#### American River Flood Control District

# CA CVFPB Encroachment Permit – Riverdale RV Resort and New Sewer Line Connection, American River North Levee

#### **Staff Report**

#### **Discussion:**

The owner of a Sacramento mobile home park has submitted an application to develop the site into an upscale RV Resort. The site location is within the levees near the North Levee of the American River. In addition to regrading the terrain and elevating the permanent structures to accommodate floodplain restrictions, the applicant is requesting the inclusion of a new sewer line connection into the floodway location. The sewer line is proposed to be installed by trenching within the Del Paso Blvd roadway and under the City's Del Paso Floodgates. No trenching or installation work will occur in the District levee.

Key notes about the project:

- The park site location is away from the levee and will not impact District O&M
- No trenching or utility installation will occur in the District levee
- Permanent structures will be elevated to accommodate floodplain development restrictions
- The hydraulic analysis showed that the proposed project will not raise the water surface in the American River
- The applicant has an evacuation plan to safely get occupants and their vehicles out of the floodway prior to high water

#### **Recommendation:**

The General Manager recommends that the Board of Trustees endorse the permit application for the Riverdale RV Resort and New Sewer Line Connection.

(For Office Use Only)

Application No. \_

# APPLICATION FOR A CENTRAL VALLEY FLOOD PROTECTION BOARD ENCROACHMENT PERMIT

The scope of t		ite and offsite i		overed under the issued permit. e see Attachment A for the scope of the
Project     Location:	1501 Northgate Blvd., Sac	cramento (N)	_ County, in Sec	tion <u>30</u> (E)
Township:	9N	_ (S), Range:	<u>5E</u>	(W), M. D. B. & M.
Latitude:	N 38° 35' 54"	_ Longitude:	W 121° 28′ 35″	 Designated
Stream:	American River	_ , Levee :		Floodway:
APN:	274-0120-010-0000	_		
3. Primewest	Investments, Inc. / Linda Fra	azier	of 27038 Co Ro	1 92F
	Name of Applicant / Land Ov	vner	_	Address
Winters	Ca		95694	(530) 601-0650
City		State	Zip Code	Telephone Number lindakfrazier@gmail.com E-mail
4. Tony McCre	earv		of CWE	
4. 10.19 MOOR	Name of Applicant's Represen	ntative	Or	Company
Roseville	Ca		95661	(916) 772-7800
City		State	Zip Code	Telephone Number
				amccreary@cwecorp.com
5. Endorseme	nt of the proposed project fro	om the Local Ma	aintaining Agency (LM	E-mail IA):
We, the Truste		of LMA	approve this	s plan, subject to the following conditions:
☐ Conditi	ons listed on back of this for	m 🗆 Co	onditions Attached	☐ No Conditions
Trustee		Date	Trustee	Date
Trustee		Date	Trustee	Date

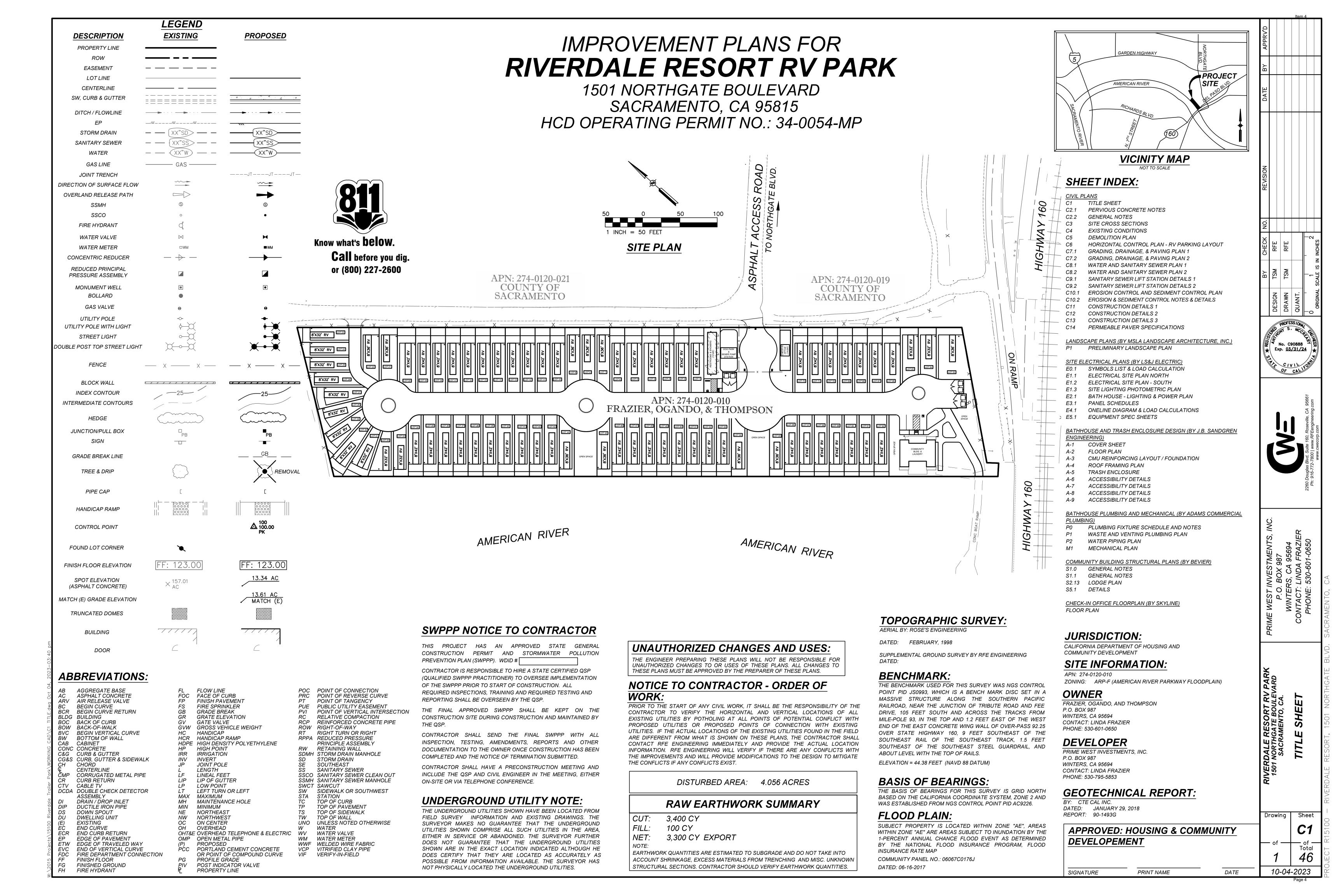
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# APPLICATION FOR A CENTRAL VALLEY FLOOD PROTECTION BOARD ENCROACHMENT PERMIT

6. Names and addresses of adjacent property owners sharing a common boundary with the land upon which the contents of this application apply. If additional space is required, list names and addresses on back of the application form or an attached sheet.

