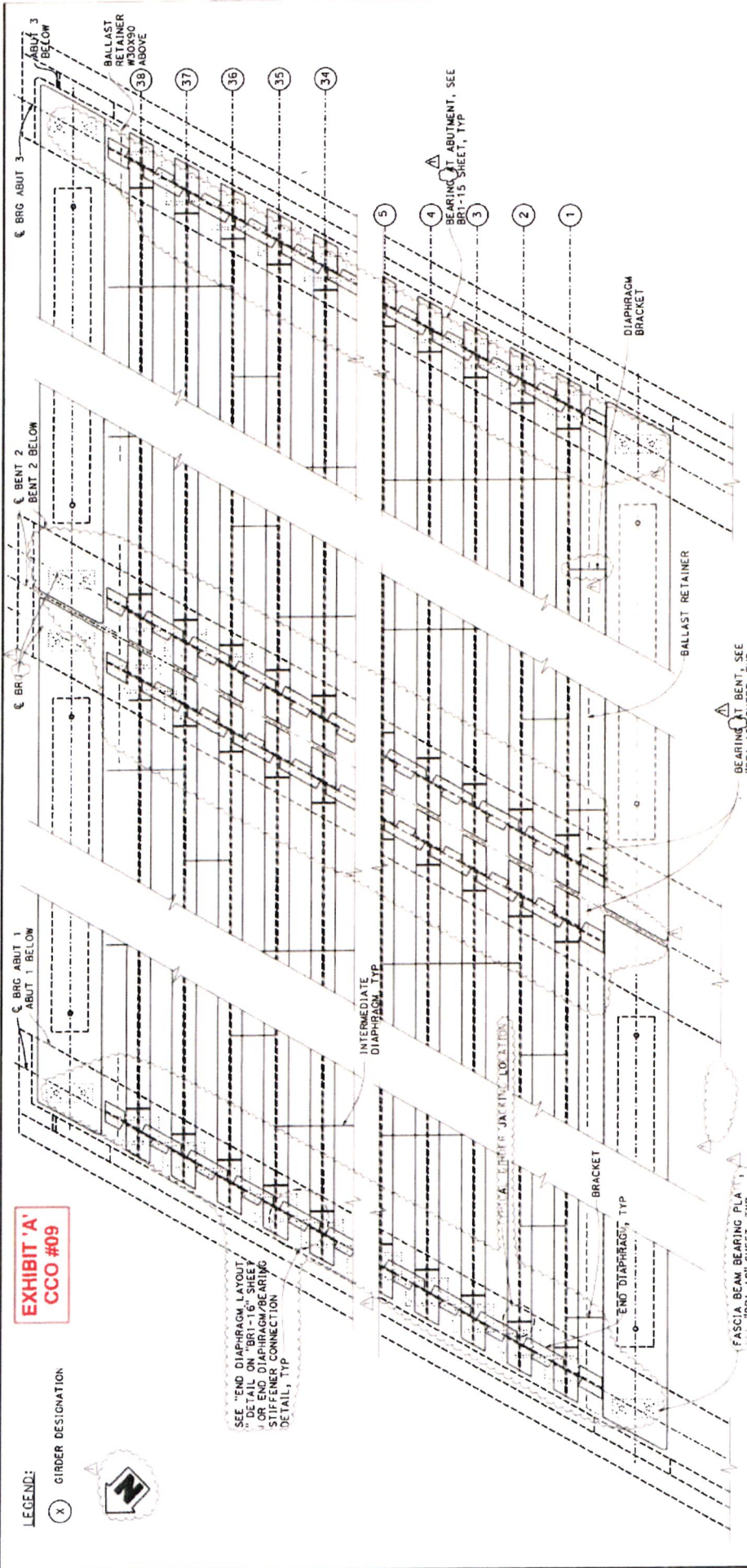
WO 00000

COUNTY FILE NO.



**EXHIBIT 'A'**  
**CCO #09**

LEGEND:  
X GIRDER DESIGNATION



**END DIAPHRAGM PLAN**  
3/4" = 1' - 0"

NOTES:  
1. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIALS.  
2. ALL CHANGES AND CLARIFICATIONS PROPOSED BY THE AGENCY, DESIGN ENGINEER AND/OR CONTRACTOR AFTER UPRR'S APPROVAL OF THE DESIGN PLANS SHALL BE PROVIDED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.

| DATE | DESCRIPTION         | BY | APP'D |
|------|---------------------|----|-------|
| 4/22 | UPRR FINAL APPROVAL | RK | BY    |

| DESIGN BY:       | DESIGNED BY:     | CHECKED BY:    | DATE: |
|------------------|------------------|----------------|-------|
| R. SHALFARBE (G) | R. SHALFARBE (G) | M. BALLE       |       |
| L. DIMICKSBURY   | L. DIMICKSBURY   | R. KALAFRE (G) |       |
| L. WJ            | L. WJ            | A. ADHARI      |       |

| QUANTITIES BY: | DESIGNED BY: | CHECKED BY:    | DATE: |
|----------------|--------------|----------------|-------|
| L. WJ          | L. WJ        | M. BALLE       |       |
| L. WJ          | L. WJ        | R. KALAFRE (G) |       |
| L. WJ          | L. WJ        | A. ADHARI      |       |

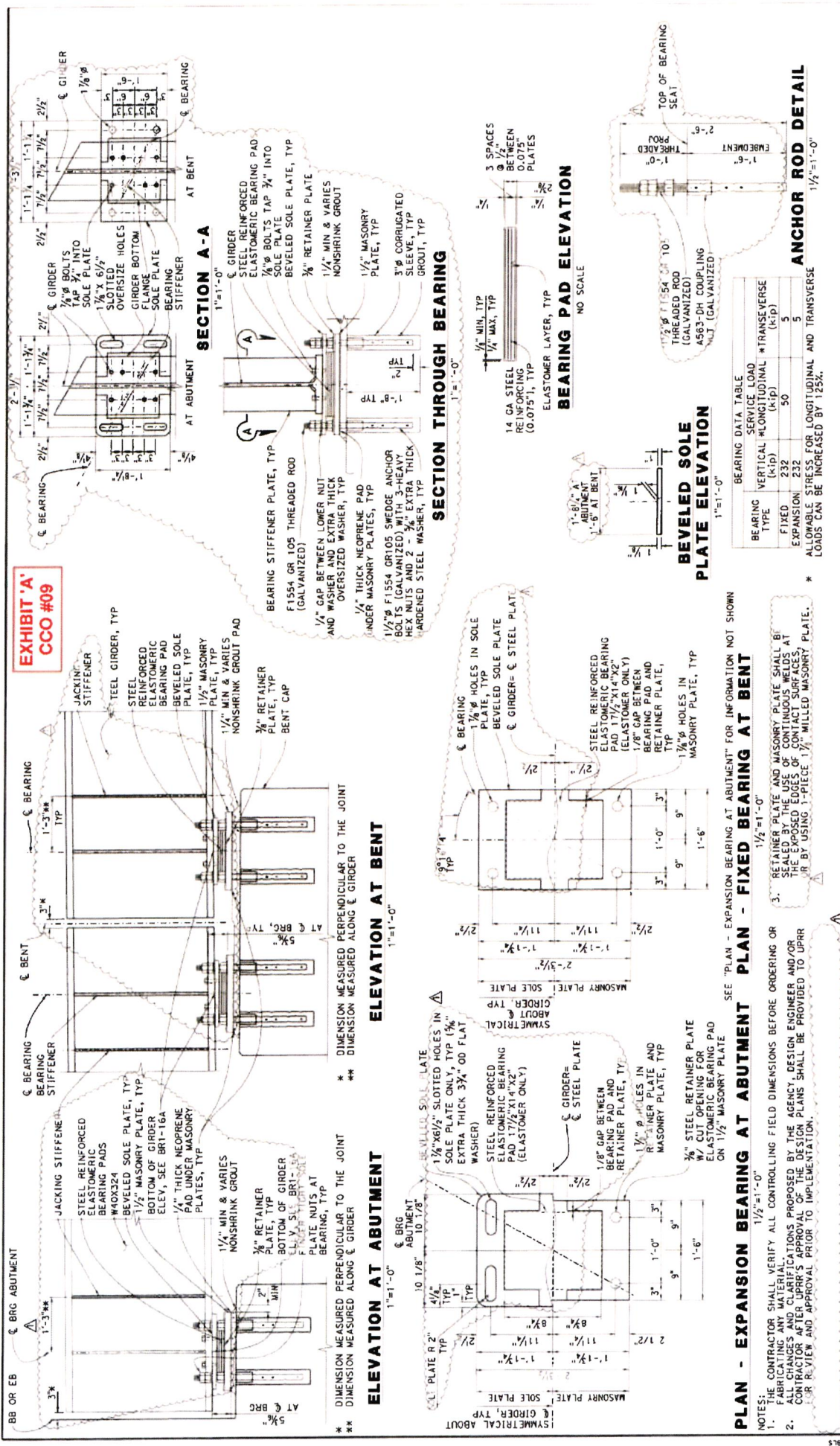


**HNTB**  
HNTB CONSULTANTS, INC.  
1770 JEFFERSON AVENUE  
SANTA ANA, CA 92707  
(714) 261-1000

BR. 48.24 - JURUPA ROAD  
GRADE SEPARATION  
JURUPA ROAD UNDERPASS  
GIRDER LAYOUT NO. 2  
SCALE: SEE DRAWING  
WO 00000  
COUNTY FILE NO.



**EXHIBIT 'A'**  
**CCO #09**



BEARING DATA TABLE

| BEARING TYPE | SERVICE LOAD VERTICAL (KIP) | LONGITUDINAL EXPANSION (IN) | TRANSVERSE EXPANSION (IN) |
|--------------|-----------------------------|-----------------------------|---------------------------|
| FIXED        | 232                         | 50                          | 5                         |
| EXPANSION    | 232                         | 50                          | 5                         |

\* ALLOWABLE STRESS FOR LONGITUDINAL AND TRANSVERSE LOADS CAN BE INCREASED BY 125%.

**PLAN - EXPANSION BEARING AT ABUTMENT** 1/2"=1'-0"

**PLAN - FIXED BEARING AT BENT** 1/2"=1'-0"

**PLAN - EXPANSION BEARING AT ABUTMENT** SEE "PLAN - EXPANSION BEARING AT ABUTMENT" FOR INFORMATION NOT SHOWN

NOTES:  
1. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.  
2. ALL CHANGES AND CLARIFICATIONS PROPOSED BY THE AGENCY, DESIGN ENGINEER AND/OR CONTRACTOR AFTER UPRR'S APPROVAL OF THE DESIGN PLANS SHALL BE PROVIDED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.

DESIGNER: R. MALAFEBIGI  
CHECKED BY: M. BALLE  
DETAILS BY: L. KINGSBURY  
CHECKED BY: R. MALAFEBIGI  
QUANTITIES BY: L. BUI  
CHECKED BY: A. ADHARI  
SCALE: SEE DRAWING  
DATE: 05-11-22  
PROJECT ENGINEER: Michael U. ...  
DATE: 05-11-22  
SCALE: SEE DRAWING  
PROJECT NO.: 435  
SHEET NO.: BR 1.15  
BR 1.15  
BR 1.15  
BR 1.15

BR. 46.24 - JURUPA ROAD GRADE SEPARATION JURUPA ROAD UNDERPASS BEARING DETAILS

SCALE: SEE DRAWING

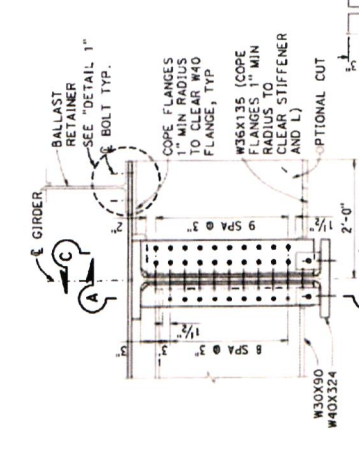
COUNTY: FILE NO.

