# SOUTH YUBA RIVER STATE PARK HISTORIC COVERED BRIDGE REHABILITATION AND RESTORATION

(National Register of Historic Places: No. 71000168), (California Historic Landmark: No. 390), (Historic American Engineering Record: No. CA-41), (Historic American Building Survey: No. CA-1404)

CSFM # 01-29-11-0032

1-ALL MATERIALS SHOWN OR NOTED ON THE PLANS ARE NEW UNLESS CALLED OUT OTHERWISE.

2-THE CONTRACTOR SHALL VISIT THE SITE AND VERIFY ALL EXISTING CONDITIONS SHOWN OR DIMENSIONED HERE. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE STATE REPRESENTATIVE FOR RESOLUTION BEFORE PROCEEDING WITH THAT PORTION OF THE WORK.

3-ALL WORK SHALL COMPLY WITH THE CURRENT EDITION OF THE FOLLOWING LISTED CODES, AND ALL OTHERS HAVING JURISDICTION OVER THE WORK.

TITLE 19, CCR, PUBLIC SAFETY, SFM REGULATIONS. 2016 CA ADMINISTRATIVE CODE TITLE 24, PT 1. 2016 CA BUILDLING CODE (CBC) TITLE 24, PT 2.

2016 CA ELECTRICAL CODE (CEC) TITLE 24, PT 3. 2016 CA MECHANICAL CODE (CMC) TITLE 24, PT 4

2016 CA ENERGY CODE CCR TITLE 24, PT 6. 2016 CA GREEN BUILDING STANDARDS TITLE 24, PT 11.

2016 CA REFERENCED STANDARDS TITLE 24, PT 12.
2016 CA BUILDING STANDARDS ADMINISTRATIVE CODE; CCR TITLE 19,
PUBLIC SAFETY: DIVISION 1. STATE FIRE MARSHAL; AND CCR TITLE 24 AD

2010 ADA STANDARD FOR ACCESSIBLE DESIGN.

THE SECRETARY OF THE INTERIOR'S STANDARDS FOR THE TREATMENT OF HISTORIC PROPERTIES.

4-CONDUCT ALL WORK IN ACCORDANCE WITH THE LATEST SAFETY RULES AND REGULATIONS OF ALL AUTHORITIES AND AGENCIES HAVING JURISDICTION OVER THE WORK.

5-ALL WORK SHALL BE IN ACCORDANCE WITH THE CONSTRUCTION DOCUMENTS. WHERE DETAILED INFORMATION OR CLARIFICATION IS REQUIRED, THE MATTER SHALL BE REFERRED TO THE STATE REPRESENTATIVE FOR WRITTEN RESOLUTION.

6-THE CONTRACTOR SHALL NOT SCALE THE DRAWINGS, BUT SHALL RELY ONLY ON THE WRITTEN DIMENSIONS GIVEN. IF A DISCREPANCY OCCURS OR NO DIMENSION IS GIVEN, THE CONTRACTOR SHALL NOTIFY THE STATE REPRESENTATIVE FOR WRITTEN CLARIFICATION BEFORE PROCEEDING WITH THAT PORTION OF THE WORK.

7-THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS AND EXISTING CONDITIONS AT THE SITE AND SHALL REPORT ANY DISCREPANCIES IN WRING TO THE STATE REPRESENTATIVE PRIOR TO SUBMITTALS

8-ALL DIMENSIONS ARE GIVEN FROM THE FACE OF CONCRETE, CONCRETE MASONRY UNITS, STRUCTURAL STEEL, STUD OR CENTERLINE OF PARTITION UNESS OTHERWISE NOTED

#### **GENERAL NOTES**

- 1. THIS IS A REGISTERED HISTORICAL PLACE AND STRUCTURE.
  2. OCCUPANCY CLASSIFICATION AND USE
  3. BUILDING CONSTRUCTION TYPE
  4. NUMBER OF STORIES
  5. ACTUAL BUILDING HEIGHT
  6. BUILDING AREA IN SQUARE FEET
  7. AREA OF PROJECT IN SQUARE FEET
  8. ALLOWABLE AREA PER C.B.C.
  9. FIRE ALARM
  NO
- TYPE: (MANUAL, AUTOMATIC, ETC)

  10. OTHER FIRE PROTECTION SYSTEMS, IF ANY HYDRANT

  11. SMOKE CONTROL SYSTEM NO

YES

- 11. SMOKE CONTROL SYSTEM
  12. OCCUPANT LOAD (Posted based on struct capacity) 50
  13. YEAR BUILDING WAS CONSTRUCTED
  186
- 14. IN A HIGH FIRE HAZARD SEVERITY ZONE?

BUILDING CODE REVIEW

A SECTION NUMBER
SHEET NUMBER

DETAIL NUMBER
SHEET NUMBER

SHEET NUMBER

REVISION NUMBER

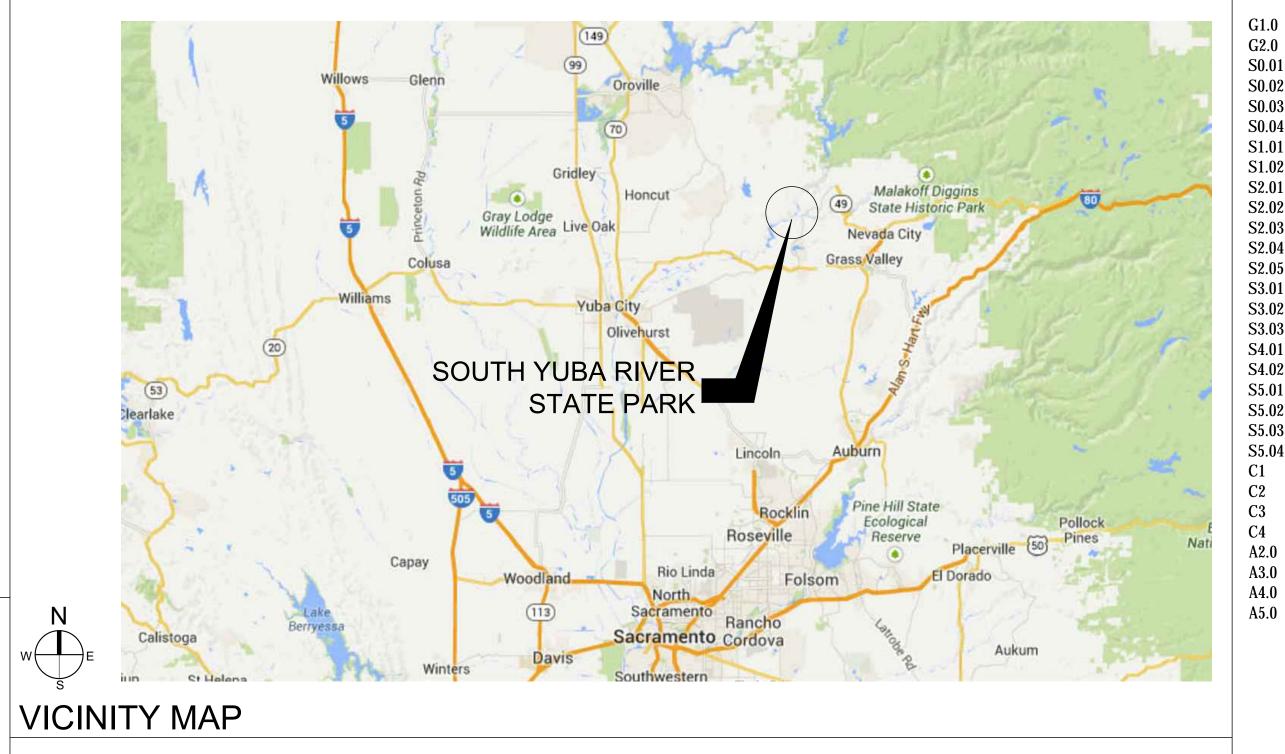
#### SYMBOLS LEGEND

(N) STABILIZED SOIL
CONCRETE BLOCK
CONCRETE
PLYWOOD
WOOD FRAMING
WOOD BLOCKING
WOOD, FINISH
METAL
UNDISTURBED SOIL
DISTURBED SOIL
(N) CONCRETE PAVING
(N) AC PAVING

#### MATERIAL LEGEND

REPAIR, RESTORE AND REHABILITATE, TO ITS ORIGINAL USE THE 208 FEET, SINGLE SPAN, HISTORIC TRUSS/ARCH, AND COVERED BRIDGE. WORK WILL INCLUDE REPLACING THE EXISTING TEMPORARY, NONE-HISTORIC SUPPORTS WITH PERMANENT BRIDGE MEMBERS AND SUPPORTS DESIGNED TO BE COMPATIBLE AND REPRESENTATIVE OF THE ORIGINAL DESIGN AND APPEARANCE.

SCOPE OF WORK



## South Yuba River South Yuba River

South Yuba River

South Yuba River State Park

Parks & Recreation Dept

Pleasant, Merred Bridge

Pleasant, Merred Bridge

**PROJECT** 

**LOCATION** 

LOCATION MAP

## SHEET INDEX

EXISTING CONDITIONS & DEMO PLAN

FLOOR DECK PLAN - ARCHITECTURAL

GRADING PLAN

SITE PLAN



Deputy Bod (moderated at 916-445-9930) to schedule appointments

APPROVAL



ACQUISITION &
DEVELOPMENT DIVISION
One Capitol Mall
Sacramento, CA



Approval of this plan does not authorized approve any omission of deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the

ewed by Date

DPR ACCESS COMPLIANCE REVIEW
ACCESSIBILITY SECTION
RTIFICATION # 18-25

WILLIAM B. SMITH, CAR-ON
Viewed by A Date | | | | |

MARSHAL SIGNED ORIGINALS ARE ON FILE AT THE DEPARTMENT OF PARKS AND RECREATION NORTHERN SERVICE CENTER

DESIGNED: DESIGNE

CHECKED: SUPERVISOR
DATE: DECEMBER 2017

REVISIONS DATE

RESTORATION

VER SHEET

YUBA

DRAWING NO. 30419.001

G1.0

001 OF 030

**EDGE OF PAVEMENT** 

ELECTRIC PULL BOX

EΡ

EPB

PΙ

POINT OF INTERSECTION



**ACQUISITION &** DEVELOPMENT DIVISION One Capitol Mall Sacramento, CA 95814-3229



CALIFORNIA STATE FIRE MARSHAL- APPROVED Approval of this plan does not authorize of

approve any omission of deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the oject site at all times.