	Name	Address	Zip Code
City of S	Sacramento		
County	of Sacramento		
Caltrans	<b>.</b>		
		-	
	s an environmental determination be t of 1970?	en made of the proposed work under the Califo	rnia Environmental Quality
	_		Number
ir yes d	r pending, give the name and addre	ess of the lead agency and State Clearinghouse	Number.
SCH N	o		
8. Whe	en is the project scheduled for const	ruction? Spring, 2024	
9. Plea	ase check exhibits accompanying th	is application.	
Α.	·	wing the location of the proposed work.	
В.	☑ Drawings showing plan view(s)	of the proposed work to include map scale.	
C.	☑ Drawings showing the cross se banks, flood plain,	ction dimensions and elevations (vertical datum	?) of levees, berms, stream
D.	Drawings showing the profile e	evations (vertical datum?) of levees, berms, floo	d plain, low flow, etc.
E.	A minimum of four photographs	s depicting the project site.	
		Signature of Applicar	1/10 21 (10 - 2 - 2).  The Date

Include any additional information:



#### PORTLAND CEMENT PERVIOUS CONCRETE PAVEMENT

#### PART 1 GENERAL

#### 1.01 SCOPE OF WORK

A. THE WORK TO BE COMPLETED UNDER THIS CONTRACT INCLUDES THE FURNISHING OF ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY FOR CONSTRUCTION OF PORTLAND CEMENT PERVIOUS CONCRETE PAVEMENT FOR STREETS, PARKING AND PEDESTRIAN AREAS IN CONFORMANCE WITH THE PLANS AND SPECIFICATIONS.

B. WORK IN OTHER SECTIONS: FORMWORK: SEE "CONCRETE FORMWORK" IN DIVISION 03 OTHER PAVING: SEE OTHER SECTIONS IN DIVISION 33 INSERTS OF LANDSCAPE ACCESSORIES INTO CONCRETE PAVEMENT: SEE **DIVISION 32** 

DRAINS IN CONCRETE PAVEMENT: SEE DIVISION 32 SUBGRADES AND COMPACTION: SEE DIVISION 31

#### 1.02 REFERENCES:

A. AMERICAN CONCRETE INSTITUTE 1. CONCRETE FIELD TESTING TECHNICIAN GRADE I

B. AMERICAN SOCIETY FOR TESTING AND MATERIALS

ASTM C 29 "TEST FOR BULK DENSITY (UNIT WEIGHT) AND VOIDS IN AGGREGATE ASTM C33 "SPECIFICATION FOR CONCRETE AGGREGATES"

ASTM C 33 "SPECIFICATION FOR CONCRETE AGGREGATES" ASTM C 94 "SPECIFICATION FOR READY-MIXED CONCRETE"

ASTM C 150 "SPECIFICATION FOR PORTLAND CEMENT" ASTM C 260 "SPECIFICATION FOR AIR-ENTRAINING ADMIXTURES FOR

CONCRETE" ASTM C 494 "SPECIFICATION FOR CHEMICAL ADMIXTURES FOR

CONCRETE" ASTM C 595 "SPECIFICATION FOR BLENDED HYDRAULIC CEMENTS" ASTM C 618 "SPECIFICATION FOR COAL FLY ASH AND RAW OR CALCINED NATURAL POZZOLAN FOR USE AS A MINERAL ADMIXTURE

IN PORTLAND CEMENT CONCRETE." ASTM C 685 "STANDARD SPECIFICATION FOR CONCRETE MADE BY

**VOLUMETRIC BATCHING AND CONTINUOUS MIXING"** 10. ASTM C 989 "SPECIFICATION FOR GROUND GRANULATED

BLAST-FURNACE SLAG FOR USE IN CONCRETE AND MORTARS." 11. ASTM C 1438 "STANDARD SPECIFICATION FOR LATEX AND POWDER

MODIFIERS FOR HYDRAULIC CEMENT CONCRETE AND MORTAR." 12. ASTM C 1602 "SPECIFICATION FOR MIXING WATER USED IN THE PRODUCTION OF HYDRAULIC CEMENT CONCRETE"

13. ASTM C 1688 "STANDARD TEST METHOD FOR DENSITY AND VOID CONTENT OF FRESHLY MIXED PERVIOUS CONCRETE"

14. ASTM C 1701/C1701M "STANDARD TEST METHOD FOR INFILTRATION RATE OF IN PLACE PERVIOUS CONCRETE" 15. ASTM C 1751 "STANDARD SPECIFICATION FOR PREFORMED

EXPANSION JOINT FILLER FOR CONCRETE PAVING AND STRUCTURAL CONSTRUCTION (NONEXTRUDING AND RESILIENT BITUMINOUS

16. ASTM C 1752 "STANDARD SPECIFICATION FOR PREFORMED SPONGE RUBBER CORK AND RECYCLED PVC EXPANSION JOINT FILLERS FOR

CONCRETE PAVING AND STRUCTURAL CONSTRUCTION." 17. ASTM D 994 "STANDARD SPECIFICATION FOR PREFORMED EXPANSION JOINT FILLER FOR CONCRETE (BITUMINOUS TYPE)" 18. ASTM E 329 "SPECIFICATION FOR AGENCIES ENGAGED IN THE

CONSTRUCTION." C. NATIONAL READY MIXED CONCRETE ASSOCIATION TEXT REFERENCE FOR PERVIOUS CONCRETE CONTRACTOR

TESTING AND/OR INSPECTION OF MATERIALS USED IN

#### 1.03 QUALITY ASSURANCE:

CERTIFICATION

A. THE PERVIOUS CONCRETE SUBCONTRACTOR:

 SHALL SUBMIT: a. EVIDENCE OF TWO SUCCESSFUL PERVIOUS CONCRETE PAVEMENT PROJECTS INCLUDING: THE PROJECT NAME AND ADDRESS, OWNER'S NAME, CONTACT INFORMATION AND SIZE OF EACH PROJECT.

VERIFICATION OF CURRENT NRMCA CERTIFICATION

REQUIREMENTS DESCRIBED BELOW: 2. SHALL MEET, AT THE TIME OF BIDDING: ONE OF THE FOLLOWING CRITERIA FOR THE MINIMUM CERTIFICATION FOR EACH PLACEMENT CREW AND SUBMIT VERIFICATION OF NRMCA PERVIOUS CONCRETE CERTIFICATION WITH THE BID.

(HTTP://WWW.NRMCA.ORG/EDUCATION/CERTIFICATIONS/PERVIOUS\_ CONTRACTOR.HTM)

a. THE PERVIOUS CONCRETE SUBCONTRACTOR SHALL EMPLOY NO LESS THAN ONE (1) NRMCA CERTIFIED PERVIOUS CONCRETE CRAFTSMAN WHO MUST BE ONSITE, ACTIVELY GUIDING AND WORKING WITH EACH PLACEMENT CREW DURING ALL PERVIOUS CONCRETE PLACEMENT.