W0 00000

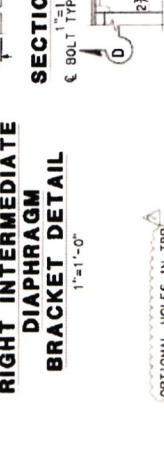


LEGEND:  
 ○ FIELD BOLT  
 ● SHOP BOLT

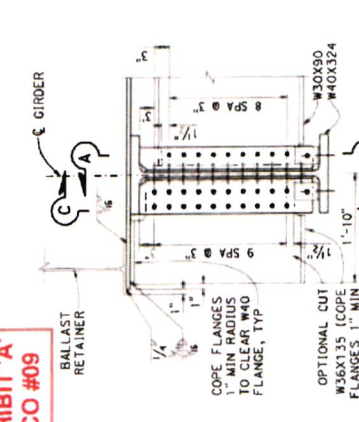
EXHIBIT 'A'  
 CCO #09



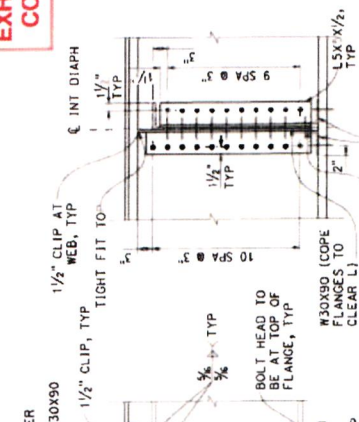
**SECTION A-A**  
 1"=1'-0"



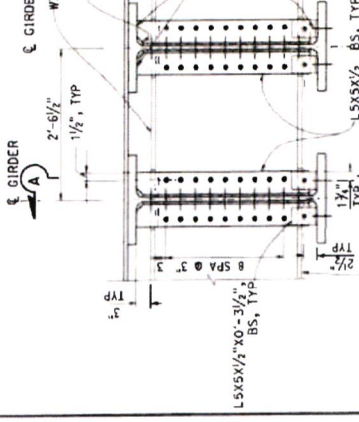
**SECTION B-B**  
 1"=1'-0"



**SECTION C-C**  
 1"=1'-0"



**SECTION D-D**  
 1"=1'-0"



**SECTION E-E**  
 1"=1'-0"



**SECTION F-F**  
 1"=1'-0"



**SECTION G-G**  
 1"=1'-0"



**SECTION H-H**  
 1"=1'-0"

**NOTES:**

1. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.
2. ALL CHANGES AND CLARIFICATIONS PROPOSED BY THE AGENCY DESIGN ENGINEER AND/OR CONTRACTOR SHALL BE SUBMITTED TO THE AGENCY DESIGN ENGINEER AND/OR CONTRACTOR FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION. DESIGN PLANS SHALL BE PROVIDED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.
3. CUT SURFACES SHALL HAVE A MAXIMUM SURFACE ROUGHNESS OF 1,000  $\mu$ in AS PRESCRIBED BY AREMA WIRE CH. 15 ART. 3.1-6.1.B AND AWS D1.5 CLAUSE 3.2.2.
4. INTERMEDIATE DIAPHRAGM AND INTERMEDIATE STIFFENER FIELD CONNECTIONS SHALL USE 1" DIA HIGH STRENGTH PLUG RESULTING HOLES IN DECK PLATE WITH HARDENED BOLTS WITH HARDENED WASHERS AND NUTS. AFTER TBR IS REMOVED.
5. THE RE-ENTRANT CORNERS OF COPE SHALL BE SHAPED WITH A RADIUS OF NOT LESS THAN 1 INCH.

| NO. | DATE | DESCRIPTION         | BY | APP'D |
|-----|------|---------------------|----|-------|
| 1   | 4/22 | UPRR FINAL APPROVAL | RK | WV    |
| 2   | 6/22 | UPRR FINAL APPROVAL | RK | WV    |

| DESIGN BY:    | DESIGNED BY:  | CHECKED BY: | DATE:    |
|---------------|---------------|-------------|----------|
| R. SHALABEIGI | M. BALLE      |             | 06-03-22 |
| L. LINGSBURY  | R. SHALABEIGI |             |          |
| L. WU         | A. ADRIARI    |             |          |

**HNTB**  
 PROJECT ENGINEER  
 MICHAEL W. WILSON  
 DATE: 06-03-22  
 SCALE: 1/8" = 1'-0"

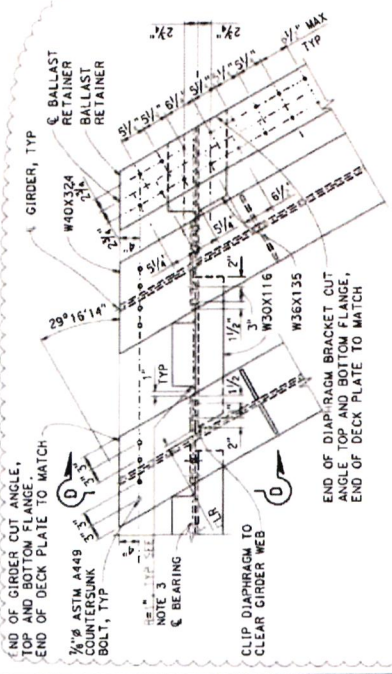
**BR. 48-24 - JURUPA ROAD GRADE SEPARATION JURUPA ROAD UNDERPASS GIRDER DETAILS NO.1**

SCALE: SEE DRAWING  
 COUNTY FILE NO. 000000  
 SHEET NO. 438 OF 565

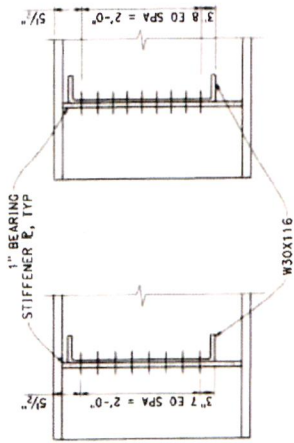


LEGEND:  
 ○ FIELD BOLT  
 ● SHOP BOLT

**EXHIBIT 'A'**  
**CCO #09**



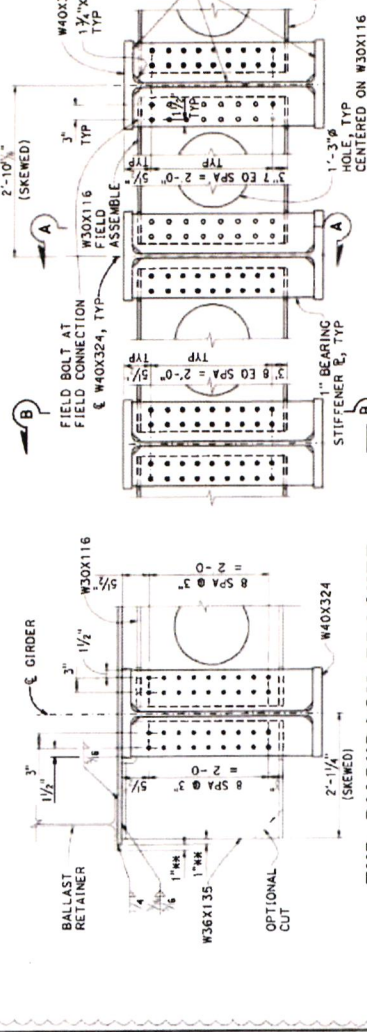
**END DIAPHRAGM LAYOUT**  
 1"=1'-0"  
 DECK PLATE NOT SHOWN FOR CLARITY



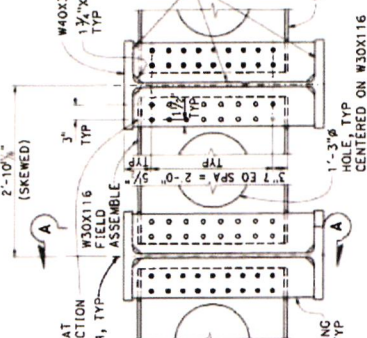
**SECTION A-A**  
 1"=1'-0"  
 FIELD ASSEMBLY



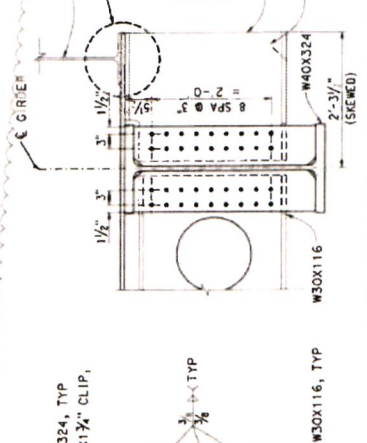
**SECTION B-B**  
 1"=1'-0"  
 SHOP ASSEMBLY



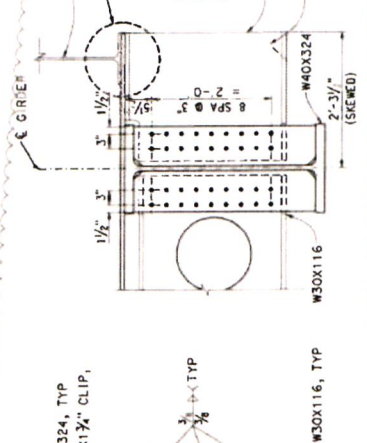
**END DIAPHRAGM BRACKET DETAIL - LEFT SIDE**  
 1"=1'-0"  
 \*\* MEASURED PERPENDICULAR TO THE GIRDER WEB



**END DIAPHRAGM CONNECTION DETAIL**  
 1"=1'-0"



**END DIAPHRAGM BRACKET DETAIL - RIGHT SIDE**  
 1"=1'-0"



**SECTION D-D**  
 3"=1'-0"

NOTES:  
 1. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.  
 2. ALL CHANGES AND CLARIFICATIONS PROPOSED BY THE AGENCY DESIGN ENGINEER AND/OR CONTRACTOR AFTER UPRR'S APPROVAL OF THE DESIGN PLANS SHALL BE PROVIDED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.  
 3. APPROVAL OF THE DESIGN PLANS SHALL BE PROVIDED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.  
 4. END DIAPHRAGM AND BEARING STIFFENERS FIELD CONNECTIONS SHALL USE 1" DIA HIGH STRENGTH BOLTS WITH NUT AND HARDENED STEEL WASHER AND HAVE OVERSIZED HOLES.

| NO. | DATE | DESCRIPTION         | BY | APP'D |
|-----|------|---------------------|----|-------|
| 1   | 4/22 | UPRR FINAL APPROVAL | RM | RM    |

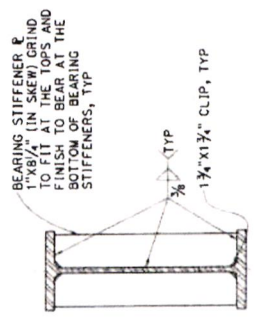
| DESIGN BY:     | CHECKED BY:   |
|----------------|---------------|
| R. MALAFREIGI  | M. BALLE      |
| DETAILS BY:    | CHECKED BY:   |
| L. KINGSBURY   | R. MALAFREIGI |
| QUANTITIES BY: | CHECKED BY:   |
| L. RU          | A. ADILARI    |
| WASHER NO.:    | X             |

| SCALE:   | DATE:    |
|----------|----------|
| AS SHOWN | 05-11-22 |

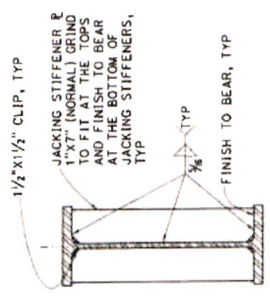
**HNTB**  
 PROJECT ENGINEER  
 MICHAEL VAN DYKE  
 DATE 05-11-22  
 14400 NORTH CENTRAL AVE  
 (714) 960-1000

**BR. 49-24 - JURUPA ROAD GRADE SEPARATION JURUPA ROAD UNDERPASS GIRDER DETAILS NO. 2**  
 SHEET NO. **BR1-16A**  
 OF 18 OF 30  
 SCALE: SEE DRAWING  
 COUNTY FILE NO. WO 00000

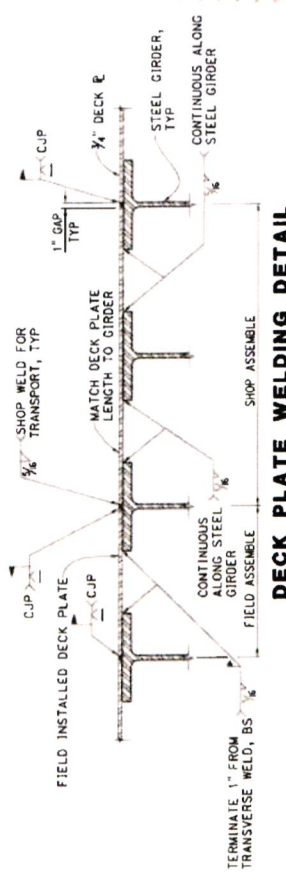
**EXHIBIT 'A'**  
**CCO #09**



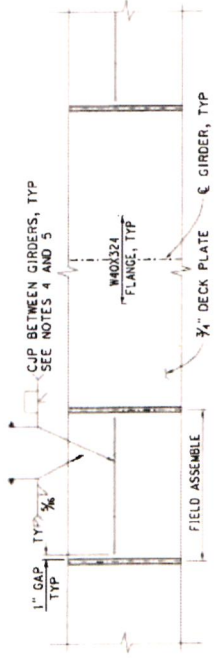
**BEARING STIFFENER DETAIL**  
1"=1'-0"