NORTHERN SERVICE CENTER

Reviewed by

DPR ACCESS COMPLIANCE REVIEW ACCESSIBILITY SECTION ERTIFICATION# 18-025

Reviewed by MARSHAL SIGNED ORIGINALS ARE ON FILE AT THE DEPARTMENT OF PARKS AND RECREATION

DESIGNED: DESIGNEF DRAWN: STAFF CHECKED: SUPERVISOR

DATE: DECEMBER 2017 REVISIONS DATE

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DRAWING NO. 30419.002

SHEET NO. G2.0

002 OF 030

1. INTERPRETATION OF DRAWINGS & SPECIFICATIONS

A. FOR CONVENIENCE. SPECIFICATIONS HAVE BEEN PREPARED FOR THIS PROJECT AND ARE ARRANGED IN SEVERAL SECTIONS, BUT SUCH SEPARATION SHALL NOT BE CONSIDERED AS THE LIMITS OF THE WORK REQUIRED OF ANY SEPARATE TRADE. THE TERMS AND CONDITIONS OF SUCH LIMITATIONS ARE WHOLLY BETWEEN THE CONTRACTOR AND HIS SUBCONTRACTORS.

B. IN GENERAL, THE WORKING DETAILS WILL INDICATE DIMENSIONS, POSITION AND KIND OF CONSTRUCTION, AND THE SPECIFICATIONS, QUALITIES AND METHODS. ANY WORK INDICATED ON THE WORKING DETAILS AND NOT MENTIONED IN THE SPECIFICATIONS, OR VICE VERSA. SHALL BE FURNISHED AS THOUGH FULLY SET FORTH IN BOTH. WORK NOT PARTICULARLY DETAILED, MARKED OR SPECIFIED, SHALL BE THE SAME AS SIMILAR PARTS THAT ARE DETAILED, MARKED OR SPECIFIED. IF CONFLICTS OCCUR ON DRAWINGS

AND/OR SPECIFICATIONS, THE MOST EXPENSIVE MATERIALS OR METHODS WILL PREVAIL C. SHOULD AN ERROR APPEAR IN THE WORKING DETAILS OR SPECIFICATIONS OR IN WORK DONE BY OTHERS AFFECTING THIS WORK, THE CONTRACTOR SHALL NOTIFY THE STATES' REPRESENTATIVE AT ONCE AND IN WRITING. IF THE CONTRACTOR PROCEEDS WITH THE WORK SO AFFECTED WITHOUT HAVING GIVEN SUCH WRITTEN NOTICE AND WITHOUT RECEIVING THE NECESSARY APPROVAL, DECISION OR INSTRUCTIONS IN WRITING FROM THE STATE, THEN HE SHALL HAVE NO VALID CLAIM AGAINST THE STATE, FOR THE COST OF SO PROCEEDING AND SHALL MAKE GOOD ANY RESULTING DAMAGE OR DEFECT. NO VERBAL APPROVAL, DECISION, OR INSTRUCTION SHALL BE VALID OR BE THE BASIS FOR ANY CLAIM AGAINST THE STATE. ITS OFFICERS. EMPLOYEES OR AGENTS. THE FOREGOING INCLUDES TYPICAL ERRORS IN THE SPECIFICATIONS OR NOTATIONAL ERRORS IN THE WORKING DETAILS WHERE THE INTERPRETATION IS DOUBTFUL OR WHERE THE ERROR IS SUFFICIENTLY APPARENT AS TO PLACE A REASONABLY PRUDENT CONTRACTOR ON NOTICE THAT, SHOULD HE ELECT TO PROCEED, HE IS DOING SO AT HIS OWN RISK.

CONSTRUCTION SHALL CONFORM TO ALL APPLICABLE CODES AND REGULATIONS

3. SHOP DRAWING NOTE:

A. WHEN NOT ADRESSED BY DIVISION 1 OF THE SPECIFICATIONS, PAPER FORMAT STRUCTURAL SHOP DRAWINGS SHALL BE SUBMITTED IN THE FORM OF THREE COPIES MINIMUM OF EACH SHEET.

B. THE PURPOSE OF SHOP DRAWINGS SUBMITTALS BY THE CONTRACTOR IS TO DEMONSTRATE TO THE STRUCTURAL ENGINEER THAT HE UNDERSTANDS THE DESIGN CONCEPT BY INDICATING WHICH MATERIAL HE INTENDS TO FURNISH AND INSTALL, AND BY DETAILING THE FABRICATION AND INSTALLATION METHODS HE INTENDS TO USE ON A STAND ALONE SET OF DOCUMENTS. DUPLICATION OF DESIGN DOCUMENTS FOR THE PURPOSE OF SHOP DRAWINGS IS NOT ACCEPTABLE

PRIOR TO FABRICATION, SHOP DRAWINGS SHALL BE SUBMITTED FOR REVIEW BY THE STRUCTURAL ENGINEER. SHOP DRAWING SUBMITTALS SHALL INCLUDE, BUT ARE NOT NECESSARILY LIMITED TO, STRUCTURAL STEEL, REINFORCING STEEL, & GLUED LAMINATED

BEAMS. D. PRIOR TO SUBMISSION THE CONTRACTOR SHALL REVIEW ALL SUBMITTALS FOR CONFORMANCE WITH THE CONTRACT DOCUMENTS AND SHALL STAMP SUBMITTALS AS BEING "REVIEWED FOR CONFORMANCE"

SHOP DRAWINGS SUBMITTALS PROCESSED BY THE STRUCTURAL ENGINEER ARE NOT CHANGE ORDERS.

F. ANY DETAIL ON THE SHOP DRAWING THAT DEVIATES FROM THE CONTRACT DOCUMENTS SHALL CLEARLY BE MARKED WITH THE NOTE "THIS A CHANGE"

G. SHOP DRAWINGS OR CALCULATIONS SUBMITTED FOR REVIEW THAT REQUIRE RESUBMITTAL FOR RE-REVIEW SHALL BE BILLED HOURLY FOR SUCH TIME TO THE GENERAL CONTRACTOR. RE-REVIEW WILL NOT PROCEED WITHOUT WRITTEN APPROVAL FROM THE GENERAL CONTRACTOR FOR ADDITIONAL ENGINEERING REVIEW SERVICES

4. SAFETY NOTE:

A. IT IS THE CONTRACTORS RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS, AS THEY APPLY TO THIS PROJECT, OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF CALIFORNIA LATEST EDITION, AND ALL OSHA REQUIREMENTS.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE DESIGN AND CONSTRUCTION OF ALL FORMS AND SHORING REQUIRED. SHORING INDICATIONS (LOCATION, DIRECTION, DURATION, ETC.) ARE ONLY SHOWN ON THE STRUCTURAL DRWGS WHEN REQUIRED TO IMPLEMENT THE DESIGN INTENT OF THE FINAL WORK PRODUCT. DETERMINATION WHETHER SHORING IS REQUIRED FOR TEMPORARY OR INTERMEDIATE CONDITIONS DURING COONSTRUCTION IS WHOLLY THE RESPOSIBILITY OF THE CONTRACTOR.

C. THE STATE AND THE STRUCTURAL ENGINEER DO NOT ACCEPT ANY RESPONSIBILITY FOR

THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS 5. THE CONTRACTOR SHALL NOTIFY THE STATE'S REPRESENTATIVE AND STRUCTURAL ENGINEER WHERE A CONFLICT OR DISCREPANCY OCCURS BETWEEN THE STRUCTURAL DRAWINGS AND ANY OTHER PORTION OF THE CONTRACT DOCUMENTS OR EXISTING FIELD CONDITIONS. SUCH NOTIFICATION SHALL BE GIVEN IN DUE TIME SO AS NOT TO AFFECT THE CONSTRUCTION SCHEDULE. IN CASE OF A CONFLICT BETWEEN STRUCTURAL DRAWINGS AND SPECIFICATIONS THE MORE RESTRICTIVE CONDITION SHALL TAKE PRECEDENCE UNLESS WRITTEN APPROVAL HAS BEEN GIVEN FOR THE LEAST RESTRICTIVE. CONTRACTOR SHALL VERIFY ALL DIMENSIONS WITH STATES REPRESENTATIVE PRIOR TO COMMENCING ANY WORK.

6. WHERE NO SPECIFIC DETAIL IS SHOWN, THE CONSTRUCTION SHALL BE IDENTICAL OR SIMILAR TO THAT INDICATED FOR LIKE CASES OF CONSTRUCTION ON THIS PROJECT. SHOULD THERE BE ANY QUESTION, CONTACT THE STATES REPRESENTATIVE AND STRUCTURAL ENGINEER PRIOR TO PROCEEDING.

7. WHEN CONSTRUCTION ATTACHES TO OR IS WITHIN AN EXISTING BUILDING, A COMPLETE SET OF DRAWINGS OF THE EXISTING BUILDING SHALL BE KEPT ON THE JOB SITE. CONTRACTOR TO OBTAIN THESE DRAWINGS FROM THE OWNER (IF THEY ARE AVAILABLE)

8. ANY SUBSTITUTIONS OR ALTERNATE METHODS FOR STRUCTURAL MEMBERS, HARDWARE OR DETAILS SHALL BE REVIEWED BY THE ARCHITECT AND STRUCTURAL ENGINEER. SUCH REVIEW WILL BE BILLED ON A TIME AND MATERIALS BASIS TO THE GENERAL CONTRACTOR WITH NO GUARANTEE THAT THE SUBSTITUTION WILL BE ALLOWED.

9. DO NOT SCALE DRAWINGS. CONTACT THE STATES REPRESENTATIVE OR STRUCTURAL ENGINEER FOR ANY DIMENSIONS NOT SHOWN.

10. THESE DRAWINGS ARE NOT COMPLETE UNTIL REVIEWED AND ACCEPTED BY STATE OFFICIALS AND SIGNED BY THE STATES' REPRESENTATIVE AND THE STRUCTURAL ENGINEER.