THE PERVIOUS CONCRETE SUBCONTRACTOR SHALL EMPLOY NO LESS THAN THREE (3) NRMCA CERTIFIED PERVIOUS CONCRETE INSTALLERS WHO MUST BE ONSITE, ACTIVELY GUIDING AND WORKING WITH PERVIOUS CONCRETE FOR PROJECTS.

THE PERVIOUS CONCRETE SUBCONTRACTOR SHALL EMPLOY NO LESS THAN THREE (3) NRMCA PERVIOUS CONCRETE TECHNICIANS AND ONE (1) PERVIOUS INSTALLER WHO SHALL BE ONSITE, ACTIVELY GUIDING AND WORKING WITH EACH PLACEMENT CREW DURING ALL PERVIOUS CONCRETE PLACEMENT.

B. PERFORMANCE: UPON COMPLETION OF THE INITIAL CURING, THE PERVIOUS CONCRETE SHALL BE TESTED FOR INITIAL BASELINE INFILTRATION IN ACCORDANCE WITH ASTM C1701. THE RATE SHALL BE A MINIMUM OF 100 INCHES PER HOUR.

1.04 SUBMITTALS: BEFORE STARTING WORK, SUBMIT THE FOLLOWING: A. CONCRETE MATERIALS:

PROPOSED CONCRETE MIXTURE PROPORTIONS INCLUDING ALL MATERIAL WEIGHTS, VOLUMES, DENSITY (UNIT WEIGHT), WATER / CEMENTITIOUS RATIO, AND VOID CONTENT. THE MIX DESIGN SHALL NOT SPECIFY A COMPRESSIVE OR FLEXURAL STRENGTH.

2. AGGREGATE TYPE, SOURCE AND GRADATION.

CEMENT, FLY ASH, GROUND GRANULATED BLAST-FURNACE SLAG AND ADMIXTURE MANUFACTURER CERTIFICATIONS

QUALIFICATIONS: EVIDENCE OF QUALIFICATIONS LISTED UNDER QUALITY ASSURANCE.

PROJECT DETAILS: SPECIFIC PLANS, DETAILS, SCHEDULE, CONSTRUCTION PROCEDURES AND QUALITY CONTROL PLAN.

D. TEST PANEL:

CONSTRUCT TEST PANEL(S) TO MEET REQUIREMENTS OF CONTRACT DOCUMENTS. PLACE A MINIMUM ONE 225 SQ. FT PANEL. PROVIDE JOINTS AND CURING USING MATERIALS, EQUIPMENT, AND PERSONNEL PROPOSED FOR THE PROJECT AS DESCRIBED IN SECTION 1.02.B. COORDINATE LOCATION OF TEST PANELS WITH

OWNER AND ARCHITECT/ENGINEER. THE TEST PANEL SHALL BE TESTED FOR ACCEPTANCE IN

ACCORDANCE WITH SECTION 3.08 QUALITY CONTROL. AN APPROVED TEST PANEL WILL BE USED AS QUALITY CONTROL FOR THE PROJECT AND MAY BE INCORPORATED INTO THE PROJECT

REMOVE AND LEGALLY DISPOSE OF ALL MATERIALS USED FOR TEST PANELS NOT APPROVED AND ALL EXCESS MATERIALS.

#### PART 2 MATERIALS

2.01 MATERIALS:

A. CEMENT: PORTLAND CEMENT TYPE II OR V CONFORMING TO ASTM C150 OR PORTLAND CEMENT TYPE IP OR IS CONFORMING TO ASTM C595.

B. SUPPLEMENTARY CEMENTITIOUS MATERIALS:

IF OF ACCEPTABLE QUALITY.

CLASS F FLY ASH: ASTM C618 GROUND GRANULATED BLAST-FURNACE SLAG: ASTM C989

C. CHEMICAL ADMIXTURES: AIR ENTRAINING AGENTS SHALL COMPLY WITH ASTM C260.

CHEMICAL ADMIXTURES SHALL COMPLY WITH ASTM C494. LATEX BONDING AGENTS SHALL COMPLY WITH ASTM C1438.

D. AGGREGATES: COARSE AGGREGATE: ASTM C33. THE MAXIMUM SIZE AND GRADATION SHALL MEET THE PROJECT CRITERIA FOR SURFACE APPEARANCE AND VOID CONTENT.

E. WATER: ASTM C 1602.

F. ISOLATION JOINT MATERIAL: SHALL COMPLY WITH ASTM D994, D1751, OR D1752.

2.02 MIXTURE PROPORTIONS: THE COMPOSITION OF THE PROPOSED CONCRETE MIXTURES SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND SHALL COMPLY WITH THE FOLLOWING PROVISIONS UNLESS AN ALTERNATIVE COMPOSITION IS DEMONSTRATED TO COMPLY WITH THE PROJECT REQUIREMENTS. CONFORM WITH ALL REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION (AHJ) FOR PAVEMENTS AND WALKWAYS.

A. CEMENTITIOUS CONTENT: COMPLY WITH THE APPROVED MIX DESIGN.

SUPPLEMENTARY CEMENTITIOUS CONTENT: a. FLY ASH: 25% MAXIMUM OF THE TOTAL CEMENTITIOUS MATERIAL

OR IN ACCORDANCE WITH APPROVED MIX DESIGN. b. SLAG: 40% MAXIMUM OF THE TOTAL CEMENTITIOUS MATERIAL OR IN ACCORDANCE WITH APPROVED MIX DESIGN.

B. WATER / CEMENTITIOUS RATIO SHALL RANGE BETWEEN 0.27 LB/LB AND 0.31 LB/LB. OR IN ACCORDANCE WITH APPROVED MIX DESIGN.

C. AGGREGATE CONTENT: AS APPROPRIATE FOR APPROVED MIX DESIGN.

D. ADMIXTURES: USE IN ACCORDANCE WITH APPROVED MIX DESIGN.

MIX WATER: AS APPROPRIATE FOR APPROVED MIX DESIGN.

F. COLOR: PIGMENTS TO BE SELECTED BY THE ARCHITECT.

#### PART 3 EXECUTION

3.01 SUBGRADE: VERIFY SUBGRADE PREPARATION, GRADE, AND CONDUCT PERMEABILITY AND DENSITY TESTS FOR CONFORMANCE TO PROJECT REQUIREMENTS AND IS ACCEPTABLE FOR INSTALLATION OF PERVIOUS CONCRETE. (SEE 'SECTION 31 SUBGRADE GUIDELINES FOR PERVIOUS CONCRETE' THAT ACCOMPANIES THIS DOCUMENT.)