**JACKING STIFFENER DETAIL**  
1"=1'-0"



**DECK PLATE WELDING DETAIL**  
1"=1'-0"



**DECK PLATE SPLICE WELDING DETAIL**  
1"=1'-0"

- NOTES:
1. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.
  2. ALL CHANGES AND CLARIFICATIONS PROPOSED BY THE AGENCY, DESIGN ENGINEER AND/OR CONTRACTOR AFTER UPRR'S APPROVAL OF THE DESIGN PLANS SHALL BE PROVIDED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.
  3. THE CONTRACTOR SHALL MINIMIZE THE NUMBER OF TRANSVERSE FABRICATION AND FIELD ERECTION LIMITS TO MINIMIZE THE NUMBER OF TRANSVERSE SPLICE JOINTS. TRANSVERSE CJP IS REQUIRED FOR DECK PLATE FIELD SPLICE WHERE DECK PLATE LENGTH IS LESS THAN SPAN LENGTH.
  4. BEARING BEAR TO BEAR 3/4" x 1 1/2" CONFORMING TO ASTM A709 GRADE 50W.
  5. TERMINATE TRANSVERSE CJP WELD 1" FROM LONGITUDINAL CJP WELD, TYP. BOTH ENDS.

| NO. | DATE | REVISIONS           |
|-----|------|---------------------|
| 1   | 4/22 | UPRR FINAL APPROVAL |
|     |      |                     |
|     |      |                     |
|     |      |                     |
|     |      |                     |

| DESIGN BY      | DESIGN CHECK BY | CHECKED BY | DATE |
|----------------|-----------------|------------|------|
| R. SHALAFBEIGI | M. SALLE        |            |      |
| L. KINGSEURY   | R. DALALFABEIGI |            |      |
| L. BEI         | A. ADHIBARI     |            |      |
|                |                 |            |      |
|                |                 |            |      |
|                |                 |            |      |

**HNTB**  
PROJECT ENGINEER  
MICHAEL V. ADAMS  
05-11-22 DATE  
12021222  
A PROFESSIONAL ENGINEER  
STATE OF CALIFORNIA  
1747 14th ST  
SAN FRANCISCO, CA 94107

**BR. 48-24 - JURUPA ROAD GRADE SEPARATION JURUPA ROAD UNDERPASS GIRDER DETAILS NO. 3**

SCALE: SEE DRAWING

NO. 00000

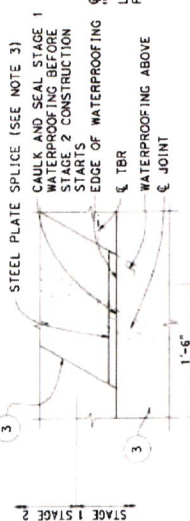
DATE: 19-30

4968 565



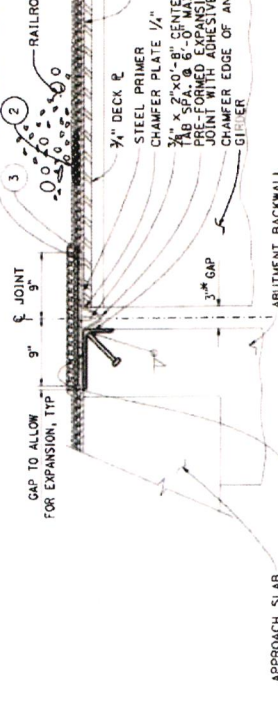
**EXHIBIT 'A'**  
**CCO #09**

NOTE: THIS DETAIL APPLIES TO BENT 2 AS WELL.



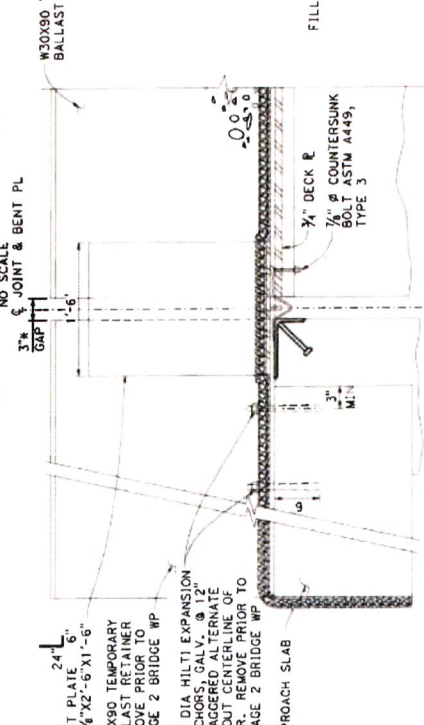
**GALVANIZED STEEL PLATE SPLICE DETAIL**

NO SCALE



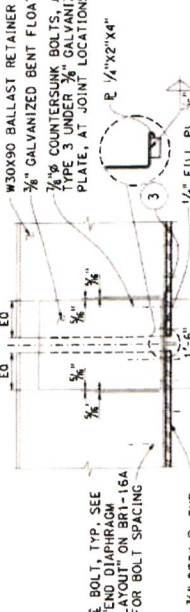
**JOINT WATERPROOFING AT ABUTMENT**

NO SCALE



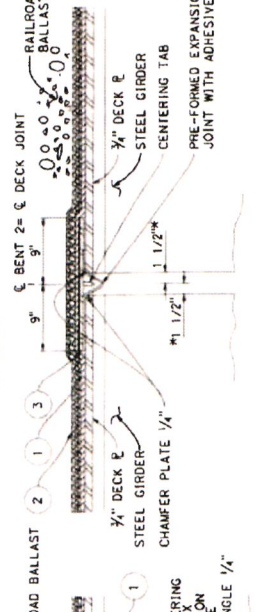
**JOINT WATERPROOFING AT BENT**

NO SCALE



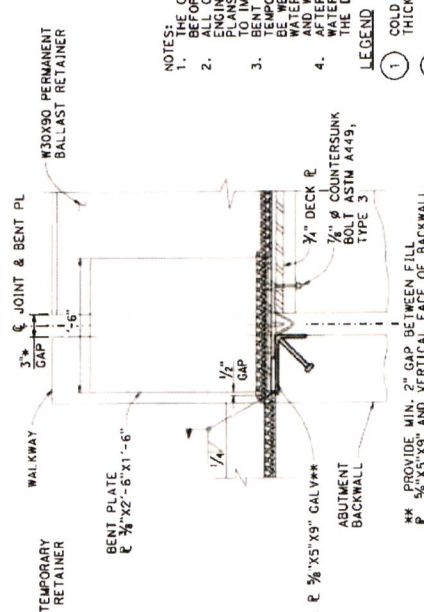
**TEMPORARY BALLAST RETAINER CONNECTION DETAIL AT APPROACH SLAB**

NO SCALE



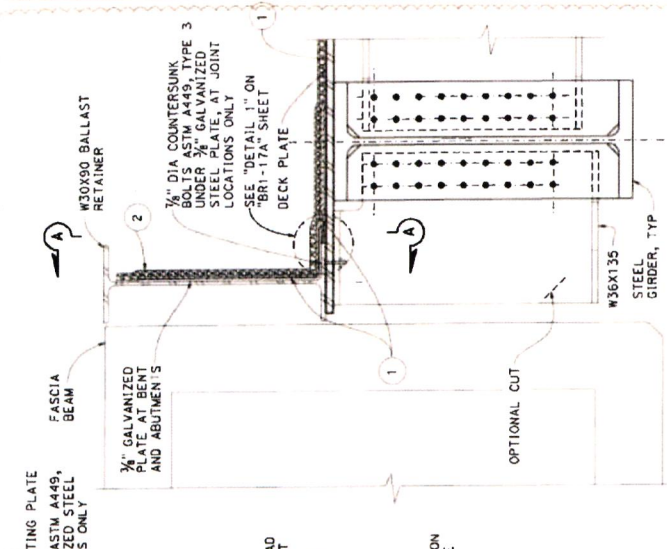
**PERMANENT BALLAST RETAINER CONNECTION AT ABUTMENT BACKWALL**

NO SCALE



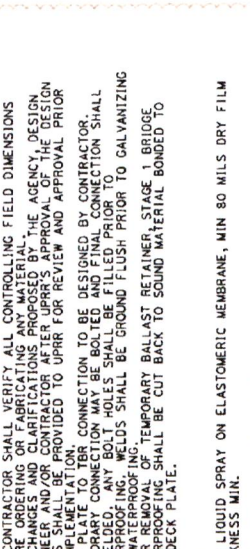
**TEMPORARY BALLAST RETAINER CONNECTION AT ABUTMENT BACKWALL**

NO SCALE



**JOINT WATERPROOFING AT BALLAST RETAINER**

NO SCALE



**JOINT WATERPROOFING AT BENT**

NO SCALE

- NOTES:
- CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.
  - ALL CHANGES AND CLARIFICATIONS PROPOSED BY THE AGENCY, DESIGN ENGINEER AND/OR CONTRACTOR AFTER UPRR'S APPROVAL OF THE DESIGN PLANS SHALL BE PROVIDED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.
  - BENT PLATE TO TBR CONNECTION TO BE DESIGNED BY CONTRACTOR. BE WELDED. ANY BOLT HOLES SHALL BE FILLED PRIOR TO WATERPROOFING. TEMPORARY BALLAST RETAINERS SHALL BE GROUND FLUSH TO GALVANIZING AFTER REMOVAL OF TEMPORARY BALLAST RETAINER. STAGE 1 BRIDGE WATERPROOFING SHALL BE CUT BACK TO SOUND MATERIAL BONDED TO THE DECK PLATE.
- LEGEND
- COLD LIQUID SPRAY ON ELASTOMERIC MEMBRANE, MIN 80 MILS DRY FILM THICKNESS MIN.
  - INTEGRATED BALLAST PROTECTION MAT OF 250 MILS DRY FILM THICKNESS, AS APPROVED BY UPRR.
  - 3\"/>

| NO. | DATE | DESCRIPTION         | BY | APP'D. |
|-----|------|---------------------|----|--------|
| 1   | 4/22 | UPRR FINAL APPROVAL | TK | MP     |

| DESIGN BENT     | CHECKED BY   | M. BALLE        |
|-----------------|--------------|-----------------|
| DETAILS BENT    | L. KINGSBURY | R. VIKHLAFEBIGI |
| QUANTITIES BENT | L. J. JBI    | A. ADRIANSI     |
| BRIDGE NO.      | X            |                 |

DESIGNED BY: MICHAEL J. KINGSBURY  
PROJECT ENGINEER  
DATE: 05-11-22  
SCALE: 1/8" = 1'-0"

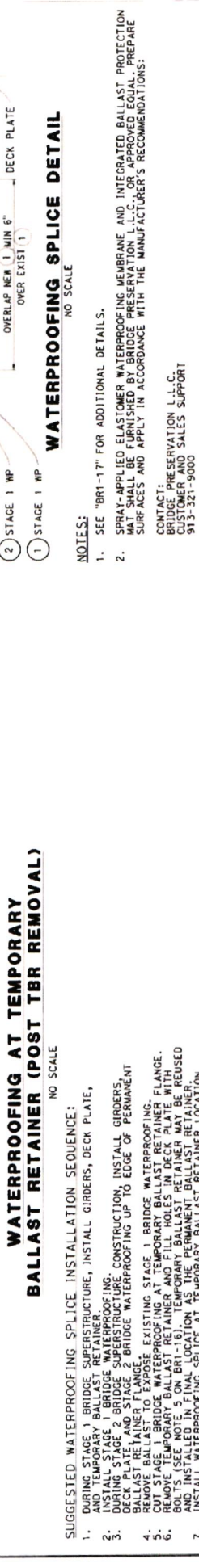
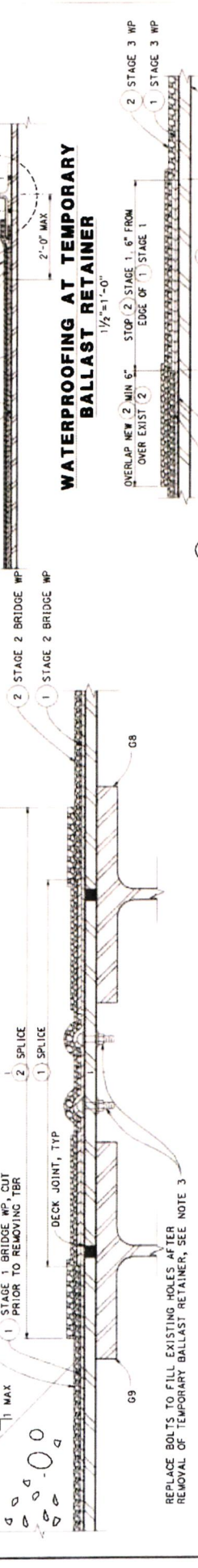
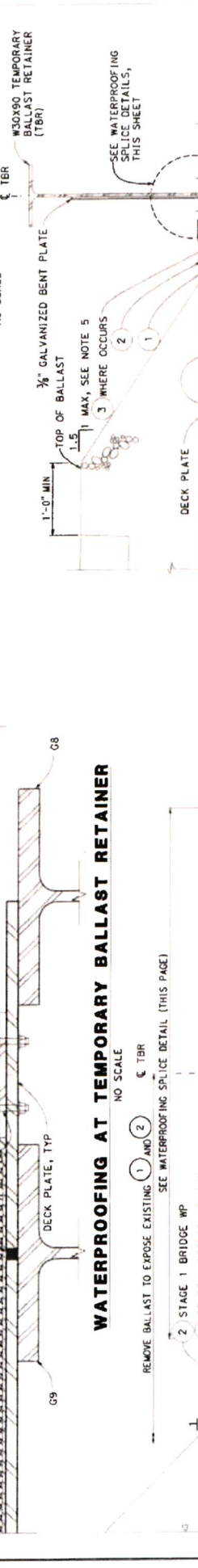
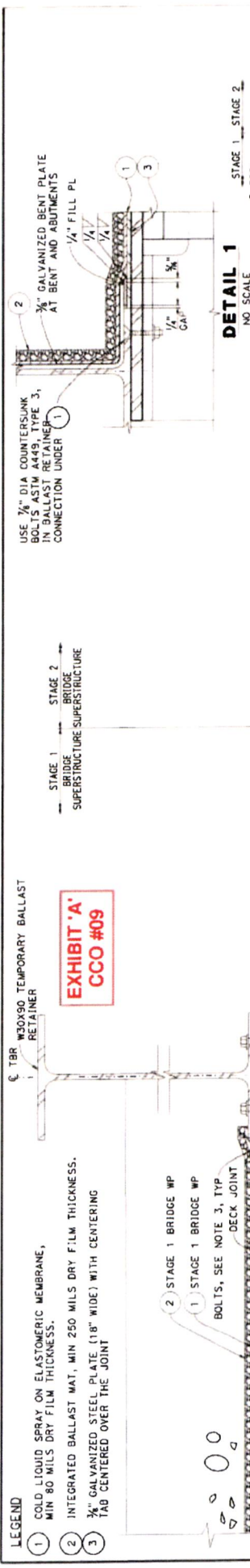
**HNTB**  
SCALE: SEE DRAWING  
497 565