<u>ABBREVIATIONS</u>

----- ANCHOR BOLT ----- LAG SCREW ----- ABOVE ----- MACHINE BOLT ----- ANCHOR ROD ----- MANUFACTURER ----- MALLEABLE IRON ----- BELOW ----- BOTTOM OF FOOTING ----- METAL ----- BEARING ----- NEW BET ----- BETWEEN ----- NOT IN CONTRACT C/C ----- CENTER TO CENTER ----- NEAR SIDE NS ----- NOT TO SCALE CTJ ----- CONTROL JOINT ----- COMPLETE JOINT PENETRATION CJP ----- NORMAL WEIGHT ----- OPPOSITE HAND CLR ----- CLEAR ----- CONCRETE MASONRY UNIT ----- PIECE ----- CONSTRUCTION JOINT ----- PARTIAL JOINT PENETRATION CONT ----- CONTINUOUS ----- SLIP CRITICAL CONTR----- CONTRACTOR ----- SHEATHING ----- COUNTERSINE ----- SIMILAR ----- DEAD LOAD ----- SHEET METAL SCREW DO ----- DITTO ----- STRUCTURAL PANEL DWG ----- DRAWING ----- STIFFENER ----- EXISTING ----- STAGGERED ----- EACH FACE ----- STEEL ----- EXPANSION JOINT ----- TOP & BOTTOM ----- ELEVATION THD ----- THREADED ----- EDGE NAILING TO ----- TOP OF ----- EDGE OF SLAB ----- TOP OF CONCRETE (SLAB UNO) ----- TOP OF FOOTING OR EQ ----- EQUAL EW ----- EACH WAY TOP OF FRAMING ----- EACH WAY EACH FACE ----- TOP OF STEEL ----- FACE OF BLOCK(OR BRICK) OR ----- TOP OF WALL TOW FLAT BAR ----- UNLESS NOTED OTHERWISE UNO ----- FACE OF CONCRETE ----- WITH ----- WITHOUT FF ----- FINISH FLOOR ----- WORK POINT ----- FACE OF STUD OR FAR SIDE WP ----- WOOD SCREW ----- GAUGE OR GAGE WS ----- HEADED BOLT ----- WELDED WIRE FABRIC ----- HEADER ----- CENTERLINE ----- HIGH STRENGTH BOLT ----- PLATE HSS ----- HOLLOW STRUCTURAL SECTION ----- WIDE FLANGE HT ----- NUMBER OR POUNDS ----- HEIGHT ----- SQUARE ----- JOIST HANGER ----- LIVE LOAD ----- ROUND OR DIAMETER ----- LONG LEG HORIZONTAL ----- "MEMBER" ABOVE LLV ----- "MEMBER" BELOW ----- LONG LEG VERTICAL

**DESIGN CRITERIA** 

4. LATERAL LOADS 1. CODES AND STANDARDS SEISMIC: 2013 CALIFORNIA BUILDING CODE SITE CLASS: C ASCE 7-10 Ss = 0.580;  $S_{DS} = 0.452$ ACI 318-11  $S_1 = 0.247$ ;  $S_{D1} = 0.256$ AISC 360-10, AISC 341-10 R = 1.252012 NDS, 2008 SDPWS  $\Omega$ o = 2.0 ; Cd = 2.5 I<sub>F</sub> = 1.0 TYPICAL RISK CATEGORY: II 2. VERTICAL LOADS SEISMIC DESIGN CATEGORY: D BRIDGE DECK LIVE LOAD = 65 PSF SEISMIC BASE SHEAR 3. SOILS VALUES = 96 KIPS (N/S DIR.) FOOTING = 96 KIPS (E/W DIR.) MINIMUM DEPTH = 18" SEISMIC FORCE RESISTING SYSTEM: MINIMUM WIDTH = 24" CONCRETE ABUTMENT (ALL OTHER PASSIVE RESISTANCE = 150 PCF STRUCTURES) FRICTION = 0.40 LATERAL ANALYSIS PROCEDURE: (REDUCE FRICTION BY 50% WHERE LINEAR STATIC COMBINED WITH PASSIVE) WIND: MICROPILES 1  $V_{ULT} = 110 \text{ MPH}$ ,  $V_{ASD} = 85 \text{ MPH}$ (SEE (S0.03) RISK CATEGORY: II

STATEMENT OF STRUCTURAL SPECIAL INSPECTIONS AND TESTING

SPECIAL INSPECTIONS AND TESTING SHALL BE PROVIDED BY AN INSPECTION AGENCY, EMPLOYED BY THE CONTRACTOR, AND QUALIFIED BY THE BUILDING OFFICIAL TO INSPECT THE PARTICULAR TYPE OF CONSTRUCTION. TESTS AND INSPECTIONS, AS REQUIRED BY SECTIONS 110, 1704, 1705.10, 1705.11 AND 1705.12 OF THE 2013 CBC, SHALL BE PERFORMED DURING CONSTRUCTION ON THE INSPECTIONS/TESTING TYPES OF WORK LISTED BELOW:

EXPOSURE CATEGORY: C

**SECTION 1705.2.1** 

**SECTION 1705.3** 

**SECTION 1705.4** 

**SECTION 1705.6** 

SEE DRILLED-IN ANCHOR NOTES

STRUCTURAL STEEL CONSTRUCTION CONCRETE CONSTRUCTION MASONRY CONSTRUCTION-LEVEL B SOILS

POST-INSTALLED ANCHORS BRIDGE ROD TUNING MICROPILES

SEE SPECIFICATIONS SEE 4/S5.03

2. INSPECTIONS SHALL BE CONTINUOUS OR PERIODIC AS NOTED FOR THE INDIVIDUAL MATERIAL OR COMPONENT INSPECTION SECTIONS AND TABLES NOTED ABOVE.

3. THE SPECIAL INSPECTOR SHALL SUBMIT INSPECTION REPORTS TO THE STATE'S REPRESENTATIVE AND THE DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE. THE REPORTS SHALL INDICATE WHETHER WORK INSPECTED CONFORMED TO THE CONSTRUCTION DOCUMENTS. ANY DISCREPANCIES SHALL BE IMMEDIATELY BROUGHT TO THE ATTENTION OF THE CONTRACTOR FOR CORRECTION. IF DISCREPANCIES ARE NOT CORRECTED, THEY SHALL BE BROUGHT TO THE ATTENTION OF THE STATE'S REPRESENTATIVE AND THE DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE

4. ALL SPECIAL INSPECTION AGENCIES / INDIVIDUALS AND SHOP FABRICATORS SHALL BE APPROVED BY THE STATE'S REPRESENTATIVE PRIOR TO COMMENCEMENT OF WORK.

TESTING AND INSPECTION RECORDS SHALL BE RETAINED UNTIL COMPLETION OF CONSTRUCTION.

6. ALL SOILS AND FOUNDATION EXCAVATION INSPECTIONS SHALL BE BY THE GEOTECHNICAL ENGINEER OF RECORD.

7. FOR TESTING AND INSPECTION REQUIREMENTS FOR NON-STRUCTURAL MATERIALS AND COMPONENTS. SEE CONSTRUCTION DOCUMENTS AND COMPLY WITH CHAPTER 17 OF THE 2013 CBC

**FOUNDATIONS** 

1. ALL FOUNDATION WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE SOILS REPORT #59030-05-41 BY GEOCON CONSULTANTS, INC DATED MAY 2015

2. FOUNDATIONS SHALL BE MICROPILES. SEE 4/S5.03

3. ALL FILLING, BACKFILLING AND COMPACTION SHALL BE DONE UNDER THE OBSERVATION OF A REPRESENTATIVE OF THE SOILS ENGINEER OF RECORD AND MUST BE COMPACTED TO THE MINIMUM DENSITY SPECIFIED IN ACCORDANCE WITH THE PROCEDURE OUTLINED IN THE SOILS REPORT

4. BUILDING PAD CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE SOILS REPORT. THE EXTENT AND DEPTH OF OVEREXCAVATION AND PLACEMENT OF ENGINEERED FILL SHALL AT A MINIMUM BE AS SHOWN ON THE PLANS. FINAL DEPTH AND EXTENT OF EXCAVATION AND FILL SHALL BE DETERMINED AT TIME OF CONSTRUCTION BY A REPRESENTATIVE OF THE SOILS ENGINEER. FOUNDATION DEPTHS INDICATED ON PLANS ARE FOR ESTIMATING PURPOSES ONLY.

5. BOTTOMS OF ALL FOUNDATIONS SHALL BE LEVEL. CHANGES IN BOTTOM OF FOUNDATION ELEVATION SHALL BE MADE ACCORDING TO STEPPED FOOTING DETAIL ON THE TYPICAL DETAIL SHEET.

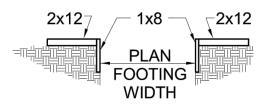
FOUNDATION CONCRETE MAY BE PLACED DIRECTLY INTO NEAT EXCAVATIONS PROVIDED 6. THE EXCAVATIONS ARE STABLE (AS DETERMINED BY A REPRESENTATIVE OF THE SOILS

ENGINEER). OTHERWISE, FOUNDATIONS SHALL BE FULLY FORMED. USE MINIMUM PLANKING SHOWN TO PROTECT AGAINST SLOUGHING, AS REQUIRED. PLANKING DOES NOT REPLACE FORMWORK REQUIRED TO STABILIZE EXCAVATION. - SEE BELOW.

7. THE SURFACE OF ALL HORIZONTAL CONSTRUCTION JOINTS SHALL BE CLEANED & ROUGHENED BY EXPOSING CLEAN AGGREGATE SOLIDLY EMBEDDED IN MORTAR MATRIX

8. NOTIFY THE STRUCTURAL ENGINEER 48 HOURS BEFORE CASTING FOUNDATIONS.

9. A REPRESENTATIVE OF THE SOILS ENGINEER SHALL ADVISE THE BUILDING OFFICIAL IN WRITING THAT: A. THE FOUNDATION EXCAVATION DEPTH AND MATERIAL ARE ADEQUATE TO ACHIEVE DESIGN BEARING CAPACITY: AND FORMING COMPLY WITH THE SOILS REPORT AND APPROVED PLAN



<u>WOOD</u>

ALL STRUCTURAL WOOD SHALL CONFORM WITH THE FOLLOWING SPECIFICATIONS:

DOUGLAS FIR - COAST REGION - WCLIB GRADING RULES #17 OR WWPA STANDARD GRADING RULES FOR WESTERN LUMBER.