3.02 RECHARGE BASIN (DETENTION BASIN): WHEN BASE MATERIAL IS USED UNDER PERVIOUS CONCRETE FOR WATER RECHARGE. IT SHALL BE COMPOSED OF UNIFORM SIZED AGGREGATE CONFORMING TO ASTM C33, MINIMUM SIZE 6. FOR MINIMUM VOID CONTENT, REFER TO CIVIL OR GEOTECHNICAL CONTRACT DOCUMENTS.

3.03 FORMWORK: FORM MATERIALS: ANY MATERIAL PERMITTED BY AHJ AND OF SUFFICIENT STRENGTH AND STABILITY TO SUPPORT MECHANICAL EQUIPMENT WITHOUT DEFORMATION OF PLAN PROFILES FOLLOWING SPREADING, STRIKE-OFF AND COMPACTION OPERATIONS.

3.04 MIXING AND HAULING:

A. PRODUCTION: PERVIOUS CONCRETE SHALL BE MANUFACTURED AND DELIVERED IN ACCORDANCE WITH APPLICABLE SECTIONS OF ASTM C 94 OR ASTM C 685.

MIXING: PERVIOUS CONCRETE SHALL BE PRODUCED IN CENTRAL MIXERS, TRANSIT MIXERS OR IN VOLUMETRIC MIXERS.

DELIVERY: DELIVER PERVIOUS CONCRETE DIRECTLY FROM THE MIXER BY MEANS OF CONVEYER AS CLOSE AS POSSIBLE TO FINAL POSITION.

D. DISCHARGE: EACH TRUCKLOAD WILL BE VISUALLY INSPECTED FOR CONSISTENCY OF CONCRETE MIXTURE. JOB SITE WATER ADDITIONS ARE PERMITTED TO OBTAIN AND MAINTAIN THE REQUIRED MIX CONSISTENCY THROUGHOUT THE DISCHARGE. DISCHARGE SHALL BE A CONTINUOUS OPERATION. CONCRETE SHALL BE DEPOSITED AS CLOSE TO ITS FINAL POSITION AS PRACTICAL AND SUCH THAT DISCHARGED CONCRETE IS INCORPORATED INTO PREVIOUSLY PLACED PLASTIC CONCRETE.

3.05 PLACING AND FINISHING: SHALL COMPLY WITH THE CONTENT OF THE NATIONAL READY MIXED CONCRETE ASSOCIATION'S 'TEXT REFERENCE FOR PERVIOUS CONCRETE CONTRACTOR CERTIFICATION' WITH THE FOLLOWING PROVISIONS:

A. INTERNAL VIBRATION SHALL NOT BE PERMITTED. USE MECHANICAL SCREED EQUIPMENT. DO NOT USE HAND SCREEDS EXCEPT IN CONFINED AND SMALL AREAS. CROSS ROLL COMPACTED CONCRETE TO REMOVE ANY SCREEDING AND COMPACTION MARKS ON THE CONCRETE SURFACE.

COMPACT TO THE REQUIRED CROSS-SECTION AND SHALL NOT DEVIATE MORE THAN + 3/8 INCH IN 10 FEET FROM PROFILE GRADE.

#### 3.06 JOINTING

A. JOINTS SHALL BE INSTALLED AT LOCATIONS AND TO DEPTHS SHOWN ON THE PROJECT PLANS.

CONTROL (CONTRACTION) JOINTS SHALL BE INSTALLED AT REGULAR INTERVALS NOT TO EXCEED 1.5 TIMES THE WIDTH OF THE PLACEMENT OR 20 FEET, OR IN ACCORDANCE WITH APPROVED JOINT PLACEMENT PLAN. THE CONTROL JOINTS SHALL BE INSTALLED AT 1/4 THE THICKNESS OF THE PAVEMENT BUT NOT TO EXCEED 1-1/2". THESE JOINTS CAN BE INSTALLED IN THE PLASTIC CONCRETE OR SAW CUT AFTER THE CONCRETE HAS HARDENED. NEW JOINTS IN PLASTIC CONCRETE OR RECENTLY HARDENED CONCRETE SHALL ALIGN WITH JOINTS IN OLDER CONCRETE. JOINTS ABUTTING CURBS AND OTHER FIXED CONCRETE SHALL BE INSTALLED WITHIN 10 DEGREES OF PERPENDICULAR TO THE OLDER CONCRETE AS POSSIBLE.

C. INSTALL JOINTS TO MATCH APPROVED SAMPLE.

D. TRANSVERSE CONSTRUCTION JOINTS: INSTALL WHENEVER PLACING IS SUSPENDED FOR 20 MINUTES OR WHENEVER CONCRETE IS NO LONGER WORKABLE.

E. DO NOT DOWEL LONGITUDINAL JOINTS BETWEEN SUCCESSIVE

PLACEMENTS. ISOLATION JOINTS: USE WHEN ABUTTING FIXED VERTICAL STRUCTURES. PLACE ISOLATION MATERIAL BEFORE CONCRETE IS PLACED AND TO THE DEPTH OF THE PAVEMENT SECTION.

#### 3.07 CURING:

A. FINAL CURING PROCEDURES SHALL BEGIN NO LATER THAN 20 MINUTES AFTER THE CONCRETE HAS BEEN DISCHARGED FROM THE MIXER. THE PAVEMENT SURFACE SHALL BE COVERED WITH A MINIMUM OF SIX (6) MIL THICK WHITE OR CLEAR POLYETHYLENE SHEET OR OTHER APPROVED COVERING MATERIAL. IN COLD WEATHER BLACK PLASTIC MAY BE USED TO AID IN HEAT RETENTION. THE COVER SHALL PREVENT AIR INFILTRATION TO THE FRESH CONCRETE AND SHALL OVERLAP ALL EXPOSED EDGES AND SHALL BE SECURED TO PREVENT DISLOCATION DUE TO WINDS OR ADJACENT TRAFFIC CONDITIONS.

B. THE CURING COVER SHALL REMAIN SECURELY IN PLACE FOR A MINIMUM OF 7 DAYS. NO VEHICULAR TRAFFIC SHALL BE PERMITTED ON THE PAVEMENT UNTIL CURING IS COMPLETE AND NO TRUCK TRAFFIC SHALL BE PERMITTED FOR AT LEAST 14 DAYS.

#### 3.08 QUALITY CONTROL:

A. THE OWNER SHALL EMPLOY A TESTING LABORATORY THAT CONFORMS TO THE REQUIREMENTS OF ASTM E329 AND ASTM C1077. ALL PERSONNEL ENGAGED IN TESTING SHALL BE CERTIFIED BY THE AMERICAN CONCRETE INSTITUTE AS ACI CONCRETE FIELD TECHNICIANS OR EQUIVALENT AND

SHALL BE CERTIFIED BY NRMCA AS A PERVIOUS CONCRETE TECHNICIAN. PRIOR TO EACH PLACEMENT, THE FORMED THICKNESS SHALL BE AT LEAST THE DESIGN THICKNESS TESTING WITHIN -0" TO +3/4".