BR. 48-24 - JURUPA ROAD GRADE SEPARATION JURUPA ROAD UNDERPASS WATERPROOFING DETAILS NO. 1

SHEET NO. 497 OF 30  
DATE: 05-11-22  
SCALE: 1/8" = 1'-0"

COUNTY FILE NO.





- LEGEND**
- 1 COLD LIQUID SPRAY ON ELASTOMERIC MEMBRANE, MIN 80 MILS DRY FILM THICKNESS.
  - 2 INTEGRATED BALLAST MAT, MIN 250 MILS DRY FILM THICKNESS.
  - 3 3/8" GALVANIZED STEEL PLATE (18" WIDE) WITH CENTERING TAB CENTERED OVER THE JOINT

**WATERPROOFING AT TEMPORARY BALLAST RETAINER**  
NO SCALE

**WATERPROOFING AT TEMPORARY BALLAST RETAINER (POST TBR REMOVAL)**  
NO SCALE

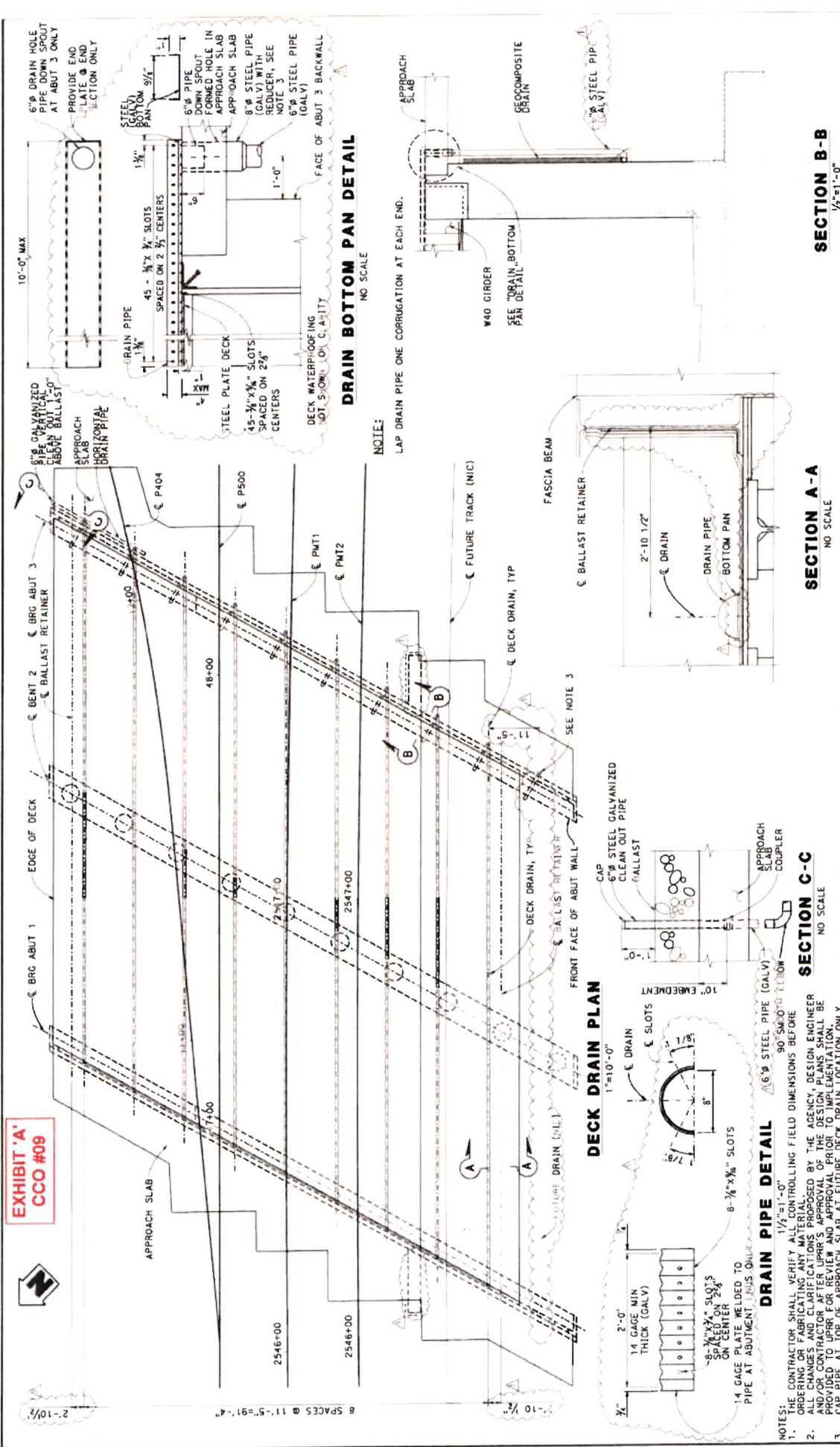
- SUGGESTED WATERPROOFING SPLICING INSTALLATION SEQUENCE:**
1. DURING STAGE 1 BRIDGE SUPERSTRUCTURE, INSTALL GIRDERS, DECK PLATE, AND TEMPORARY BALLAST RETAINER.
  2. INSTALL STAGE 1 BRIDGE WATERPROOFING.
  3. DURING STAGE 2 BRIDGE SUPERSTRUCTURE CONSTRUCTION, INSTALL GIRDERS, DECK PLATE, AND TEMPORARY BALLAST RETAINER. WATERPROOFING UP TO EDGE OF PERMANENT BALLAST RETAINER FLANGE.
  4. REMOVE BALLAST TO EXPOSE EXISTING STAGE 1 BRIDGE WATERPROOFING.
  5. CUT STAGE 1 BRIDGE WATERPROOFING AT TEMPORARY BALLAST RETAINER FLANGE.
  6. REMOVE EXISTING STAGE 1 BRIDGE WATERPROOFING. REMOVE EXISTING BALLAST RETAINER FLANGE. REMOVE EXISTING BALLAST RETAINER. REMOVE EXISTING BALLAST RETAINER. REMOVE EXISTING BALLAST RETAINER.
  7. INSTALL WATERPROOFING SPLICING AT TEMPORARY BALLAST RETAINER LOCATION.
  8. REMOVE EXISTING STAGE 1 BRIDGE WATERPROOFING. REMOVE EXISTING BALLAST RETAINER. REMOVE EXISTING BALLAST RETAINER.
  9. STAGE 2 BRIDGE WATERPROOFING MAY BE INSTALLED IN ONE PHASE IF PROPOSED LIMITS OF BALLAST REMOVAL ARE APPROVED BY THE ENGINEER AND UPRR. COORDINATE TRACK OPERATIONS AS REQUIRED TO PERFORM WORK.

- NOTES:**
1. SEE "BR1-17" FOR ADDITIONAL DETAILS.
  2. SPRAY-APPLIED ELASTOMER WATERPROOFING MEMBRANE AND INTEGRATED BALLAST PROTECTION MAT SHALL BE FURNISHED BY BRIDGE PRESERVATION L.L.C. OR APPROVED EQUAL. PREPARE SURFACES AND APPLY IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
  - CONTACT: BRIDGE PRESERVATION L.L.C. 913-261-9000
  3. SEE "BR1-16" AND "BR1-16A" FOR BALLAST RETAINER BOLTING DETAILS.
  4. AFTER REMOVAL OF TEMPORARY BALLAST RETAINER, STAGE 1 BRIDGE WATERPROOFING SHALL BE CUT BACK TO SOUND MATERIAL BONDED TO THE DECK PLATE.
  5. CONTRACTOR TO PROVIDE BALLAST STABILIZATION FOR SLOPES STEEPER THAN 3:1

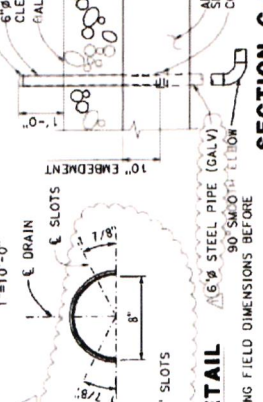
| <p>BR. 48-24 - JURUPA ROAD GRADE SEPARATION JURUPA ROAD UNDERPASS WATERPROOFING DETAILS NO. 2</p>   |  |  |  |       |      |             |    |       |   |      |                     |    |    |
|---|--|--|--|-------|------|-------------|----|-------|---|------|---------------------|----|----|
| <p>DATE: 05-11-22<br/>PROJECT ENGINEER: MICHAEL VAN ARMAN<br/>SCALE: SEE DRAWING</p>  |  | <p>SHEET NO. BR1-17A<br/>DATE: 21 OF 30<br/>JOB NO. 437A<br/>665</p> |  |       |      |             |    |       |   |      |                     |    |    |
| <p>DESIGN BY: R. MALAFRIGI<br/>CHECKED BY: M. BILLE</p>   | <p>DETAILS BY: L. KINGSBURY<br/>CHECKED BY: R. MALAFRIGI</p> | <p>QUANTITIES BY: L. BU<br/>CHECKED BY: A. WILHELM</p>               | <p>WORK NO. X<br/>FOR REVISIONS IN WORKS</p> |       |      |             |    |       |   |      |                     |    |    |
| <p>REVISIONS</p> <table border="1"> <thead> <tr> <th>NO.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> <th>APP'D</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>4/22</td> <td>UPRR FINAL APPROVAL</td> <td>RL</td> <td>WP</td> </tr> </tbody> </table> |  |  |  | NO.   | DATE | DESCRIPTION | BY | APP'D | 1 | 4/22 | UPRR FINAL APPROVAL | RL | WP |
| NO.   | DATE   | DESCRIPTION  | BY   | APP'D |      |             |    |       |   |      |                     |    |    |
| 1   | 4/22   | UPRR FINAL APPROVAL  | RL   | WP    |      |             |    |       |   |      |                     |    |    |



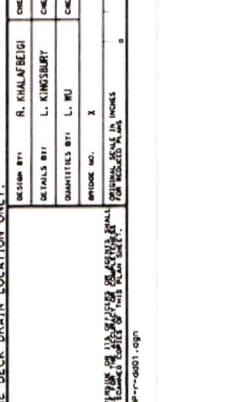
**EXHIBIT 'A'**  
**CCO #09**



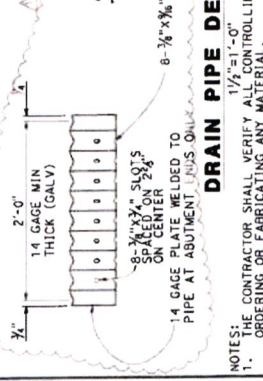
**SECTION A-A**  
NO SCALE



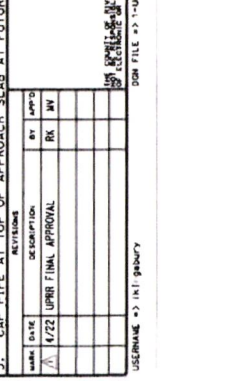
**SECTION B-B**  
1/2" = 1'-0"



**SECTION C-C**  
NO SCALE



**SECTION C-C**  
NO SCALE



**NOTES:**  
 1. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.  
 2. ALL CHANGES AND/OR MATERIALS APPROVED BY THE AGENCY, DESIGN ENGINEER AND/OR CONTRACTOR AFTER APPROVAL PRIOR TO IMPLEMENTATION. ALL CHANGES SHALL BE PROVIDED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.  
 3. CAP PIPE AT TOP OF APPROACH SLAB AT FUTURE DECK DRAIN LOCATION ONLY.