2X, 3X AND 4X MEMBERS - SELECT STRUCTURAL UNO.

6X AND LARGER MEMBERS - SELECT STRUCTURAL UNO. MEMBERS 3X AND LARGER SHALL BE FREE OF HEART CENTER

REDWOOD - CALIFORNIA REDWOOD, RIS.

PRESSURE TREATED DOUGLAS FIR - TYPE AS APPROPRIATE FOR EXTERIOR ABOVE GROUND USE AS SPECIFIED, BY AWPA.

2. ALL DOUGLAS FIR WOOD IN DIRECT CONTACT WITH CONCRETE SHALL BE PRESSURE TREATED, EXCEPT LEDGERS, WHICH DO NOT NEED TO BE PRESSURE TREATED

FIELD CUTS AND BOLT HOLES IN PRESSURE TREATED WOOD SHALL BE PROTECTED IN ACCORDANCE WITH AWPA STANDARD M4.

4. THE MOISTURE CONTENT OF 2X MATERIAL AT TIME OF INITIAL USE SHALL BE LESS THAN 12%. THE MOISTURE CONTENT OF LUMBER 3X AND LARGER AT TIME OF INITIAL USE SHALL BE LESS THAN 19% UNO

5. HOLES FOR BOLTS IN WOOD SHALL BE BORED WITH A BIT OF THE SAME NOMINAL DIAMETER AS THE BOLT PLUS 1/16".

6. HOLES FOR LAG SCREWS SHALL BE FIRST BORED TO THE SAME DIAMETER AND DEPTH AS THE UNTHREADED SHANK. THE THREADED PORTION SHALL BE DRILLED TO 50% OF THE SHANK DIAMETER UNLESS NOTED OTHERWISE IN THE SPECIFICATIONS.

7. LAG SCREWS AND WOOD SCREWS SHALL BE SCREWED AND NOT DRIVEN INTO PLACE. SOAP MAY BE USED TO LUBRICATE SCREWS.

8. ALL BOLTS AND LAG SCREWS SHALL BE PROVIDED WITH METAL WASHERS UNDER HEADS AND NUTS WHICH BEAR ON WOOD. APPLIES ALSO TO EXPANDING AND ADHESIVE FASTENERS. SQUARE STEEL WASHERS SHALL BE SIMPSON BP OR BPS TYPE (3" SQ. MIN. W/ STD CUT WASHER WHERE REQ'D BY CODE). MALLEABLE IRON (MI) WASHERS SHALL BE SQUARE AND CAST. STANDARD FLAT WASHERS SHALL BE PER ANSI B18.22.1 TYPE A - WIDE PATTERN. ALL WASHERS FOR SILL ANCHORS SHALL BE SQUARE STEEL AND SHALL BE HOT-DIPPED GALVANIZED.

9. ALL BOLTS AND LAG SCREWS SHALL BE TIGHTENED ON INSTALLATION AND RETIGHTENED BEFORE CLOSING IN OR AT COMPLETION OF JOB.

10. ALL BOLTS SHALL BE FULL NOMINAL DIMENSION AT UNTHREADED PORTION. NO UPSET THREADED BOLTS

11. ALL FASTENERS SHALL BE HOT-DIPPED GALVANIZED.

12. FRAMING HARDWARE SHOWN ON THE PLANS IS SIMPSON STRONG-TIE. USE FRAMING HARDWARE AS MANUFACTURED BY SIMPSON COMPANY OR EQUIVALENT. PRIOR TO INSTALLATION OF ANY NON-SIMPSON HARDWARE, THE CONTRACTOR SHALL SUBMIT A LIST OF ALL DETAIL REFERENCES WHERE A HARDWARE SUBSTITUTION IS PROPOSED, THE DESIGNATION FOR THE SIMPSON ITEM AND NON-SIMPSON PROPOSED EQUIVALENT AND AN ICC REPORT FOR EACH SUBSTITUTION ITEM.

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S0.03	GENERAL NOTES				
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S1.02	DEMOLITION PLAN				
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S2.03	NORTH BRIDGE ABUTMENT PLAN				
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S5.01	DETAILS				
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S5.04	DETAILS				

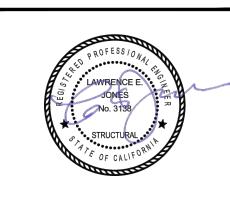
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**SINCE 1864** 

**ACQUISITION & DEVELOPMENT DIVISION** One Capitol Mall Sacramento, CA 95814-3229



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OPR ACCESS COMPLIANCE REVIEW ACCESSIBILITY SECTION ERTIFICATION# 18-005

ARSHAL SIGNED ORIGINALS ARE ON FILE AT THE DEPARTMENT OF PARKS AND RECREATION NORTHERN SERVICE CENTER

**DESIGNED:** DRAWN: CHECKED: DATE: Issue Date

**REVISIONS** 

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(7)

DRAWING NO. 30419.003

SHEET NO.

003 of 030

#### CONCRETE

- 1. STRUCTURAL CONCRETE SHALL ATTAIN 28 DAY COMPRESSIVE STRENGTH AS REQUIRED IN NOTE #28. MAXIMUM SLUMP SHALL NOT EXCEED 4 INCHES
- 2. CONCRETE MIX DESIGNS SHALL BE PREPARED BY A REGISTERED CIVIL ENGINEER, REVIEWED BY CONTRACTOR'S TESTING LABORATORY AND SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW.
- 3. CEMENTITIOUS MATERIALS:
- CEMENT SHALL CONFORM TO ASTM C-150 TYPE I OR II. FLY ASH SHALL CONFORM TO ASTM C-618. MAX. QUANTITY OF FLY ASH SHALL BE AS GIVEN IN SPECS
- 4. CONCRETE AGGREGATES SHALL CONFORM TO ASTM C-33 FOR NORMAL WEIGHT CONCRETE AND ASTM C-330 FOR LIGHTWEIGHT CONCRETE.
- 5. NON-SHRINK GROUT OR DRYPACK SHALL CONSIST OF A PREMIXED NONMETALLIC FORMULA.
- 6. REINFORCING STEEL SHALL CONFORM TO ASTM A-615 GRADE 60 FOR #3 AND LARGER, EXCEPT REINFORCING STEEL TO BE WELDED SHALL CONFORM TO ASTM A-706. CONTRACTOR SHALL SUBMIT REBAR MILL CERTIFICATES. ALL REINFORCING SHALL BE GREEN EPOXY COATED AND CONFORM TO ASTM A-775. EPOXY COATED BARS SHALL BE INSPECTED PRIOR TO CONCRETE PLACEMENT. ANY DAMAGED COATINGS SHOULD BE REPAIRED ACCORDING TO ASTM A-775. PLASTIC HEADED VIBRATORS SHOULD BE USED FOR CONCRETE CONSOLIDATION. FIELD TOUCH-UP ALL END CUTS AND DAMAGE.
- 7. ALL PREHEATING AND WELDING OF REINFORCING BARS SHALL BE DONE IN ACCORDANCE WITH AWS D1.4 LATEST EDITION AND SHALL BE CONTINUOUSLY INSPECTED BY A QUALIFIED LABORATORY. CONTRACTOR SHALL FURNISH WPS FOR ALL REBAR WELDING TO THE LABORATORY.
- 8. REINFORCING STEEL SHALL BE FABRICATED ACCORDING TO "MANUAL OF STANDARD PRACTICE FOR
- REINFORCED CONCRETE CONSTRUCTION". 9. WIRE FABRIC SHALL CONFORM TO ASTM A-185
- 10. DIMENSIONS SHOWN FOR LOCATION OF REINFORCING ARE TO THE FACE OF BARS LISTED AND DENOTE CLEAR COVERAGE. NON-PRESTRESSED, CAST-IN-PLACE CONCRETE COVERAGE SHALL BE AS

CONCRETE DEPOSITED DIRECTLY AGAINST GROUND (EXCEPT SLABS)--- 3" CONCRETE EXPOSED TO GROUND OR WEATHER BUT PLACED IN FORMS:

#5 AND SMALLER----- 1-1/2" #6 AND LARGER--BEAMS & COLUMNS (TIES)----- 1-1/2" BEAMS & COLUMNS (MAIN REINFORCING)----- 2" CAST-IN-PLACE WALLS (EXTERIOR FACE & SOIL SIDE)------ SEE ABOVE CAST-IN-PLACE WALLS (INTERIOR FACE-#11 & SMALLER)----- 3/4" SLABS (ON FORMS)---SLABS (ON GROUND)---------- 2" CLEAR FROM TOP UNO

- 11. SPLICES IN CONTINUOUS REINFORCEMENT SHALL BE LAPPED UNO, SEE SCHEDULE THIS SHEET. SPLICES IN ADJACENT BARS SHALL BE GREATER THAN 5'-0" APART. SPLICE CONTINUOUS BARS IN SOIL-BEARING GRADE BEAMS, STRUCTURAL SLABS ON GRADE AND MAT FOUNDATIONS AS FOLLOWS UNO: TOP BARS AT CENTERLINE OF SUPPORT; BOTTOM BARS AT MID-SPAN. SPLICE CONTINUOUS BARS IN ELEVATED SLABS AND BEAMS, ETC. AS FOLLOWS UNO: TOP BARS AT MID-SPAN; BOTTOM BARS AT CENTERLINE OF SUPPORT ALL BARS SIZE #14 AND LARGER SHALL BE CONTINUOUS FOR FULL LENGTH SHOWN OR SPLICED WITH MECHANICAL COUPLERS AS NOTED IN DETAILS. SPLICES IN WWF SHALL BE 1-1/2 MESHES WIDE
- LARGER OF BAR DIAMETER, 1", OR 33% GREATER THAN THE MAXIMUM AGGREGATE SIZE (NOMINAL) WHICHEVER IS GREATEST. THIS REQUIREMENT ALSO APPLIES TO THE CLEAR SPACING BETWEEN DIFFERENT LAYERS OF PARALLEL BARS AND TO THE CLEAR DISTANCE BETWEEN A CONTACT LAP SPLICE AND ADJACENT SPLICES OR BARS.