C. PLASTIC CONCRETE SHALL BE SAMPLED IN ACCORDANCE WITH ASTM C 172 AND DENSITY (UNIT WEIGHT) MEASURED IN ACCORDANCE WITH ASTM C 1688. THE DENSITY (UNIT WEIGHT) OF THE DELIVERED CONCRETE SHALL BE +/- 5 PCF OF THE DESIGN DENSITY (UNIT WEIGHT).

D. PLASTIC VOID CONTENT SHALL BE CALCULATED AS PER ASTM C1688 GRAVIMETRIC AIR DETERMINATION AND COMPARED TO THE VOID PERCENTAGE REQUIRED BY THE HYDRAULIC DESIGN.

UPON COMPLETION OF INITIAL CURING, THE PERVIOUS CONCRETE SHALL BE TESTED FOR A BASELINE INFILTRATION RATE USING ASTM C1701.

## SUBGRADES AND COMPACTION FOR PORTLAND CEMENT PERVIOUS CONCRETE PAVEMENT

#### PART 1 GENERAL

1.01 SCOPE OF WORK:

A. THE WORK TO BE COMPLETED UNDER THIS CONTRACT INCLUDES THE SUBGRADE AND COMPACTION REQUIREMENTS FOR PORTLAND CEMENT PERVIOUS CONCRETE PAVEMENT FOR STREETS. PARKING & PEDESTRIAN AREAS IN CONFORMANCE WITH THE PLANS AND SPECIFICATIONS.

WORK IN OTHER SECTIONS:

FORMWORK: SEE "CONCRETE FORMWORK" IN DIVISION 03 OTHER PAVING: SEE OTHER SECTIONS IN DIVISION 33 INSERTS OF LANDSCAPE ACCESSORIES INTO CONCRETE PAVEMENT: SEE DIVISION 32 DRAINS IN CONCRETE PAVEMENT: SEE DIVISION 32 PORTLAND CEMENT PERVIOUS CONCRETE PAVEMENT: SEE DIVISION 33 SECTION 033729

#### 1.02 REFERENCES:

A. AMERICAN SOCIETY FOR TESTING AND MATERIALS

ASTM D 1557 "TEST METHODS FOR LABORATORY COMPACTION CHARACTERISTICS OF SOIL USING MODIFIED EFFORT (56,000 FT-LBF/FT3)"

ASTM D 3385 "TEST METHOD FOR INFILTRATION RATE OF SOILS IN FIELD USING DOUBLE-RING INFILTROMETER"

1.03 SUBGRADE AND COMPACTION: MATERIAL: THE TOP 6 INCHES SHALL BE COMPOSED OF GRANULAR OR GRAVELLY SOIL THAT IS PREDOMINANTLY SANDY WITH NO MORE THAN A MODERATE AMOUNT OF SILT OR CLAY. GRANULAR SUB-BASE MAY BE PLACED OVER THE SUBGRADE.

PERMEABILITY: SUBGRADE SHALL BE DETERMINED IN ACCORDANCE WITH ASTM D3385.

C. COMPACTION: COMPACT SUB-GRADE TO A MINIMUM 90% AND A MAXIMUM 95%. COMPACTION SHALL BE IN ACCORDANCE WITH ASTM D 1557.

D. FILL: IF FILL MATERIAL IS REQUIRED TO BRING THE SUBGRADE TO FINAL ELEVATION, IT SHALL BE CLEAN AND FREE OF DELETERIOUS MATERIALS. IT SHALL BE PLACED IN 6-INCH MAXIMUM LAYERS, AND COMPACTED BY A MECHANICAL VIBRATORY COMPACTOR TO A MINIMUM DENSITY OF 90% AND A MAXIMUM DENSITY OF 95% IN ACCORDANCE WITH ASTM D 1557.

MOISTURE: THE SUBGRADE MOISTURE CONTENT SHALL BE 1% - 3% ABOVE OPTIMUM AS DETERMINED BY ASTM D 1557.

VERIFY SUBGRADE PREPARATION, GRADE, AND CONDUCT PERMEABILITY AND DENSITY TESTS FOR CONFORMANCE TO PROJECT REQUIREMENTS.

#### RECOGNIZED PROCEDURES FOR **ACHIEVING QUALITY PERVIOUS** CONCRETE

1. MIXTURE PROPORTIONS: THE COMPOSITION OF THE PROPOSED CONCRETE MIXTURES SHALL BE SUBMITTED TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND/OR APPROVAL AND SHALL COMPLY WITH THE FOLLOWING PROVISIONS UNLESS AN ALTERNATIVE COMPOSITION IS DEMONSTRATED TO COMPLY WITH THE PROJECT REQUIREMENTS.

A. CEMENTITIOUS CONTENT: THE CONCRETE PRODUCER SHALL DETERMINE THE CEMENT CONTENT BASED UPON THE AVAILABLE AGGREGATE GRADATION.

SUPPLEMENTARY CEMENTITIOUS CONTENT: FLY ASH, IF USED, SHALL BE A MAXIMUM OF 25% OF THE TOTAL CEMENTITIOUS MATERIAL. BLAST FURNACE SLAG, IF USED, SHALL BE A MAXIMUM OF 40% OF THE TOTAL CEMENTITIOUS MATERIAL.

C. WATER / CEMENTITIOUS RATIO SHALL RANGE BETWEEN 0.27 LB/LB AND 0.31 LB/LB.

D. AGGREGATE CONTENT: THE BULK VOLUME OF AGGREGATE PER CUBIC YARD SHALL BE EQUAL TO 27 CUBIC FOOT WHEN CALCULATED FROM THE DRY RODDED DENSITY (UNIT WEIGHT) DETERMINED IN ACCORDANCE WITH ASTM C29 RODDING PROCEDURE.

E. ADMIXTURES: ADMIXTURES SHALL BE USED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND DOSAGE DETERMINED BY THE CONCRETE PRODUCER.

F. MIX WATER: THE QUANTITY OF MIXING WATER SHALL BE ESTABLISHED TO PRODUCE A PERVIOUS CONCRETE MIXTURE OF THE DESIRABLE WORKABILITY TO FACILITATE PLACING. COMPACTION AND FINISHING TO THE DESIRED SURFACE CHARACTERISTICS.

#### MIXING AND HAULING:

PRODUCTION: PERVIOUS CONCRETE SHALL BE MANUFACTURED AND DELIVERED IN ACCORDANCE WITH THE APPLICABLE SECTIONS OF ASTM C94 OR C685.