| DATE    | DESCRIPTION         | BY | APP'D |
|---------|---------------------|----|-------|
| 1/22/99 | UPRR FINAL APPROVAL | RK | RM    |

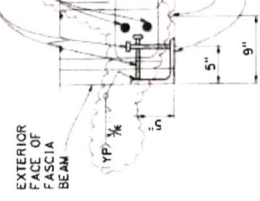
  

| DESIGN BY      | CHECKED BY | DETAILS BY   | CHECKED BY    | QUANTITIES BY | PHONE NO. |
|----------------|------------|--------------|---------------|---------------|-----------|
| R. SHALWENBERG | M. HALL    | L. KINGSBURY | R. HUNLAFBICI | L. WU         | X         |
|                |            |              | A. JUNGBERG   |               |           |

SCALE: SEE DRAWING

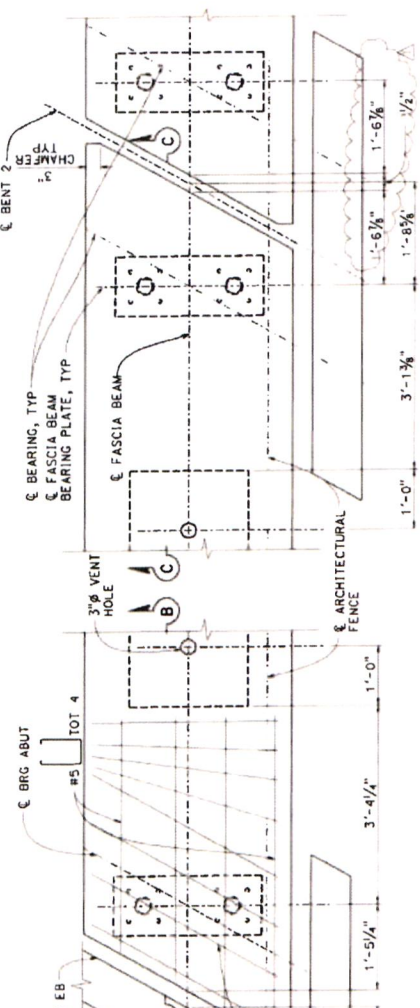
**EXHIBIT 'A'**  
**CCO #09**

$1/2$ "x6"x6" AUTOMATICALLY WELDED STUDS @ 12" C/C ALTERNATE  
SEE "SECTION A-A" FOR DETAIL



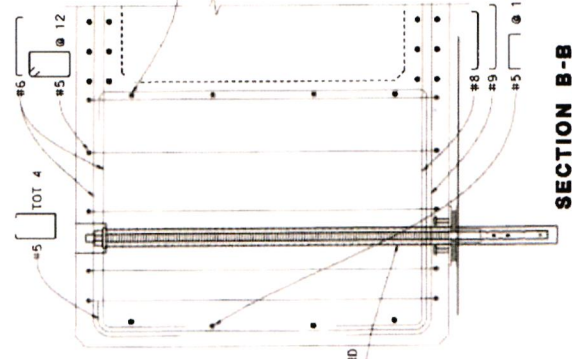
**CONTINUOUS PROTECTIVE ANGLE DETAIL**  
1 1/2"-1'-0"

#5 SKEWED, FIT @ 12" ON LONG SIDE AND VARY ON OPPOSITE SIDE



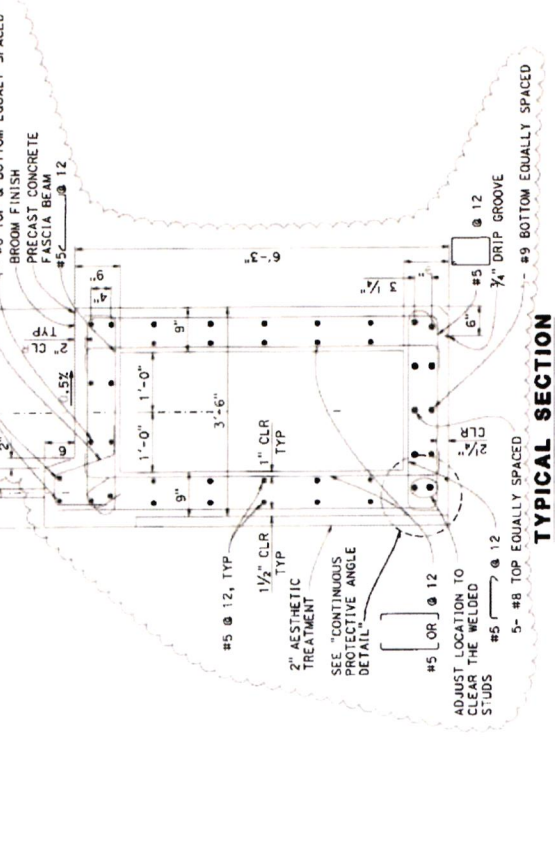
**PLAN**  
1'-1'-0"

1 1/2" Ø F1554 GR 105 THREADED ROD (GALVANIZED), TYP  
4" PROJECTION ABOVE BOTTOM OF POCKET  
1 1/2" Ø HEAVY HEX NUT (GALVANIZED), TYP  
6"X6" DEEP POCKET  
1 1/2" Ø F1554 GR 105 SWEDGE ANCHOR BOLT (GALVANIZED), TYP  
CORRUGATED SLEEVE, TYP  
456" ØH COUPLING NUT (GALVANIZED)



**SECTION C-C**  
1'-1'-0"

ARCHITECTURAL FENCE, SEE NOTE 3  
#6 TOP & BOTTOM EQUALLY SPACED BROOM FINISH PRECAST CONCRETE FASCIA BEAM  
#5-#12  
#5-#12  
#9 DRIP GROOVE  
#5-#8 TOP EQUALLY SPACED STUDS  
#5-#8 BOTTOM EQUALLY SPACED STUDS



**TYPICAL SECTION**  
1'-1'-0"

NOTES:  
1. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.  
2. ALL CHANGES AND CLARIFICATIONS PROPOSED BY THE AGENCY, DESIGN ENGINEER AND/OR CONTRACTOR AFTER UPPIR'S APPROVAL OF THE DESIGN PLANS SHALL BE SUBJECT TO UPPIR'S FINAL PRIOR TO IMPLEMENTATION.  
3. FOR ARCHITECTURAL FENCE POST POCKET DETAILS AND SPACING SEE SHEETS BR1-20 AND BR1-21.

NOTE:  
GALVANIZE ALL BOLTS, PLATES AND INSERTED MATERIAL AFTER FABRICATION.



**SECTION B-B**  
1'-1'-0"

| NO. | DATE | DESCRIPTION          | BY | APP'D. |
|-----|------|----------------------|----|--------|
| 1   | 4/22 | UPPIR FINAL APPROVAL | RK | BM     |

|                |                |
|----------------|----------------|
| DESIGN BY:     | M. BALLE       |
| DETAILS BY:    | R. SHALKEBEIGI |
| CHECKED BY:    | L. KINGSBURY   |
| QUANTITIES BY: | L. BU          |
| SHOWN NO.:     | 1              |

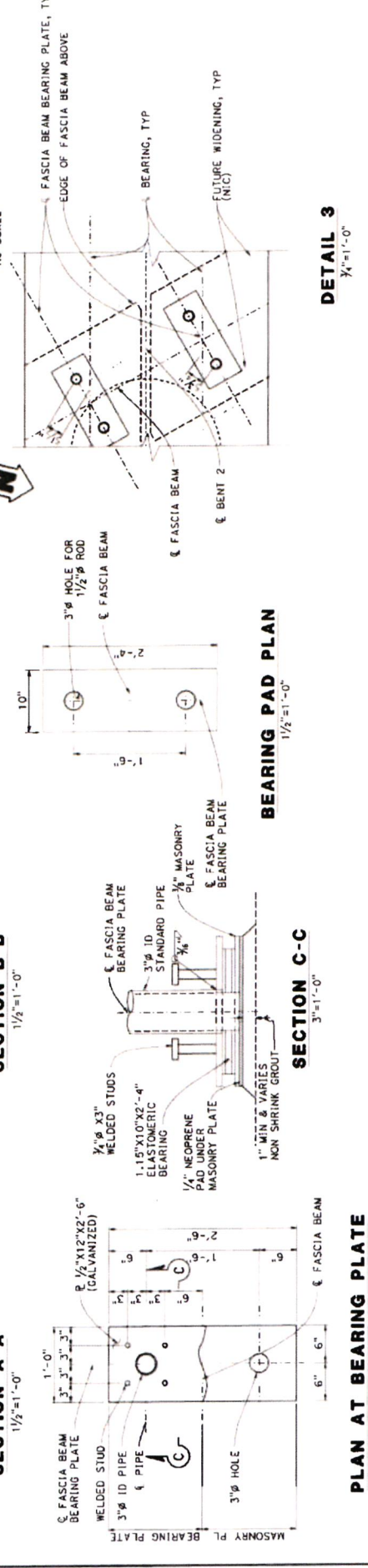
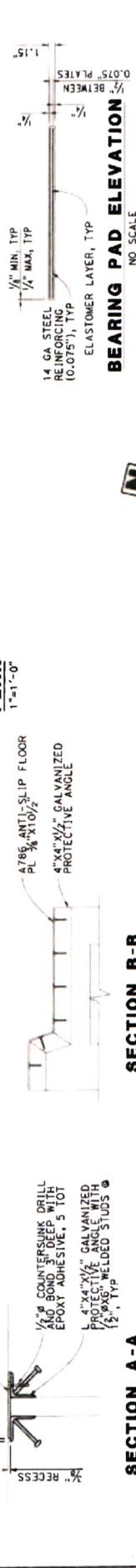
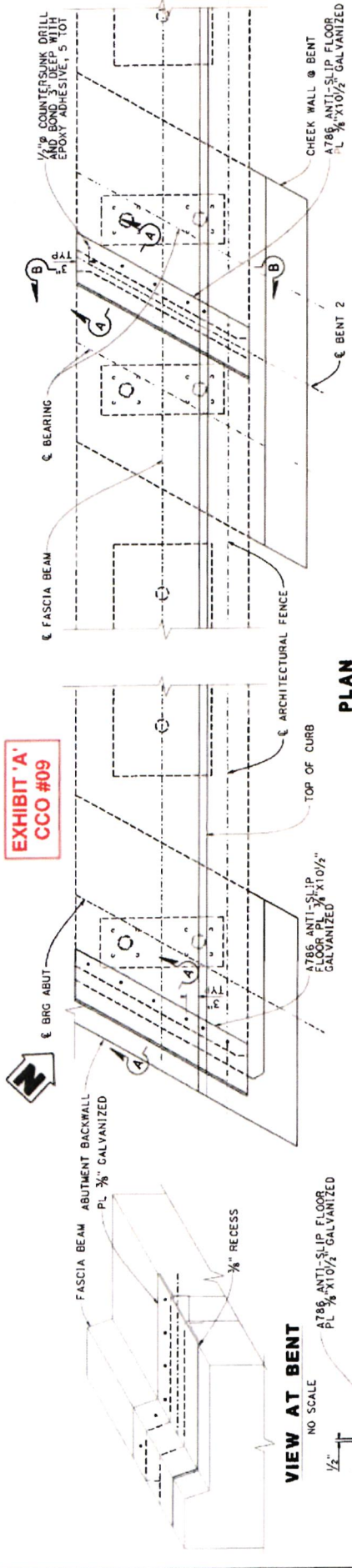
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|-------------|----------------|
| DESIGN BY:  | R. SHALKEBEIGI |
| CHECKED BY: | M. BALLE       |
| DETAILS BY: | R. SHALKEBEIGI |
| CHECKED BY: | A. ADILKARI    |

|                          |             |
|--------------------------|-------------|
| BR 48-24                 | JURUPA ROAD |
| GRADE SEPARATION         |             |
| JURUPA ROAD UNDERPASS    |             |
| FASCIA BEAM DETAILS NO.1 |             |

HNTB PROJECT ENGINEER  
Milton Gordon Drive  
Beverly Hills, CA 91607  
TEL: 310.770.1000  
DATE: 05-11-02  
SHEET: 23 OF 30  
SCALE: SEE DRAWING  
PROJECT NO.: 439  
SHEET NO.: BR1-19



**EXHIBIT 'A'**  
**CCO #09**



**NOTES:**  
 1. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.  
 2. ALL CHANGES AND CLARIFICATIONS PROPOSED BY THE AGENCY, DESIGN ENGINEER AND/OR CONTRACTOR AFTER UPRR'S APPROVAL OF THE DESIGN PLANS SHALL BE PROVIDED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.