12. THE MINIMUM CLEAR SPACING BETWEEN PARALLEL BARS IN A LAYER SHALL NOT BE LESS THAN THE

- 13. ALL HOOKS SHALL BE STANDARD HOOKS UNLESS OTHERWISE SHOWN OR NOTED. AT WALLS, PROVIDE HOOKS AT ENDS OF ALL REINFORCING AT ENDS, CORNERS AND INTERSECTIONS, UNO.
- 14. CONSTRUCTION JOINTS SHALL BE MADE ROUGH AND ALL LAITANCE REMOVED FROM THE SURFACE. CONCRETE MAY BE ROUGHENED BY CHIPPING THE ENTIRE SURFACE, SAND BLASTING, OR RAKING THE SURFACE TO PROVIDE 1/4" DEEP DEFORMATIONS.
- 15. REMOVE ALL DEBRIS FROM FORMS BEFORE CASTING ANY CONCRETE.
- 16. REINFORCING, DOWELS, BOLTS, ANCHORS, SLEEVES, ETC. TO BE EMBEDDED IN CONCRETE SHALL BE SECURELY POSITIONED BEFORE PLACING CONCRETE.
- 17. ANCHOR BOLTS (AB'S) CAST IN CONCRETE OR MASONRY FOR WALL SILL AND LEDGER\APPLICATIONS SHALL BE HEADED BOLTS WITH CUT THREADS CONFORMING TO ASTM A307, UNO. REFER TO "WOOD" NOTES FOR ADDITIONAL REQUIREMENTS FOR BOLTS IN CONTACT WITH PRESSURE TREATED OR FIRE RETARDANT MATERIAL. REFER TO 'STRUCTURAL STEEL' NOTE FOR REQUIREMENTS FOR ANCHOR RODS (AR'S) CAST IN CONCRETE FOR COLUMN BASE PLATE AND STEEL EMBED APPLICATIONS.

WALLS SHALL BE CAST IN HORIZONTAL LAYERS OF 2'-0" MAXIMUM DEPTH CONCRETE IN WALLS, PIERS OR COLUMNS SHALL SET AT LEAST 2 HOURS BEFORE PLACING CONCRETE IN BEAMS, SPANDRELS, OR SLABS SUPPORTED THEREON.

HORIZONTAL WALL BARS IN MULTI-CURTAIN CAST IN PLACE WALLS SHALL BE STAGGERED DOWEL ALL VERTICAL REINFORCING IN WALLS AND COLUMNS FROM FOUNDATION WITH SAME SIZE BAR CONSOLIDATE CONCRETE PLACED IN FORMS BY MECHANICAL VIBRATING EQUIPMENT SUPPLEMENTED BY HAND-SPADING, RODDING OR TAMPING. USE EQUIPMENT AND PROCEDURES FOR CONSOLIDATION OF CONCRETE IN ACCORDANCE WITH THE RECOMMENDED PRACTICES OF ACI 309 TO SUIT THE TYPE OF CONCRETE AND PROJECT CONDITIONS. CONCRETE SHALL NOT BE DROPPED THROUGH REINFORCING STEEL (AS IN WALLS) SO AS TO CAUSE SEGREGATION OF AGGREGATES. IN SUCH CASES HOPPERS AND CHUTES OR TRUNKS OF VARIABLE LENGTHS SHALL BE USED SO THAT THE FREE UNCONFINED FALL OF CONCRETE SHALL NOT EXCEED 6 FEET.

NO WOOD SPREADERS ALLOWED. NO WOOD STAKES ALLOWED IN AREAS TO BE CONCRETED. ADDITIONAL REINFORCING IN PRECAST OR TILT-UP PANELS REQUIRED FOR LIFTING STRESSES SHALL BE SUPPLIED BY CONTRACTOR.

PROVIDE #5 X 4'-0" DIAGONAL REINFORCING AT TOP AND BOTTOM OF SLAB AT ALL RE-ENTRANT CORNERS TYPICAL. THIS APPLIES TO SLAB ON GRADE, CONCRETE OVER METAL DECK, AND ELEVATED STRUCTURAL SLAB CONDITIONS.

ALL SAW CUTTING SHALL BE DONE AFTER INITIAL SET HAS OCCURRED TO AVOID TEARING OR DAMAGE BY THE SAW BLADE, BUT BEFORE INITIAL SHRINKAGE HAS OCCURRED

NOTIFY STRUCTURAL ENGINEER A MINIMUM OF 48 HOURS BEFORE PLACING ANY CONCRETE. CONCRETE STRENGTHS & MIX PROPERTIES:

	<u>ITEM</u>	 <u>  F'C @ 28 DAYS</u>	MAX AGGR. SIZE	<u>WEIGHT</u>	MAX W/CM RATIO
Α.	FOUNDATIONS & WALL	4000 PSI	1"	NW	0.45
В.	SLAB ON GRADE	3500 PSI	1"	NW	0.45
	CITE AND MICCELL ANEOLIC		DDAMAINICC		

SITE AND MISCELLANEOUS - SEE CIVIL OR ARCH'L DRAWINGS \* W/CM = WATER : CEMENTITIOUS MATERIAL RATIO

### GENERAL NOTES APPLICABLE TO ALL DRAWINGS UNLESS NOTED OR SHOWN OTHERWISE

#### <u>STRUCTURAL STEEL</u>

- FABRICATION, ERECTION AND MATERIALS SHALL CONFORM WITH THE AISC SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS, THE AISC SEISMIC PROVISIONS FOR STRUCTURAL STEEL BUILDINGS, AND THE INTERNATIONAL BUILDING
- 2. STRUCTURAL STEEL WIDE FLANGE SHAPES SHALL CONFORM WITH ASTM A992. ALL OTHER STRUCTURAL STEEL ROLLED SHAPES (CHANNELS, ANGLES, ETC) AND PLATES SHALL CONFORM WITH ASTM A36, UNO.
- 3. STEEL PIPE SHALL CONFORM TO ASTM A53, TYPES E OR S, GRADE B.
- 4. ALL HOLLOW STRUCTURAL SECTIONS (HSS) SHALL CONFORM TO ASTM A500, GRADE B.
- 5. ALL STRUCTURAL STEEL SHALL RECEIVE A MINIMUM OF ONE SHOP COAT OF RED PRIMER PAINT. DO NOT PAINT AREAS TO BE FIELD WELDED, FIREPROOFED, GALVANIZED, TO RECEIVE SLIP-CRITICAL HIGH STRENGTH BOLTS, OR TO BE EMBEDDED IN CONCRETE. PROVIDE ADDITIONAL PAINTING AS NOTED IN THE SPECIFICATIONS
- 6. ALL STRUCTURAL STEEL SHALL BE ERECTED PLUMB AND TRUE TO LINE. TEMPORARY BRACING SHALL BE INSTALLED AND SHALL BE LEFT IN PLACE UNTIL OTHER MEANS ARE PROVIDED TO ADEQUATELY BRACE THE STRUCTURE CONTRACTOR RESPONSIBLE FOR REVIEWING ALL BASE PLATE AND SUPPORT CONDITIONS DURING ERECTION AND BRACING AS REQUIRED. SEE AISC AND OSHA REQUIREMENTS.
- 7. PLACE NON-SHRINK GROUT UNDER ALL BASE PLATES BEFORE ADDING VERTICAL LOAD
- 8. STRUCTURAL STEEL BELOW GRADE SHALL HAVE 3 INCHES MINIMUM OF CONCRETE COVER
- 9. BOLTED CONNECTIONS SHALL CONSIST OF UNFINISHED BOLTS CONFORMING TO ASTM A307 UNLESS NOTED OTHERWISE. WHERE HIGH STRENGTH BOLTS ARE INDICATED, BOLTS CONFORMING TO ASTM A325 OR ASTM A490 AS NEEDED SHALL BE PROVIDED. ANCHOR RODS CAST IN CONCRETE OR MASONRY SHALL BE HEADED BOLTS WITH CUT THREAD, FULL DIAMETER BODY STYLE CONFORMING TO ASTM F1554 GR. 36, 55 (WELDABLE PER S1 SUPPLEMENTARY REQUIREMENTS), OR 105 AS INDICATED ON DRAWINGS. ALL BOLTED CONNECTIONS AND BASE PLATES SHALL HAVE STANDARD CUT WASHERS UNLESS NOTED OTHERWISE. WASHERS FOR BASE PLATES SHALL CONFORM TO ASTM F844 UNLESS NOTED OTHERWISE, AND SHALL BE PLACED AT TOP AND BOTTOM OF PLATE.
- 10. "SLIP-CRITICAL" BOLTED CONNECTIONS:
  - A) "SLIP-CRITICAL" CONNECTIONS (A325SC DESIGN VALUES WITH SPECIAL INSPECTION) ARE REQUIRED AT ALL BRACED FRAME CONNECTIONS, AT ALL CONNECTIONS ALONG CHORD LINES AND DRAG LINES (AS NOTED ON PLANS), AND UNO, AT ALL BOLTS IN OVERSIZED OR SLOTTED HOLES.
  - B) THE SPECIAL INSPECTOR MUST BE PRESENT DURING INSTALLATION AND TIGHTENING OPERATION OF "SLIP-CRITICAL" CONNECTIONS.
- 11. PROVIDE 1/2" DIAMETER STITCH BOLTS AND RING FILLS, SPACED AT NOT MORE THAN 2'-0" ON CENTER FOR ALL
- 12. AT WOOD TO STEEL PARALLEL CONTACT, BOLT WITH 1/2" DIAMETER BOLTS AT MAXIMUM 24"C/C
- 13. HOLES FOR UNFINISHED BOLTS SHALL BE OF THE SAME NOMINAL DIAMETER OF THE BOLT PLUS 1/16". USE STANDARD
- AISC GAGE AND PITCH FOR BOLTS EXCEPT AS NOTED OTHERWISE. 14. WELDING SHALL BE DONE BY THE ELECTRIC ARC PROCESS IN ACCORDANCE WITH AMERICAN WELDING SOCIETY STANDARDS, USING ONLY CERTIFIED WELDERS. ALL GROOVE WELDS SHALL HAVE COMPLETE PENETRATION UNLESS NOTED OTHERWISE. ALL EXPOSED WELDS SHALL BE GROUND SMOOTH. ALL ELECTRODES FOR WELDING SHALL
- COMPLY WITH AWS CODE, E70 SERIES MINIMUM. 15. WELD LENGTHS CALLED FOR ON PLANS ARE THE NET EFFECTIVE LENGTHS REQUIRED.