MIXING: PERVIOUS CONCRETE SHALL BE PRODUCED IN CENTRAL MIXERS. TRANSIT MIXERS, OR VOLUMETRIC MIXERS. THE MANUFACTURERS OF MIXING EQUIPMENT SHALL SPECIFY MIXING SPEED AND REVOLUTIONS TO PRODUCE A HOMOGENEOUS MIX. PERVIOUS CONCRETE PRODUCED IN TRANSIT MIXERS SHALL BE MIXED AT LEAST 70 REVOLUTIONS.

PRIOR TO DISCHARGE: THE CONTRACTOR SHALL VISUALLY EVALUATE THE HOMOGENEOUS UNIFORMITY OF EACH LOAD AND EITHER APPROVE THE CONCRETE OR ADD WATER. ALL PERSONS AUTHORIZED TO ADD WATER SHALL BE IDENTIFIED PRIOR TO THE START OF EACH DAY'S PLACEMENT. ADDED WATER SHALL BE RECORDED ON THE DELIVERY TICKET AND COMMUNICATED TO THE BATCH PLANT.

D. DISCHARGE: PERVIOUS CONCRETE SHALL BE DISCHARGED DIRECTLY FROM THE MIXER TO THE GRADE OR TO A BELT CONVEYOR. THE DISCHARGE SHALL BE AS CLOSE AS POSSIBLE TO ITS FINAL POSITION AND SUCH THAT THE DISCHARGED CONCRETE IS INCORPORATED INTO PREVIOUSLY PLACED PLASTIC CONCRETE. DISCHARGE OF INDIVIDUAL LOADS OF PERVIOUS CONCRETE SHALL BE COMPLETED AS QUICKLY AS POSSIBLE: WITHIN ONE HOUR FROM THE TIME OF INTRODUCTION OF CEMENT TO WATER OR 90 MINUTES WHEN A HYDRATION STABILIZER IS

ADDITIONAL WATER ADDITIONS: THROUGHOUT THE PLACEMENT. THE CONTRACTOR SHALL VISUALLY MONITOR THE APPEARANCE OF THE CONCRETE. JOB SITE WATER ADDITION DURING PLACEMENT IS ALLOWED TO MAINTAIN THE REQUIRED MIX CONSISTENCY. ADDED WATER SHALL BE THOROUGHLY MIXED INTO THE CONCRETE.

IMMEDIATELY AFTER SCREEDING. IF THE PERVIOUS CONCRETE IS SUSCEPTIBLE TO PLASTIC SHRINKAGE ACCORDING TO ACI 305, THE SURFACE SHALL BE KEPT MOIST WITH ONE OR MORE OF THE FOLLOWING ACTIONS: AN EXTERNAL FOGGING DEVICE, OR APPLICATION OF A SPRAY APPLIED CURING COMPOUND, OR APPLICATION OF A SACRIFICIAL EVAPORATION COMPOUND.

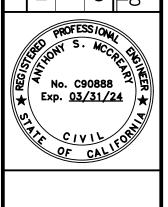
#### 3. PLACING AND FINISHING:

A. THE CONTRACTOR SHALL PROVIDE EQUIPMENT TO PLACE AND FINISH THE PERVIOUS CONCRETE. INTERNAL VIBRATION SHALL NOT BE PERMITTED. PLACEMENT PROCEDURES SHALL UTILIZE MECHANICAL SCREED EQUIPMENT SUCH AS A MOTORIZED ROLLER SCREED OR A VIBRATORY TRUSS SCREED. HAND SCREEDS ARE PROHIBITED EXCEPT IN CONFINED AND SMALL AREAS. HAND COMPACTION TOOLS ARE ALSO USED IN SUCH AREAS TO COMPACT THE PERVIOUS CONCRETE TO PROPER DENSITY AND ELEVATION.

MOTORIZED ROLLER SCREED CONSTRUCTION: PERVIOUS CONCRETE SHALL BE MANUALLY COMPACTED AT THE LOWER FORM EDGES PRIOR TO SCREED OPERATION. THE MOTORIZED ROLLER SCREED IS SUPPORTED BY EDGE FORMS AND POWERED TO SPIN COUNTER TO THE DIRECTION OF TRAVEL. THE COUNTER-ROTATING TUBE IS DRAWN OVER THE SLAB SURFACE TO STRIKE THE SURFACE ELEVATION AND COMPRESS THE SURFACE MATERIALS. SCREED ROLLERS SHALL BE MINIMUM 6 INCHES IN DIAMETER AND CAPABLE OF CONFIGURATION TO A WEIGHT OF 37 POUNDS PER LINEAR FOOT. STRIKE-OFF IS FOLLOWED BY CROSS ROLLER TOOLING TO APPLY MILD COMPRESSION AND UNIFORMITY TO THE SURFACE MATERIALS. THE PERVIOUS CONCRETE PAVEMENT SHALL BE COMPACTED TO THE REQUIRED CROSS-SECTION AND SHALL NOT DEVIATE MORE THAN +/- 3/8 INCH IN 10 FEET FROM PROFILE GRADE.

C. VIBRATORY TRUSS SCREED CONSTRUCTION. PERVIOUS CONCRETE SHALL BE MANUALLY COMPACTED AT THE LOWER FORM EDGES PRIOR TO SCREED OPERATION. THE VIBRATORY SCREED IS SUPPORTED BY EDGE FORMS AND ½ INCH RISER STRIPS TO ELEVATE THE SCREED ½ INCH ABOVE FINISHED ELEVATION. THE VIBRATORY TRUSS SCREED IS DRAWN OVER THE SLAB AT LOW INTENSITY VIBRATION WITH CARE TAKEN TO STOP VIBRATION IF TRAVEL MOVEMENT IS STOPPED. RISER STRIPS ARE REMOVED AFTER SCREED OPERATION IS COMPLETE AND A FULL WIDTH STATIC ROLLER IS DEPLOYED ON THE SLAB SURFACE TO COMPRESS THE PERVIOUS CONCRETE DOWN TO FINISHED ELEVATION. THE STATIC ROLLER SHALL EXERT A PRESSURE OF 10 PSI PER FOOT ON THE PLASTIC PERVIOUS CONCRETE. THE PERVIOUS CONCRETE PAVEMENT SHALL BE COMPACTED TO THE REQUIRED CROSS-SECTION AND SHALL NOT DEVIATE MORE THAN +/- 3/8 INCH IN 10 FEET FROM PROFILE GRADE. CARE SHALL BE TAKEN TO NOT SEAL THE PERVIOUS CONCRETE SURFACE DUE TO OVER VIBRATION OR EXCESSIVE ROLLING.