| NO. | DATE | DESCRIPTION         | BY | APP'D |
|-----|------|---------------------|----|-------|
| 1   | 4/22 | UPRR FINAL APPROVAL | DK | MM    |

| DESIGNER     | CHECKED BY   | DATE |
|--------------|--------------|------|
| M. BALLE     | M. BALLE     |      |
| R. CHALMERS  | R. CHALMERS  |      |
| L. KINGSBURY | L. KINGSBURY |      |
| L. KU        | L. KU        |      |

| QUANTITY | UNIT | AMOUNT |
|----------|------|--------|
|          |      |        |

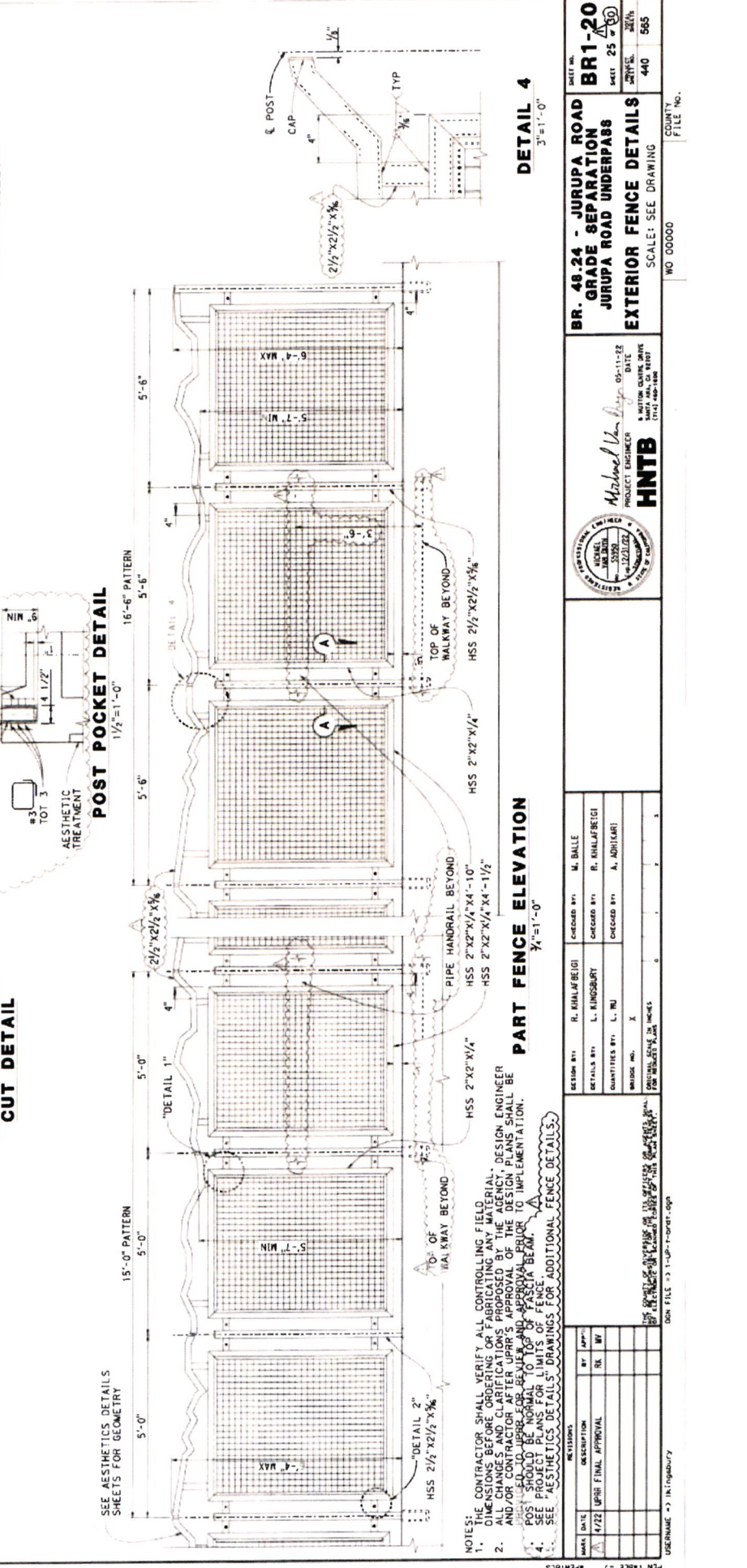
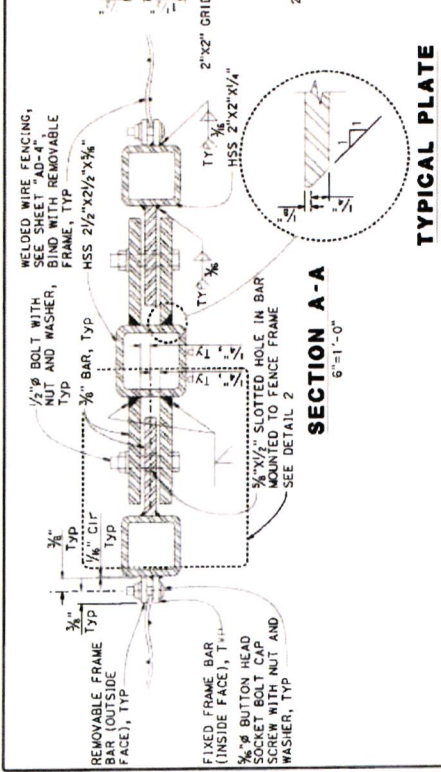
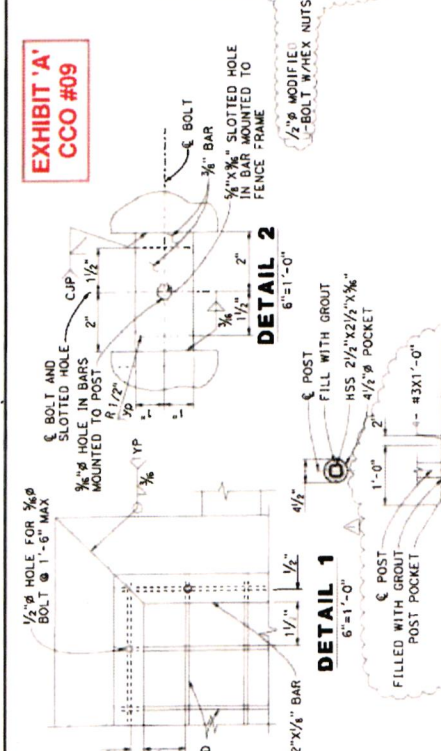
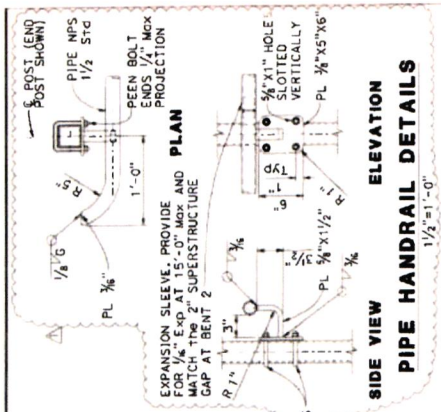
  

| NO. | DATE | DESCRIPTION         |
|-----|------|---------------------|
| 1   | 4/22 | UPRR FINAL APPROVAL |

BR. 48-24 - JURUPA ROAD GRADE SEPARATION JURUPA ROAD UNDERPASS FASCIA BEAM DETAILS NO. 2  
 SCALE: SEE DRAWING  
 COUNTY FILE NO. 439A 666  
 HNTB PROJECT ENGINEER  
 MICHAEL J. BALLE  
 11741 10th Ave, Suite 100  
 San Diego, CA 92121  
 (619) 444-1000  
 DATE PLOTTED: 05-11-22  
 PLOTTED BY: HNTB  
 USER: HNTB  
 PLOT TABLE: 1:1  
 PLOT DRIVER: 1:1  
 PLOT TABLE: 1:1  
 PLOT DRIVER: 1:1



**EXHIBIT 'A'**  
**CCO #09**



**NOTES:**  
1. THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. ALL CHANGES AND CLARIFICATIONS PROPOSED BY THE AGENCY, DESIGN ENGINEER OR CONTRACTOR SHALL BE SUBMITTED TO THE AGENCY FOR APPROVAL PRIOR TO IMPLEMENTATION.  
2. POST SHOULD BE NORMAL TOP OF FASCIA BEAM.  
3. SEE PROJECT PLANS FOR LIMITS OF FENCE.  
4. SEE 'AESTHETICS DETAILS' DRAWINGS FOR ADDITIONAL FENCE DETAILS.

|      |                    |    |       |
|------|--------------------|----|-------|
| DATE | DESCRIPTION        | BY | APP'D |
| 4/22 | UPR FINAL APPROVAL | RL | WJ    |

|                       |                |            |                |
|-----------------------|----------------|------------|----------------|
| DESIGN BY             | R. KHALFEBEIGI | CHECKED BY | M. BALLE       |
| DETAILS BY            | L. KINGSBURY   | CHECKED BY | R. KHALFEBEIGI |
| QUANTITIES BY         | L. INU         | CHECKED BY | A. ADHILARI    |
| WROTE INCHES          | X              |            |                |
| FOR PROJECT IN INCHES |                |            |                |

SCALE: SEE DRAWING

NO. 00000

COUNTY FILE NO.

BR. 48-24 - JURUPA ROAD GRADE SEPARATION JURUPA ROAD UNDERPASS EXTERIOR FENCE DETAILS

SHEET NO. BR1-20

DATE 09-11-22

PROJECT ENGINEER

**HNTB**

Michael Van Dyke

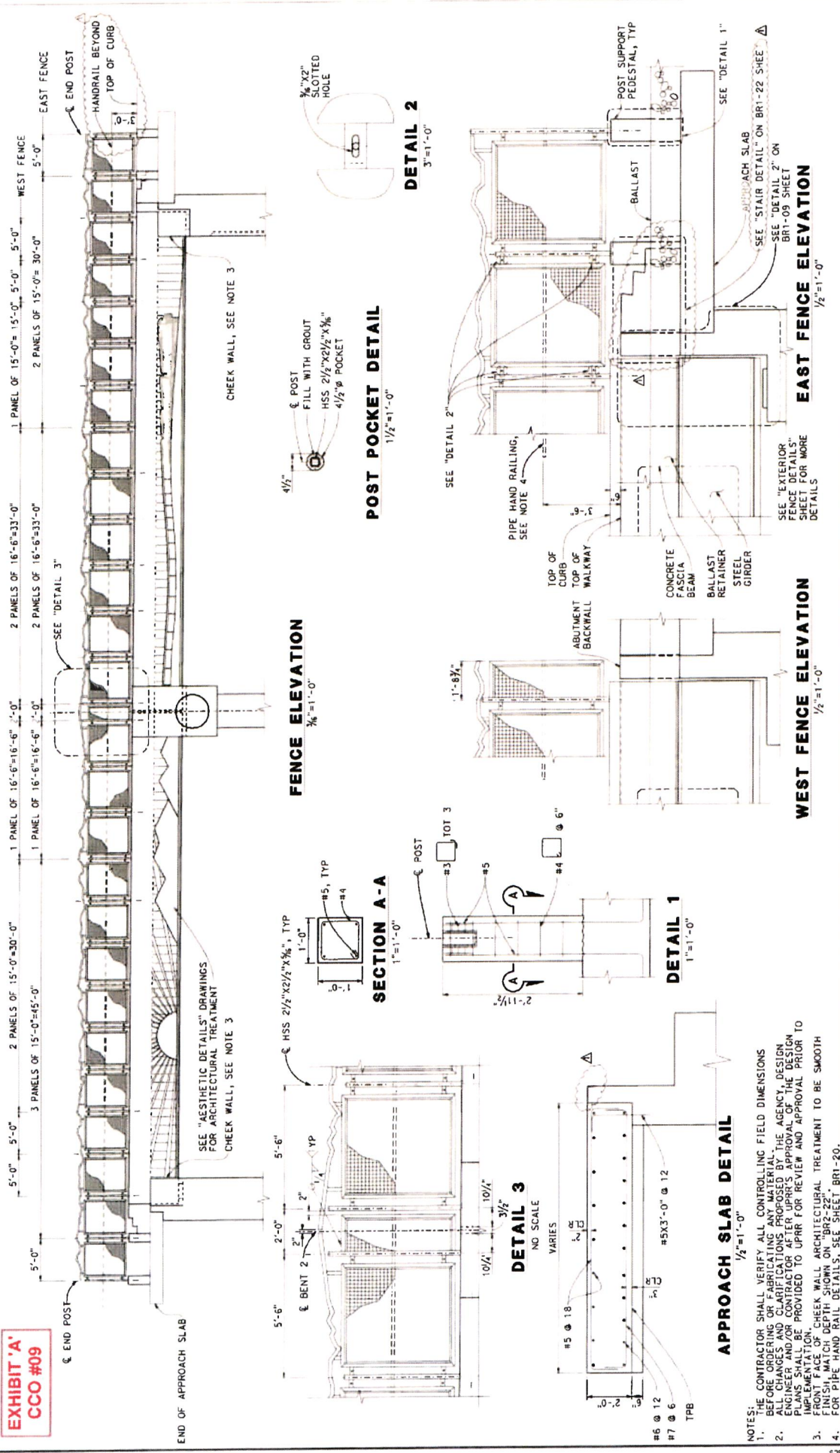
SCALE: SEE DRAWING

NO. 00000

COUNTY FILE NO.