#### 16. MINIMUM FILLET WELDS: 3/16" @ T < 1/2"

5/16" @ T > 3/4"

- 17. WELDING PROCEDURE SPECIFICATIONS (WPS) FOR SHOP AND FIELD PREQUALIFIED WELD JOINTS AND WELD JOINTS QUALIFIED BY TEST SHALL BE PREPARED FOR REVIEW PRIOR TO FABRICATION. ALL WELDING PROCEDURE ITEMS SUCH AS BASE METALS, WELDING PROCESSES, FILLER METALS AND JOINT DETAILS THAT MEET THE REQUIREMENTS OF AWS D1.1 SECTION 5.1 SHALL BE CONSIDERED AS PREQUALIFIED. ANY CHANGE OR SUBSTITUTION THAT IS BEYOND THE RANGE OR TOLERANCE OR REQUIREMENTS FOR PREQUALIFICATION SHALL BE QUALIFIED BY TEST PER AWS D1.1 SECTION 5 PART B. QUALIFICATION TESTING IS REQUIRED WHEN THE DEPTH OF A PARTIAL PENETRATION OR COMPLETE PENETRATION WELD IS 2" OR GREATER.
- 18. FOR NONDESTRUCTIVE TESTING OF WELDED CONNECTIONS EXCLUDING PRIMARY MEMBERS OF MOMENT RESISTING
  - A) WELDED CONNECTIONS SHALL BE TESTED BY NONDESTRUCTIVE METHODS FOR COMPLIANCE WITH AISC J2, AND JOB SPECIFICATIONS. ULTRASONIC TESTING SHALL BE IN ACCORDANCE WITH AWS D1.1, ASTM E164 AND ASME SECTION V. RADIOGRAPHY SHALL BE IN ACCORDANCE WITH AWS D1.1, ASTM E94 AND E99, AND ASME SECTION V. THIS TESTING SHALL BE PART OF THE SPECIAL INSPECTION REQUIREMENTS OF IBC SECTION 1704.3 PERFORMED BY AN APPROVED INDEPENDENT TESTING LABORATORY AS FOLLOWS:
    - 1. BASE METAL THICKER THAN 1 INCH WHEN SUBJECT TO THROUGH THICKNESS WELD SHRINKAGE STRAINS.
    - 2. ALL COMPLETE JOINT PENETRATION GROOVE OR BUTT WELDS
  - 3. ALL PARTIAL JOINT PENETRATION GROOVE WELDS WHEN USED IN COLUMN SPLICES.
    B) ANY MATERIAL DISCONTINUITIES SHALL BE ACCEPTED OR REJECTED ON THE BASIS OF DEFECT RATING IN ACCORDANCE WITH THE (LARGER REFLECTOR) CRITERIA OF AISC J2.
- 19. TENSION ROD REPLACEMENTS SHALL BE CAST DUCTILE IRON RODS GRADE 80-55-06 AND CONFORM TO ASTM A-536.

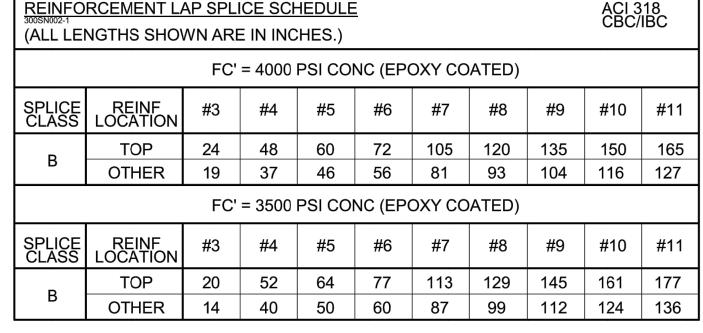
#### **DEMOLITION NOTES**

- 1. THESE NOTES ALSO APPLY TO CONDITIONS WHERE PARTIAL OR SELECTIVE DEMOLITION IS REQUIRED AS PART OF THE WORK.
- SAFETY NOTES:
- A. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COMPLY WITH THE PERTINENT SECTIONS, AS THEY APPLY TO THIS PROJECT, OF THE "CONSTRUCTION SAFETY ORDERS" ISSUED BY THE STATE OF CALIFORNIA LATEST EDITION AND ALL OSHA REQUIREMENTS.
- B. THE ARCHITECT, STRUCTURAL ENGINEER AND OWNER DO NOT ACCEPT ANY RESPONSIBILITY FOR THE CONTRACTOR'S FAILURE TO COMPLY WITH THESE REQUIREMENTS.
- C. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADEQUATE DESIGN AND CONSTRUCTION OF ALL FORMWORK, BRACING, AND SHORING REQUIRED. SHORING INDICATIONS (LOCATION, DIRECTION, DURATION, ETC.) ARE ONLY SHOWN ON THE STRUCTURAL DRWGS WHEN REQUIRED TO IMPLEMENT THE DESIGN INTENT OF THE FINAL WORK PRODUCT. DETERMINATION WHETHER SHORING IS REQUIRED FOR TEMPORARY OR INTERMEDIATE CONDITIONS DURING CONSTRUCTION IS WHOLLY THE RESPONSIBILITY OF THE CONTRACTOR.
- 3. SHORE OR BRACE BEAMS, COLUMNS AND WALLS AS REQUIRED TO MAINTAIN THE STABLE INTEGRITY OF THE EXISTING STRUCTURE PRIOR TO DEMOLITION. IT IS THE CONTRACTOR'S SOLE RESPONSIBILITY TO DESIGN AND PROVIDE COMPETENT SHORING AND BRACING FOR ALL LOADS IMPOSED DURING AND AFTER DEMOLITION THROUGH COMPLETION OF NEW CONSTRUCTION.
- 4. CONTRACTOR IS TO PREPARE A DEMOLITION AND SHORING PLAN DEPICTING LOCATIONS AND METHOD OF SHORING AND DEMOLITION SEQUENCING. ALL DIMENSIONS GIVEN TO EXISTING STRUCTURE ARE APPROXIMATE VERIFY BY FIELD MEASUREMENTS THE DIMENSIONS OF THE EXISTING STRUCTURE. WHERE ACTUAL CONDITIONS DEVIATE FROM DETAILS SHOWN ON THE DRAWINGS, NOTIFY THE STRUCTURAL ENGINEER FOR INSTRUCTIONS BEFORE PROCEEDING WITH WORK.
- 5. ANY CONFLICTING ITEMS NOT SPECIFICALLY SHOWN (SUCH AS UNDERGROUND PIPES, CONDUITS, ETC.) SHALL BE BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER PRIOR TO FURTHER DEMOLITION.
- 6. DEMOLITION AND REMOVAL OF EXISTING CONSTRUCTION SHALL BE MADE IN SUCH A MANNER AS TO MINIMIZE OR AVOID DAMAGE TO ADJACENT CONSTRUCTION.
- 7. A COMPLETE SET OF ORIGINAL DRAWINGS OF THE EXISTING STRUCTURE IS TO BE KEPT ON THE JOBSITE. CONTRACTOR SHALL OBTAIN THESE DRAWINGS FROM THE OWNER WHERE AVAILABLE.
- 8. EXTENT OF DEMOLITION IS TO BE AS INDICATED ON PLANS, SECTIONS AND DETAILS. VERIFY STORAGE AND REUSE OF EXISTING MATERIALS WITH ARCHITECTURAL DRAWINGS. DEMOLITION IS TO INCLUDE REMOVAL AND DISPOSAL OF DEMOLISHED CONSTRUCTION. SEE SPECIFICATIONS FOR ADDITIONAL DEMOLITION INSTRUCTIONS.
- CONTRACTOR SHALL RETAIN THE SERVICES OF A CIVIL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA TO PROVIDE SELECTIVE DEMOLITION AND REPLACEMENT OF EXISTING CONSTRUCTION IN AREAS NECESSARY FOR CLEARANCE OF PILE DRIVING EQUIPMENT. PLAN SHALL BE SUBMITTED TO THE STRUCTURAL ENGINEER FOR REVIEW.
- 10. ALL MATERIALS REQUIRING STORAGE SHALL BE PROTECTED TO PREVENT DEGRADATION.

#### HISTORIC REHABILITATION NOTES:

- 1. THE BRIDGE SHALL BE REHABILITATED PER "STANDARDS FOR REHABILITATION AND GUIDELINES FOR REHABILITATING HISTORIC BUILDINGS" AS PUBLISHED BY THE SECRETARY OF THE INTERIOR.
- 2. CARE SHALL BE PROVIDED TO PROTECT HISTORIC FEATURES PRIOR TO AND DURING CONSTRUCTION.
- 3. MATERIAL DEGRADATION OR DETERIORATION THAT IS NOT NOTED IN THE DRAWINGS AND IS ENCOUNTERED IN CONSTRUCTION SHALL BE BROUGHT TO THE ATTENTION OF THE STATE'S REPRESENTATIVE. DETERIORATED MATERIALS SHALL BE REPAIRED AND/OR REPLACED. WHERE POSSIBLE, REPLACED AND/OR REPAIRED PORTIONS SHALL BE INSTALLED TO MATCH THE EXISTING CHARACTERISTICS OF THE STRUCTURE.

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- 1. SCHEDULE APPLIES TO NORMAL WEIGHT CONCRETE WITH EPOXY COATED, GRADE 60 REINFORCING
- STEEL FOR #4 BARS AND LARGER (VALUES FOR #3 BARS BASED ON GRADE 40). 2. TOP REINFORCEMENT IS HORIZONTAL REINFORCEMENT LOCATED SUCH THAT MORE THAN 12 INCHES
- OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE SPLICE 3. WHEN LIGHTWEIGHT CONCRETE IS USED, MULTIPLY LAP LENGTHS BY 1.30.
- 4. WHERE CLEAR SPACING OF BARS BEING SPLICED IS LESS THAN 2 BAR DIA. OR WHERE CLEAR COVER OF
- BARS BEING SPLICED IS LESS THAN 1 BAR DIA., MULTIPLY LAP LENGTHS BY 1.50, UNO.
- 5. WHERE NOTES #3 AND #4 OCCUR, MULTIPLY LAP LENGTHS BY 2.00, UNO.
- 6. WHERE CLASS A LAP SPLICE IS NOTED IN DETAIL, DIVIDE LENGTHS ABOVE BY 1.30.
- 7. WHERE CONCRETE COVER IS GREATER THAN 3 BAR DIA. AND CLEAR SPACING IS GREATER THAN 6 BAR DIA., LAP SPLICE LENGTHS CAN BE MULTIPLIED BY 0.8.