D. CROSS-ROLLING AND EDGING: IMMEDIATELY AFTER SCREEDING THE FINISHED SURFACE SHALL BE CROSS-ROLLED TO REMOVE ANY ROLLING AND COMPACTION MARKS. THE LONGITUDINAL EDGES ADJACENT TO THE FORMS SHALL BE MANUALLY COMPACTED WITH A HAND TAMP AND THEN EDGED WITH A 1/2" RADIUS EDGER. NO FURTHER FINISHING SHALL BE PERFORMED ON THE CONCRETE.





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#### **PROJECT GENERAL NOTES:**

- THE EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN ON THESE PLANS IS FROM A TOPOGRAPHIC SURVEY PLAN REFERENCED ON SHEET C1. CONTRACTOR SHALL VERIFY EXISTING CONDITIONS. ESPECIALLY POINTS OF CONNECTION TO EXISTING FACILITIES FOR ALL IMPROVEMENTS PRIOR TO CONSTRUCTION OF APPLICABLE FACILITIES. CONTRACTOR SHALL NOTIFY CWE IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS DISCOVERED.
- THE CONTRACTOR AGREES THAT, IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY. THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXEMPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE ENGINEER.
- EXCAVATIONS SHALL BE ADEQUATELY SHORED, BRACED AND SHEETED SO THAT THE EARTH WILL NOT SLIDE OR SETTLE AND SO THAT ALL EXISTING IMPROVEMENTS OF ANY KIND WILL BE FULLY PROTECTED FROM DAMAGE. ANY DAMAGE RESULTING FROM A LACK OF ADEQUATE SHORING, BRACING AND SHEETING, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND HE SHALL AFFECT NECESSARY REPAIRS OR RECONSTRUCTION AT HIS OWN EXPENSE. WHERE THE EXCAVATION FOR A CONDUIT TRENCH, AND/OR STRUCTURE IS FIVE FEET OR MORE IN DEPTH. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHEETING, SHORING AND BRACING OR EQUIVALENT METHOD, FOR THE PROTECTION OF LIFE, OR LIMB, WHICH SHALL CONFORM TO THE APPLICABLE CONSTRUCTION SAFETY ORDERS OF THE DIVISION OF INDUSTRIAL SAFETY OF THE STATE OF CALIFORNIA. THE CONTRACTOR SHALL ALWAYS COMPLY WITH OSHA REQUIREMENTS.
- 4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN ANY ADDITIONAL PERMITS NECESSARY TO PERFORM THE WORK SHOWN ON THESE PLANS FROM THE APPROPRIATE AGENCIES.
- FORMATION OF AN AIRBORNE DUST NUISANCE AND SHALL BE RESPONSIBLE FOR ANY DAMAGE RESULTING FROM HIS FAILURE TO DO SO.
- THE CONTRACTOR SHALL PROVIDE FOR INGRESS AND EGRESS FOR PRIVATE PROPERTY ADJACENT TO WORK THROUGHOUT THE PERIOD OF CONSTRUCTION. TRAFFIC MOVEMENT SHALL BE MAINTAINED AT ALL TIMES. IF TRAFFIC CONTROL PROCEDURES ARE DEEMED NECESSARY, THE CONTRACTOR SHALL CONFORM TO THE "WATCH HANDBOOK" AND CALTRANS TRAFFIC MANUAL. CITY/COUNTY ENGINEERS APPROVAL IS REQUIRED PRIOR TO ANY DETOURING, DISRUPTION, OR INTERRUPTION OF THE NORMAL TRAFFIC FLOW
- THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR FURNISHING, INSTALLING, AND MAINTAINING ALL WARNING SIGNS AND DEVICES NECESSARY TO SAFEGUARD THE GENERAL PUBLIC AND THE WORK, AND PROVIDE FOR THE PROPER AND SAFE ROUTING OF ALL VEHICULAR AND PEDESTRIAN TRAFFIC DURING THE PERFORMANCE OF THE WORK. THE REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO THE NORMAL WORKING HOURS.
- 8. THE CONTRACTOR SHALL POST EMERGENCY TELEPHONE NUMBERS FOR POLICE, FIRE, AMBULANCE, AND THOSE AGENCIES RESPONSIBLE FOR MAINTENANCE OF UTILITIES IN THE VICINITY OF THE JOBSITE.
- 9. ANY EXTRA CONSTRUCTION STAKING NECESSITATED SOLELY BY THE CONTRACTOR'S NEGLIGENCE WILL BE CHARGED TO THE CONTRACTOR ON A TIME AND MATERIAL BASIS, AND PAID FOR BY THE CONTRACTOR.
- 10. STATIONING HEREON IS ALONG STREET CENTERLINE UNLESS OTHERWISE
- 11. ALL RETURN RADII AND CURB DATA ARE TO BOTTOM FACE OF CURB.
- 12. ALL QUANTITIES AND PAY ITEMS ARE AND WILL BE BASED ON HORIZONTAL MEASUREMENTS.
- 13. LENGTHS OF SANITARY SEWERS AND STORM DRAINS ARE HORIZONTAL DISTANCES FROM CENTER TO CENTER OF STRUCTURES, ROUNDED OFF TO THE NEAREST FOOT.
- 14. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED ON FACILITIES IDENTIFIED BY THE TOPOGRAPHIC SURVEY AND UPON RECORD INFORMATION AVAILABLE TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES AT LEAST 2 WORKING DAYS IN ADVANCE OF CONSTRUCTION TO FIELD LOCATE UTILITIES. CALL UNDERGROUND SERVICE ALERT (U.S.A.), AT 800-642-2444. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THOSE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF CONTRACTOR'S FAILURE TO VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED AND MERGED IN THE CONTRACT UNIT PRICE.
- 15. ALL EXISTING UTILITIES AND IMPROVEMENTS THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED TO THE SATISFACTION OF THE APPLICABLE AGENCY ENGINEER, AT THE CONTRACTOR'S SOLE EXPENSE.
- 16. ANY RELOCATION OF PUBLIC UTILITIES SHALL BE CONDUCTED IN ACCORDANCE WITH ANY AND ALL REQUIREMENTS OF THE UTILITY COMPANY INCLUDING FEES, BONDS, PERMITS AND WORKING CONDITIONS, ETC. THIS WORK SHALL BE DONE AT NO EXPENSE TO THE UTILITY COMPANY. THE OWNER SHALL PAY THE COST OF ALL SUCH RELOCATION WORK INCLUDING FEES, BONDS, PERMITS, ETC.
- 17. IF ARCHAEOLOGICAL MATERIALS ARE UNCOVERED DURING GRADING. TRENCHING OR OTHER EXCAVATION, EARTHWORK WITHIN 100 FEET OF THESE MATERIALS SHALL BE STOPPED UNTIL A PROFESSIONAL ARCHAEOLOGIST WHO THE SOCIETY OF PROFESSIONAL ARCHAEOLOGY (SOPA) HAS HAD AN OPPORTUNITY TO EVALUATE THE SIGNIFICANCE OF THE FIND AND SUGGEST APPROPRIATE MITIGATION MEASURES, IF THEY ARE DEEMED NECESSARY.
- 18. CWE DOES NOT SPECIFY NOR RECOMMEND THE USE OR INSTALLATION OF ANY MATERIAL OR EQUIPMENT WHICH IS MADE FROM, OR WHICH CONTAINS ASBESTOS FOR USE IN THE CONSTRUCTION OF THESE IMPROVEMENTS. ANY PARTY INSTALLING OR USING SUCH MATERIAL OR EQUIPMENT SHALL BE SOLELY RESPONSIBLE FOR ALL INJURIES, DAMAGE OR LIABILITIES, OF ANY KIND, CAUSED BY THE USE OF SUCH MATERIALS OR EQUIPMENT. THE PROVISIONS OF THIS NOTE SHALL APPLY UNLESS THEY ARE EXPRESSLY WAIVED IN WRITING BY OWNER AND CWE.