**EXHIBIT 'A'**  
**CCO #09**



- NOTES:** THE CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL. DESIGN ALL CHANGES AND CLARIFICATIONS PROPOSED BY THE AGENCY, DESIGN ENGINEER AND/OR CONTRACTOR AFTER UPRR'S APPROVAL OF THE DESIGN IMPROVEMENTS. THE CONTRACTOR SHALL BE PROVIDED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO THE START OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE FINISH FACE OF CHECK WALL ARCHITECTURAL TREATMENT TO BE SMOOTH. FINISH MATCH DEPTH SHOWN ON "BR2-22".
- FOR PIPE HAND RAIL DETAILS, SEE SHEET BR1-20.
  - FOR PIPE HAND RAIL DETAILS, SEE SHEET BR1-20.
  - FOR PIPE HAND RAIL DETAILS, SEE SHEET BR1-20.
  - FOR PIPE HAND RAIL DETAILS, SEE SHEET BR1-20.

| NO.   | DATE          | DESCRIPTION         | BY            | APP'D |
|---|---------------|---------------------|---------------|-------|
| 1   | 4/22          | UPRR FINAL APPROVAL | RL            | ML    |
| <p>REVISIONS</p>  |               |                     |               |       |
| DESIGN BY   | R. SHALFMEICI | CHECKED BY          | M. BALLE      |       |
| DETAILS BY  | L. KINGSBURY  | CHECKED BY          | R. SHALFMEICI |       |
| QUANTITIES BY   | L. KU         | CHECKED BY          | A. JOHNSON    |       |
| BY DATE   | X             |                     |               |       |
| <p>SCALE: AS SHOWN ON DRAWING. ALL DIMENSIONS UNLESS OTHERWISE SPECIFIED ARE IN INCHES. DIMENSIONS OF BEAMS AND POSTS ARE TO FACE UNLESS OTHERWISE SPECIFIED.</p> |               |                     |               |       |

PROJECT: BR. 48-24 - JURUPA ROAD GRADE SEPARATION  
 JURUPA ROAD UNDERPASS  
 ARCHITECTURAL EXTERIOR FENCE ELEVATION

SCALE: SEE DRAWING

NO. 00000

COUNTY FILE NO.

DATE: 08-11-22

PROJECT ENGINEER: Michael Van Dyke

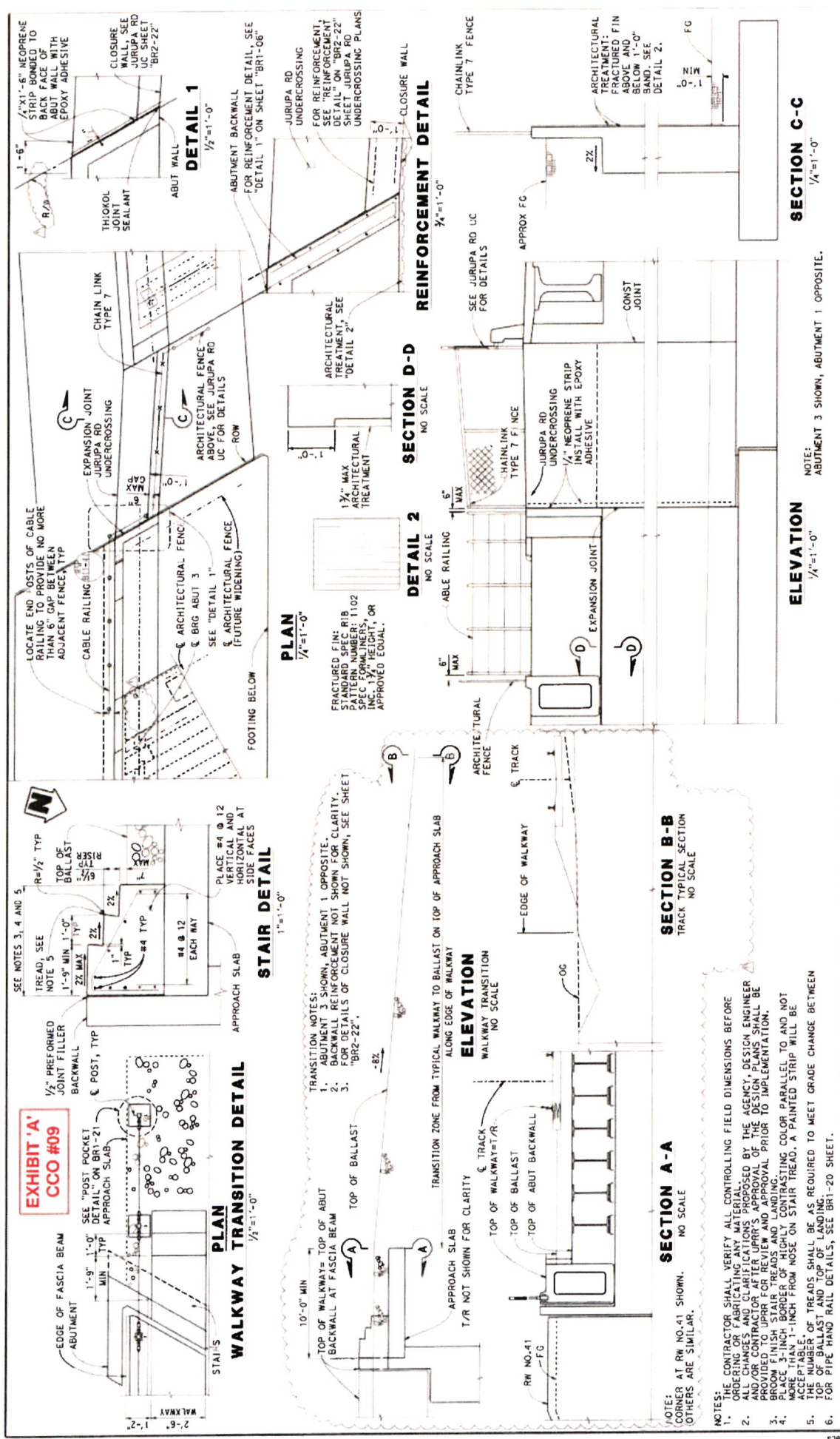
HNTB

REGISTERED PROFESSIONAL ENGINEER  
 STATE OF CALIFORNIA  
 LICENSE NO. 68188

BR1-21  
 DATE: 08-11-22  
 SHEET NO. 441 OF 441  
 685

USER NAME: j31.k.friggsbury  
 PLOT DRIVER: >> BLOTDRVS  
 PLOT TABLE: >> BPTBLS





| MARK DATE | DESCRIPTION         | BY | APP'D |
|-----------|---------------------|----|-------|
| 4/22      | UPRR FINAL APPROVAL | RE | WY    |

| SECTION BY      | DESIGNED BY     | CHECKED BY      |
|-----------------|-----------------|-----------------|
| R. KHALAF BEIGI | M. BALLE        | R. KHALAF BEIGI |
| L. R. HINDSBURY | R. KHALAF BEIGI | R. KHALAF BEIGI |
| L. R. HINDSBURY | R. KHALAF BEIGI | R. KHALAF BEIGI |

| SECTION BY      | DESIGNED BY     | CHECKED BY      |
|-----------------|-----------------|-----------------|
| L. R. HINDSBURY | R. KHALAF BEIGI | R. KHALAF BEIGI |
| L. R. HINDSBURY | R. KHALAF BEIGI | R. KHALAF BEIGI |
| L. R. HINDSBURY | R. KHALAF BEIGI | R. KHALAF BEIGI |

| SECTION BY      | DESIGNED BY     | CHECKED BY      |
|-----------------|-----------------|-----------------|
| L. R. HINDSBURY | R. KHALAF BEIGI | R. KHALAF BEIGI |
| L. R. HINDSBURY | R. KHALAF BEIGI | R. KHALAF BEIGI |
| L. R. HINDSBURY | R. KHALAF BEIGI | R. KHALAF BEIGI |

SHEET NO. **BR1-22**  
**BR. 48.24 - JURUPA ROAD GRADE SEPARATION**  
**JURUPA ROAD UNDERPASS**  
**CLOSURE WALL DETAILS**  
 SCALE: SEE DRAWING  
 NO. 00000  
 COUNTY FILE NO.

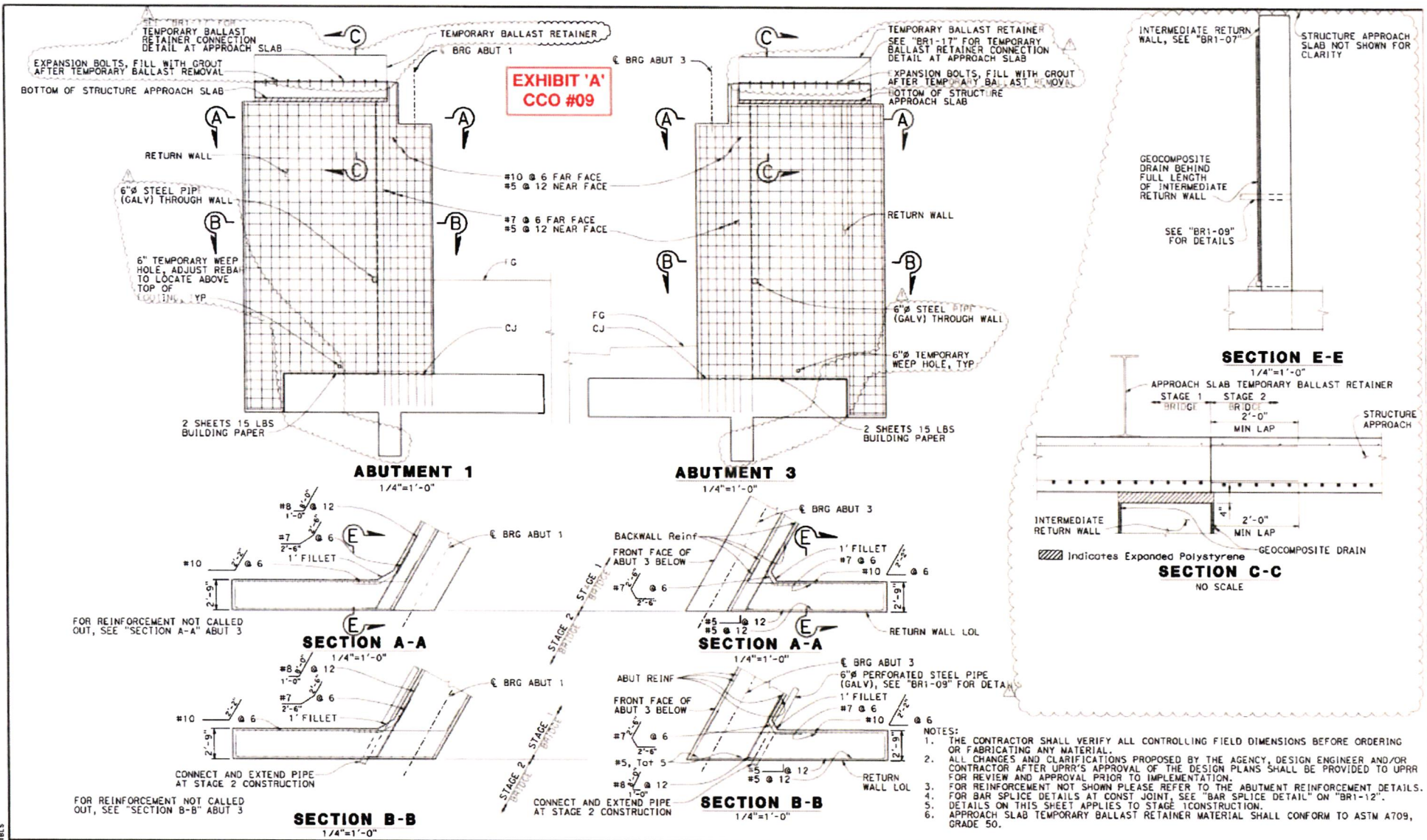
PROJECT ENGINEER: *Michael J. ...*  
 PROJECT CHECKER: *...*  
 HNTB  
 11411 401-1000  
 8400 W. 11th Ave., Suite 100  
 Denver, CO 80202

CONTRACT NO. 17-0003-003  
 SHEET NO. 27 OF 30  
 DATE: 05/11/22

PLOT DRIVER: *...*  
 REVISIONS:

NOTES:  
 1. CONTRACTOR SHALL VERIFY ALL CONTROLLING FIELD DIMENSIONS BEFORE ORDERING OR FABRICATING ANY MATERIAL.  
 2. ALL CHANGES AND CLARIFICATIONS PROPOSED BY THE AGENCY, DESIGN ENGINEER AND/OR CONTRACTOR AFTER UPRR'S APPROVAL OF THE DESIGN PLANS SHALL BE PROVIDED TO UPRR FOR REVIEW AND APPROVAL PRIOR TO IMPLEMENTATION.  
 3. PLACE 3-INCH BORDER OF HIGHLY CONTRASTING COLOR PARALLEL TO AND NOT MORE THAN 1-INCH FROM NOSE ON STAIR TREAD. A PAINTED STRIP WILL BE ACCEPTABLE.  
 4. TOP NUMBER OF TREADS SHALL BE AS REQUIRED TO MEET GRADE CHANGE BETWEEN TOP AND BOTTOM OF WALKWAYS.  
 5. FOR PIPE HAND RAIL DETAILS, SEE BR1-20 SHEET.