Buehler & Buehler Structural Engineers, Inc. 600 Q Street, Suite 200, Sacramento, CA 95811 tel 916.443.0303 fax 916.443.0313 Sacramento . Phoenix . San Francisco



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ACCESSIBILITY SECTION CERTIFICATION# 18-005

THE DEPARTMENT OF PARKS AND RECREATION NORTHERN SERVICE CENTER

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\* ESTIMATED BOND LENGTH IS 6.25 FEET BASED ON ASSUMED ULTIMATE BOND STRESS PROVIDED IN SOILS REPORT. ACTUAL BOND LENGTH TO BE DETERMINED BY CONTRACTOR AND VERIFIED BY LOAD TESTING. ACTUAL BOND LENGTH SHALL NOT BE LESS THAN 5

#### NOTES:

SIZE D D+H+L D+H+E **DESIGN LOAD** 7"Ø 80K 165K -55K CAPACITY: D = DEAD LOAD

LOADS GIVEN IN KIPS, 1K= 1000LBS. POSITIVE VALUES ARE DOWNWARD, NEGATIVE VALUES ARE UPLIFT. MINIMUM FACTOR OF SAFETY=2.0 (D+L) SEE GEOTECHNICAL REPORT FOR **ESTIMATED ULTIMATE BOND STRESS** 

#### 2. MATERIAL SPECIFICATIONS:

L = LIVE LOAD

H = SOIL LOAD

- A) GROUT A NEAT MIX OF PORTLAND CEMENT (TYPE I/II) CONFORMING TO ASTM C150 WITH A WATER CEMENT RATIO OF APPROXIMATELY 0.35. THE MINIMUM 28 DAY COMPRESSIVE STRENGTH OF THE GROUT SHALL BE 5,000 PSI.
- REINFORCING BAR THE REINFORCING BAR SHALL BE GRADE 75 DYWIDAG THREADBAR (OR EQUIVALENT) CONFORMING TO ASTM A-615. LENGTH OF COUPLED BAR SECTIONS SHALL BE DETERMINED BASED ON THE OVERHEAD CLEARANCE AVAILABLE AT EACH PILE LOCATION.
- C) CASING THE STEEL CASING SHALL BE 0.5" MINIMUM WALL THICKNESS 80 KSI YIELD STRENGTH MANUFACTURED TO API N-80 SPECIFICATIONS.
- D) PLATE STEEL PLATE SHALL CONFORM TO ASTM A572 GRADE 50.
- 3. RECOMMENDED MICROPILE INSTALLATION PROCEDURE
  - A) ADVANCE OUTSIDE DIAMETER CASING TO FULL PILE DEPTH UTILIZING ROTARY DRILLING TECHNIQUES.
  - PLACE REINFORCING TREAD BAR WITH CENTRALIZERS.
  - TREMIE CASING FULL WITH NEAT CEMENT GROUT.
  - EXTRACT CASING OUT OF THE PILE BOND LENGTH WHILE PLACING ADDITIONAL GROUT. PRESSURE SHALL BE APPLIED TO THE BOND LENGTH GROUT A MINIMUM OF 2 TIMES DURING CASING EXTRACTION TO A MINIMUM PRESSURE OF 75 PSI. THIS PRESSURE MAY BE APPLIED THROUGH THE DRILL.
  - UPON COMPLETION OF PRESSURE GROUTING, REINSERT THE CASING 3' TO 4' MINIMUM INTO THE TOP OF THE BOND LENGTH AS SHOWN ON THE PILE DESIGN DETAILS. APPLY PRESSURE TO THE GROUT ONE FINAL TIME AFTER CASING REINSERTION.
  - F) THE TOP PIECE OF CASING SHALL BE PREFABRICATED WITH THE CONNECTION SHEAR RINGS WHERE OCCURS. REMOVE UNSOUND GROUT FROM THE TOP OF THE PILE CASING AND PLACE THE BEARING PLATE AS REQUIRED BY THE CONNECTION DETAILS. CAST PILE TOP INTO THE FOOTING CONCRETE.
  - G) THE QUALITY OF THE GROUT SHALL BE MONITORED BY COLLECTING GROUT CUBES EACH DAY FOR LATER COMPRESSION TESTING.
  - H) CONSISTENCY OF PILE INSTALLATION SHALL BE MONITORED AND RECORDED IN THE MICROPILE INSTALLATION LOG FORM. MONITORED AND RECORDED DATA SHALL INCLUDE TOTAL PILE DEPTH, GROUT PRESSURES AND QUANTITIES, SOILS ENCOUNTERED DURING INSTALLATION, AND ANY OBSTRUCTIONS OR IRREGULARITIES.
  - I) CONSTRUCTION TOLERANCE ON PLACEMENT OF PILES IS 3 INCHES HORIZONTALLY IN ANY DIRECTION AND A VERTICAL ALIGNMENT OF NO MORE THAN 2% OUT OF PLUMB.
- 4. DESIGN OF PILES TO CONFORM WITH SOILS REPORT # S9030-05-41 BY GEOCON CONSULTANTS DATED MAY 2015.
- 5. INSTALLATION TO BE PERFORMED BY A QUALIFIED CONTRACTOR WITH A MINIMUM OF 5 YEARS OF EXPERIENCE WITH THIS TYPE OF FOUNDATION.
- 6. INSTALLATION RECORDS AND INITIAL TESTING TO BE DONE IN ACCORDANCE WITH SPECIFICATIONS. LOAD TESTS SHALL BE COMPLETED ON PRE-PRODUCTION AND PRODUCTION PILES AS REQUIRED IN THE SOILS REPORT AND CBC 1810.3.3.
- 7. MINIMUM PILE SPACING 3'-0" CENTER TO CENTER.
- 8. PROVIDE PILE DESIGN CALCULATIONS FOR APPROVAL SIGNED BY CIVIL ENGINEER LICENSED IN THE STATE OF CALIFORNIA.

MICRO-PILE NOTES

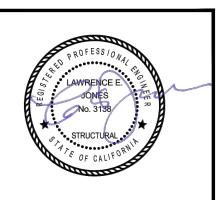


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**ACQUISITION &** 

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DPR ACCESS COMPLIANCE REVIEW ACCESSIBILITY SECTION ERTIFICATION# 18-025

Reviewed by MARSHAL SIGNED ORIGINALS ARE ON FILE AT THE DEPARTMENT OF PARKS AND RECREATIO

DESIGNED: DRAWN:

NORTHERN SERVICE CENTER

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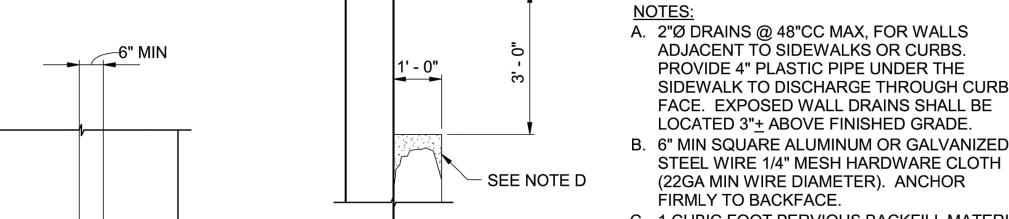
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## TYPICAL DETAILS APPLICABLE TO ALL DRAWINGS UNLESS NOTED OR SHOWN OTHERWISE



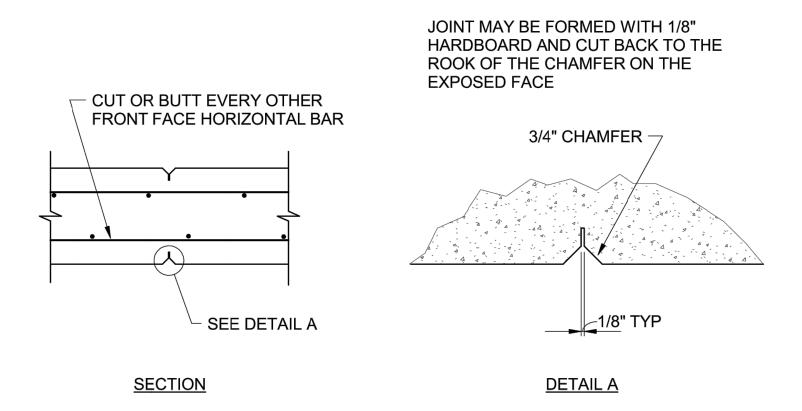
PIPE SEE 5

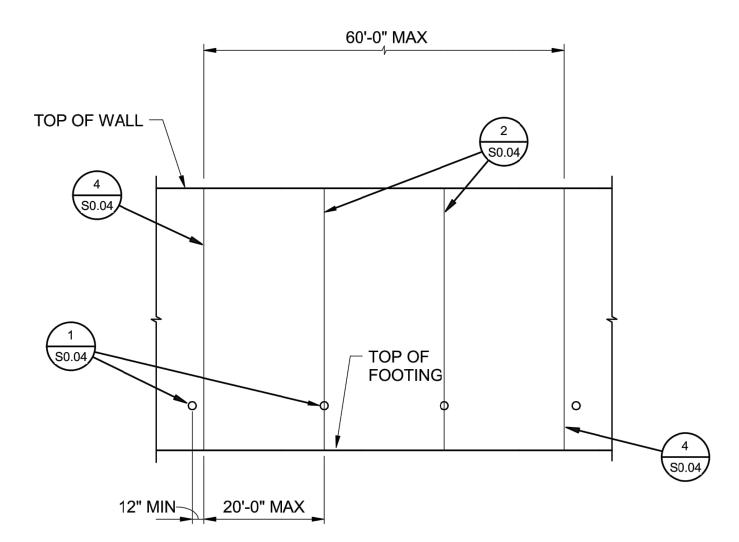
SEE NOTE C

SEE NOTE B

- FINISHED GRADE

- C. 1 CUBIC FOOT PERVIOUS BACKFILL MATERIAL IN A NONWOVEN FILTER FABRIC, SECURELY
- D. PERVIOUS BACKFILL MATERIAL CONTINUOUS BEHIND RETAINING WALL OR ABUTMENT.





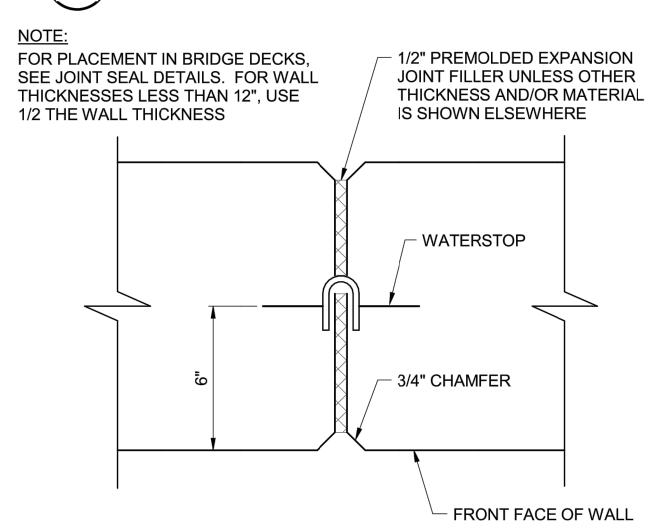
#### 1 WEEP HOLE AND PERVIOUS BACKFILL S0.04

**SECTION** 

SEE NOTE B

SEE NOTE A

**ELEVATION** 



**WALL EXPANSION JOINT** 

2 1/2" MIN

180°

<u>MINIMÚM BEND DIAMETER</u>

D=6D FOR #3 THRU #8

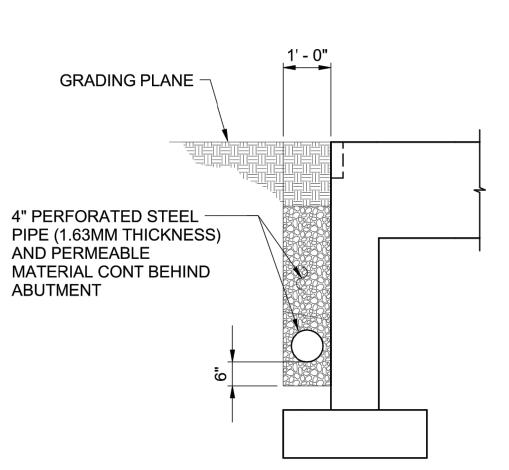
<u>MINIMUM BEND DIAMETER</u>

D=4D FOR #3 THRU #5

D=6D FOR #6 THRU #8

D=8D FOR #9 THRU #11

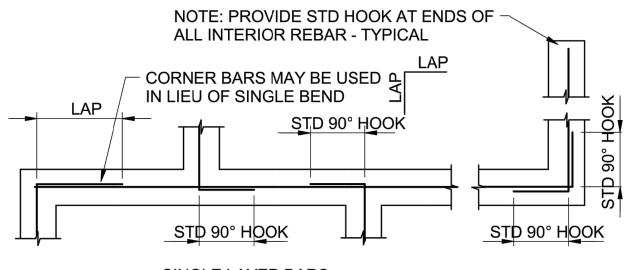
D=10D FOR #14 THRU #18

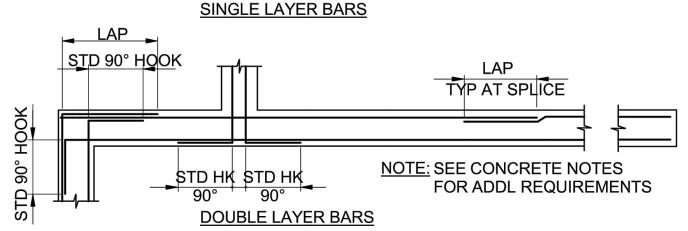


## **WEAKENED PLANES**

#### HOLES WILL BE PERMITTED IN THE OUTER 1/2" OF THE WEB FOR WIRE, RINGS, ETC. TIE WEB TO #5 1/2" PREMOLDED EXPANSION SEAL BETWEEN REINFORCING BARS @ 16"CC MAX FILLER AND JOINT FILLER UNLESS OTHER INTERVALS TO SUPPORT THE THICKNESS AND/OR MATERIAL WATERSTOP WATERSTOP IN PROPER IS SHOWN ELSEWHERE POSITION DURING CONCRETE 1/8" MIN THICKNESS PLACEMENT. WATERSTOP TO HAVE 5 OR MORE - WATERSTOP PAIRS OF RAISED RIBS TO PROVIDE 0.10 SQUARE INCHES MINIMUM CROSS-SECTION AREA ON EA HALF OF THE WATERSTOP. - #5 BAR #5 BAR - R = 1/16" 2 1/2" **SEAL BETWEEN FILLER BONDING STRIP** AND WATERSTOP

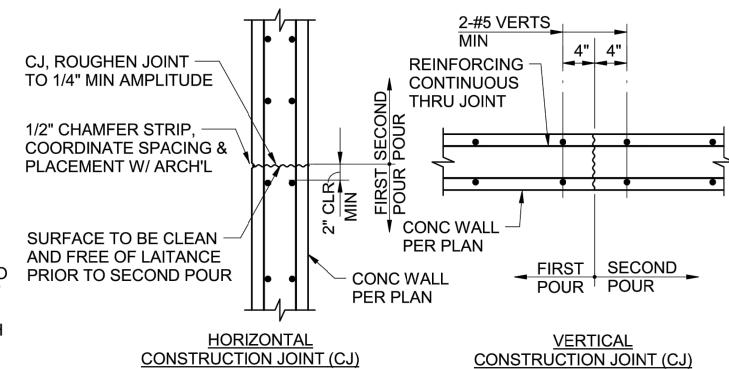
#### WALL EXPANSION JOINTS **AND WEAKENED PLANES**

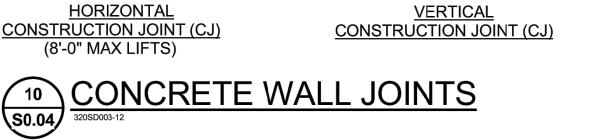


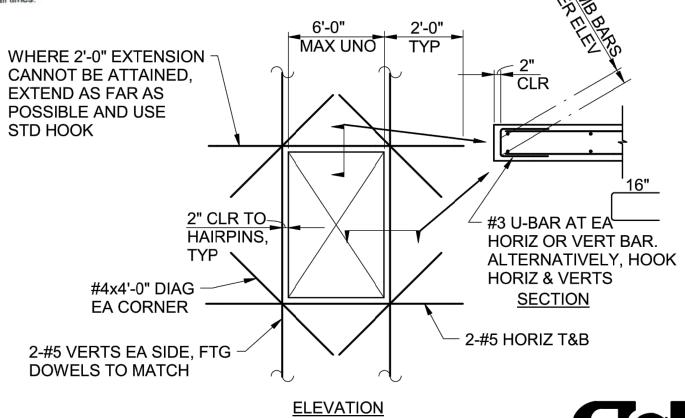




#### **WATERSTOP** CONCRETE FOOTINGS JAN 0 9 2018 Approval of this plan does not authorize or approve any omission or deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the project site at all times.





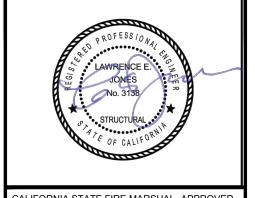


**OPENING REINFORCING** IN CONCRETE WALLS



Sacramento . Phoenix . San Francisco

**ACQUISITION & DEVELOPMENT DIVISION** One Capitol Mall Sacramento, CA 95814-3229



Approval of this plan does not authorize of approve any omission of deviation from applicable regulations. Final approval is subject to field inspection. One set of approved plans shall be available on the roject site at all times.

DPR ACCESS COMPLIANCE REVIEW ACCESSIBILITY SECTION

CERTIFICATION # 18-025 Reviewed by

MARSHAL SIGNED ORIGINALS ARE ON FILE AT

THE DEPARTMENT OF PARKS AND RECREATIO NORTHERN SERVICE CENTER

DESIGNED: DRAWN:

CHECKED: DATE: Issue Date

**REVISIONS** 

DATE

H

PARK

YUBA

BRIDGE REHABILITATION STORATION DE SOUTH YUBA HISTORIC COVERED B RES Y

> DRAWING NO. 30419.006

SHEET NO S<sub>0.04</sub>

006 OF 030

6D FOR 7

\$0.04 **BENDS** 

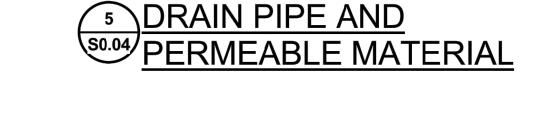
NOTE: ALL HOOKS SHALL BE 90° OR 180° STANDARD HOOKS

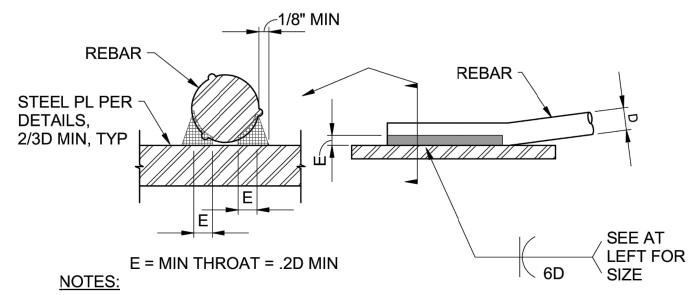
UNLESS OTHERWISE SHOWN OR NOTED.

**END HOOKS & BENDS** 

TIES & STIRRUPS

STANDARD REBAR HOOKS AND





- REINFORCING TO BE WELDED, EXCEPT ASTM A706, SHALL CONFORM TO THE MATERIAL PROPERTY REQUIREMENTS OF ANSI/AWS D1.4, NEWEST EDITION.
- ALL PREHEATING AND WELDING SHALL BE DONE IN ACCORDANCE WITH ANSI/AWS D1.4, NEWEST EDITION.
- ALL WELDING SHALL BE CONTINUOUSLY INSPECTED BY A QUALIFIED LABORATORY.