PLOT DRIVER => PLOTDRVS  
PEN TABLE => #PENCILS

| REVISIONS |      |                     |            |
|-----------|------|---------------------|------------|
| MARK      | DATE | DESCRIPTION         | BY / APP'D |
| A         | 4/22 | UPRR FINAL APPROVAL | RK / MV    |

|                |                |             |                |
|----------------|----------------|-------------|----------------|
| DESIGN BY:     | R. KHALAFBEIGI | CHECKED BY: | W. BALLE       |
| DETAILS BY:    | L. KINGSBURY   | CHECKED BY: | R. KHALAFBEIGI |
| QUANTITIES BY: | L. MJ          | CHECKED BY: | A. ADHICARI    |
| BRIDGE NO.     | X              |             |                |

|  |   |   |   |   |
|--|---|---|---|---|
| ORIGINAL SCALE IN INCHES FOR REDUCED PLANS | 0 | 1 | 2 | 3 |
|--|---|---|---|---|

**Michael Van Deyn** 05-11-22  
 PROJECT ENGINEER DATE  
**HNTB**  
 6 HUTTON CENTRE DRIVE  
 SUITE 400, CA 94107  
 (415) 400-1800

**BR. 48.24 - JURUPA ROAD GRADE SEPARATION JURUPA ROAD UNDERPASS RETURN WALL DETAILS**

SCALE: SEE DRAWING

|                |               |
|----------------|---------------|
| SHEET NO.      | <b>BR1-23</b> |
| SHEET 28 OF 30 |               |
| DATE           | 05/11/22      |
| 443            | 585           |

USERNAME => lk.kingsbury

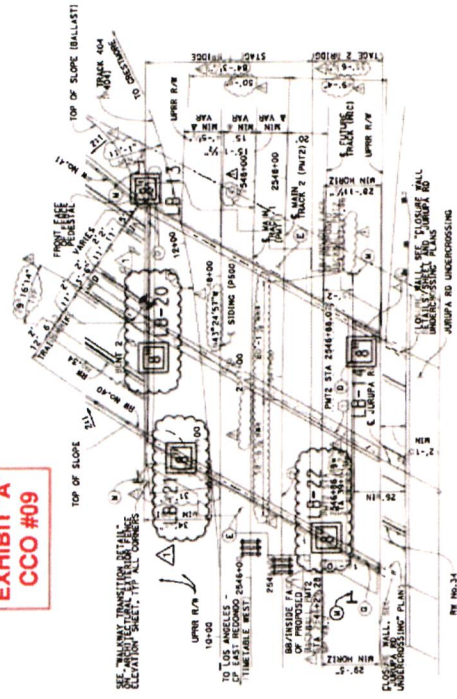
OGN FILE => 1-UP-F-001073.dgn

NO 00000

COUNTY FILE NO.

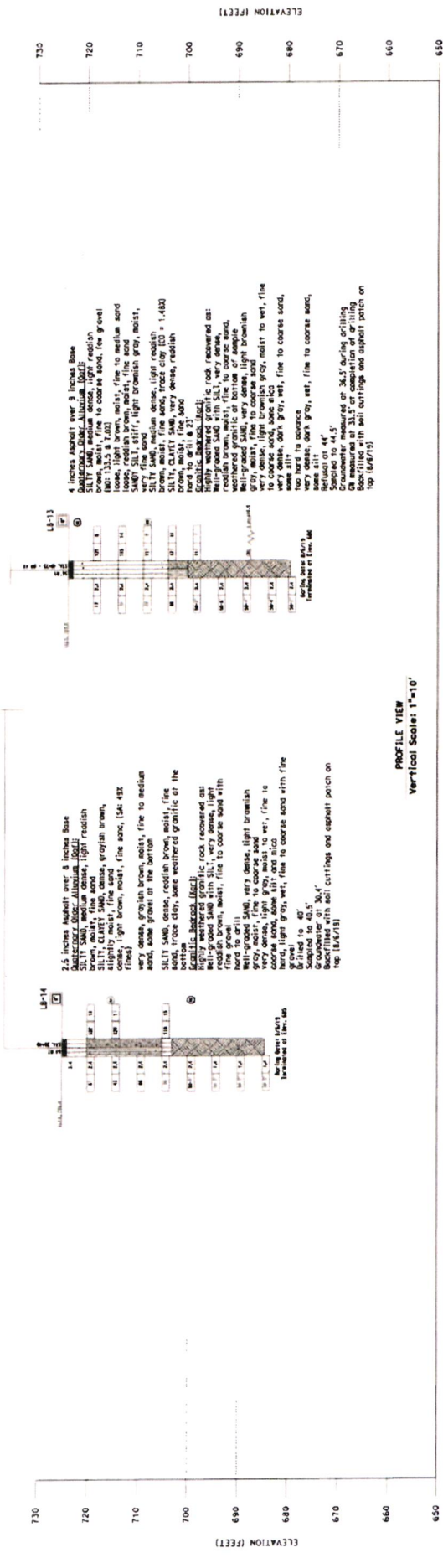
**EXHIBIT 'A'**  
**CCO #09**

- NOTES**
1. 1.4-INCH DIAMETER SAMPLES WERE TAKEN USING A STANDARD PENETRATION TEST (SPT) BARREL SAMPLER WITH AN INSIDE DIAMETER (ID) OF 1.4 INCHES AND AN OUTSIDE DIAMETER (OD) OF 2.0 INCHES.
  2. 2.4-INCH DIAMETER RING SAMPLES WERE TAKEN USING A CALIFORNIA SPLIT BARREL SAMPLER WITH AN ID OF 2.4 INCHES AND AN OD OF 3.0 INCHES.
  3. ALL DRIVE SAMPLES WERE DRIVEN WITH 140 LB AUTOMATIC-TRIP HAMMER WITH A FALLING HEIGHT OF 30 INCHES.
  4. HAMMER ENERGY EFFICIENCY OF 86.22 AT 56.4 BLOWS PER MINUTE.



**LEGEND**  
LB-22

ADDITIONAL BORING LOCATION

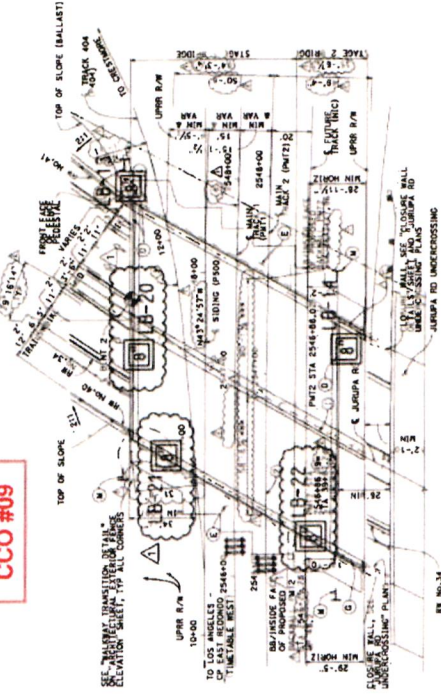


|   |  |
|---|--|
| <b>JURUPA ROAD GRADE SEPARATION PROJECT</b><br><b>LOG OF TEST BORINGS</b><br><b>NO. 1 OF 2</b><br>SCALE: 1"=30'<br>NO. 0000 COUNTY FILE NO.   |  |
| SHEET NO. <b>BR1-24</b><br>SHEET 29 OF 30<br>DATE 04/21/2022<br>PROJECT ENGINEER<br>SIGNATURE: [Signature]<br>DATE 04/21/2022<br>CHECKED BY: BSS<br>COUNTY NO. 444<br>COUNTY FILE NO. 565 | BORING SOIL FIELD INVESTIGATION BY: [Name]<br>DATE: 6/6/2019<br>STATE OF CALIFORNIA<br>COUNTY OF LOS ANGELES<br>PROJECT NO. 1<br>COUNTY FILE NO. X |
| PLOT DRIVER: [Name]<br>REVISIONS: [Table]<br>SCALE: 1"=10'<br>DATE: 04/21/2022  |  |



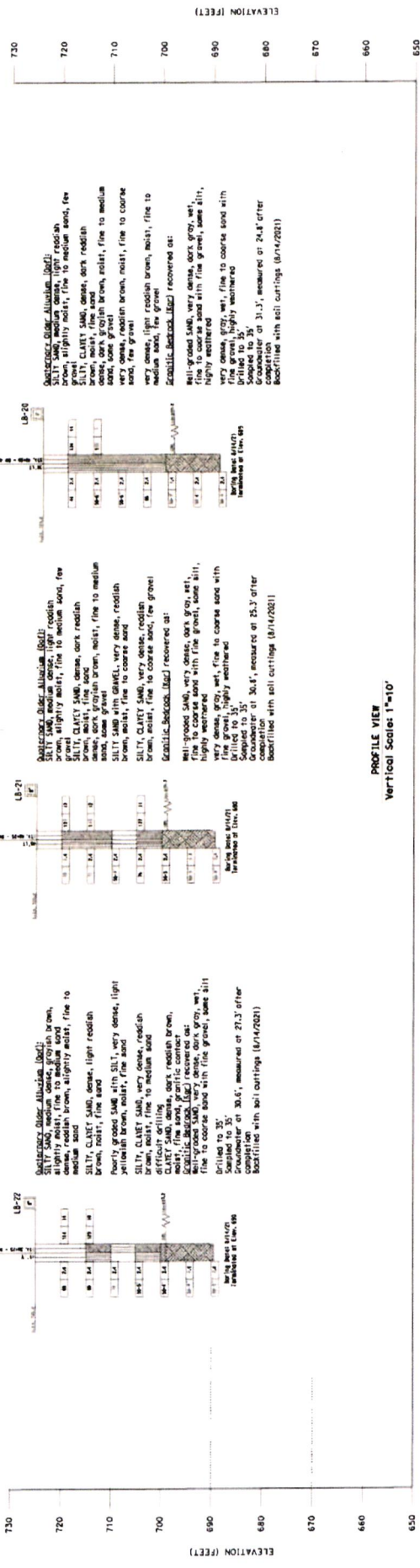
**EXHIBIT 'A'**  
**CCO #09**

- NOTES:**
1. 1.4-INCH DIAMETER SAMPLES WERE TAKEN USING A STANDARD PENETRATION TEST (SPT) SPLIT BARREL SAMPLER WITH AN INSIDE DIAMETER (ID) OF 1.4 INCHES AND AN OUTSIDE DIAMETER (OD) OF 2.0 INCHES.
  2. 2.4-INCH DIAMETER RING SAMPLES WERE TAKEN USING A CALIFORNIA SPLIT BARREL SAMPLER WITH AN ID OF 2.4 INCHES AND AN OD OF 3.0 INCHES.
  3. ALL DRIVE SAMPLES WERE DRIVEN WITH 140 LB AUTOMATIC-TRIP HAMMER WITH A FALLING HEIGHT OF 30 INCHES.
  4. HAMMER ENERGY EFFICIENCY OF 86.2% AT 56.4 BLOWS PER MINUTE.



**LEGEND**  
**LB-22**

ADDITIONAL BORING LOCATION



**PROFILE VIEW**  
Vertical Scale: 1"=10'

| NO. | DATE      | REVISIONS           | BY  |
|-----|-----------|---------------------|-----|
| 1   | 8/14/2021 | FIELD INVESTIGATION | BSS |

|                  |                     |                |            |
|------------------|---------------------|----------------|------------|
| BOHRER           | Simon Solig, PE, CE | DATE           | 04/21/2022 |
| PROJECT ENGINEER | Simon Solig, PE, CE | DATE           | 04/21/2022 |
| CHECKED BY       | BSS                 | CHECKED BY     | BSS        |
| COUNTY NO.       | X                   | COUNTY BR. NO. | X          |

**LEIGHTON CONSULTING, INC.**

41715 ENTERPRISE DRIVE, SUITE 102  
MIRAMONTE, CA 91356 (PH) 909-280-9350

Simon Solig, PE, CE  
PROJECT ENGINEER

04/21/2022  
DATE

8/14/2021  
DATE

**JURUPA ROAD GRADE SEPARATION PROJECT LOG OF TEST BORINGS NO. 2 OF 2**

SCALE: 1"=30'

WO 00000

COUNTY NO. 14

SHEET NO. BR1-25

BR1-30 OF 30

DATE 4/45

NO. 605