#### PROJECT GENERAL NOTES (CONT):

- 19. SHOULD IT APPEAR THAT THE WORK TO BE DONE OR ANY MATTER RELATIVE THERETO IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS. THE CONTRACTOR SHALL CONTACT CWE. AT (916) 772-7800 FOR SUCH FURTHER EXPLANATIONS AS MAY BE NECESSARY.
- 20. CONTRACTOR SHALL PROVIDE PROTECTIVE FENCING AROUND EXISTING TREES TO REMAIN.
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL REPORT REFERENCED ON SHEET C1.
- 22. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL REGULATIONS, LAWS AND ORDINANCES. INCLUDING ALLOWABLE CONSTRUCTION HOURS. CONSTRUCTION NOISE NEAR RESIDENCES, DUST CONTROL AND EROSION CONTROL.
- 23. THE CONTRACTOR SHALL BE RESPONSIBLE TO REVIEW ALL CONTRACT DOCUMENTS INCLUDING ALL PLANS AND SPECIFICATIONS PREPARED BY OTHER DISCIPLINES FOR THIS PROJECT PRIOR TO THE START OF CONSTRUCTION. SUCH REVIEW SHALL BE CONTINUOUS THROUGHOUT THE CONSTRUCTION PROCESS. ANYTIME THAT A CONFLICT BETWEEN SUCH PLANS AND SPECIFICATIONS IS IDENTIFIED, THE CONTRACTOR SHALL CONTACT CWE AND OTHER APPLICABLE DISCIPLINES TO REQUEST A VERIFICATION OF THE DESIGN REQUIREMENTS AND A RESOLUTION TO SUCH CONFLICTS PRIOR TO CONSTRUCTION OF SUCH FACILITIES.
- 24. BEFORE EXECUTION OF ANY WORK, THE CONTRACTOR SHALL EXAMINE ACTUAL JOB CONDITIONS AND REPORT TO CWE AND OWNER ANY ERROR. OMISSION, OR DISCREPANCY AFFECTING WORK. UPON COMMENCING CONSTRUCTION THE CONTRACT SHALL BE RESPONSIBLE FOR REPORTING ANY AND ALL CONFLICTS, ERRORS, OMISSIONS, ETC. TO CWE IMMEDIATELY UPON DISCOVERY. IF SO DIRECTED BY THE ENGINEER OR CITY/COUNTY ENGINEER, THE CONTRACTOR SHALL STOP WORK UNTIL MITIGATION CAN BE MADE. ANY COST INCURRED RESULTING FROM THE CONTRACTOR'S FAILURE TO STOP WORK AS DIRECTED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 5. THE CONTRACTOR SHALL TAKE EFFECTIVE ACTION TO PREVENT THE 25. THE CONTRACTOR SHALL PROVIDE THE CIVIL ENGINEER "AS BUILT" DRAWINGS AT PROJECT COMPLETION. THE CONTRACTOR SHALL PROVIDE ONE COMPLETE ACCURATE SET OF RECORD CHANGES. THE CHANGES SHALL BE PLACED ON A CLEAN SET OF PROJECT DRAWINGS IN RED, AND GIVEN TO THE ENGINEER AT JOB COMPLETION.
  - THE ENGINEERS ESTIMATE OF QUANTITIES IS FOR DESIGN REFERENCE ONLY. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING THE QUANTITIES FOR BID AND FIELD INSTALLATION. ALL CALCULATED EARTHWORK QUANTITIES FURNISHED FOR THIS PROJECT ARE APPROXIMATE. THE QUANTITIES HEREIN WERE CALCULATED TO FINISHED ROUGH GRADE AND EXISTING GROUND. THE ACTUAL MATERIALS MOVED ARE VARIABLE DEPENDENT UPON THE CONTRACTOR'S METHOD OF OPERATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE FOR ANY EXCESS OR SHORTAGE OF EARTH MATERIAL FOR THIS PROJECT AND NO ADDITIONAL PAYMENT WILL BE MADE.
  - THESE DRAWINGS ARE FOR THIS SPECIFIC PROJECT AND NO OTHER USE IS AUTHORIZED. CWE DISCLAIMS ALL RESPONSIBILITY FOR CONSTRUCTION BEYOND WHAT IS SPECIFICALLY DESIGNED OR DETAILED HEREIN.
  - 28. THE CONTRACTOR SHALL TAKE CARE TO PROTECT THE EXISTING SITE AND ADJACENT IMPROVEMENTS FROM DAMAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE RESULTING FROM THE CONSTRUCTION AND SHALL REPAIR OR MAKE REPLACEMENT TO CURRENT CITY/COUNTY STANDARDS. ALL SUCH WORK SHALL BE AT THE CONTRACTOR'S OWN EXPENSE. THE CONTRACTOR SHALL PERFORM THESE REPAIRS AND REMOVE ALL TRASH AND CONSTRUCTION DEBRIS AS DIRECTED BY CWE OR THE CITY/COUNTY ENGINEER.
  - 29. THE AGENCY, CITY/COUNTY ENGINEER, OWNER OR CWE MAY REQUIRE THE CONTRACTOR TO UNCOVER ANY IMPROVEMENTS THAT HAVE BEEN COMPLETED WITHOUT PROPER INSPECTION AND/OR APPROVAL. IF THE INSTALLATION IS FOUND NOT TO MEET APPLICABLE STANDARDS OR PREVIOUSLY APPROVED ALTERNATIVES SHOWN ON THE PLANS, THE CONTRACTOR MAY BE REQUIRED TO REMOVE AND REPLACE SUCH IMPROVEMENTS AT HIS OWN EXPENSE.

#### GENERAL PAVING NOTES:

- ENGINEER AT THE TIME OF DESIGN AND NO GUARANTEE IS MADE AS TO THE 1. CONSTRUCTION OF ALL PAVING SHALL BE CONSISTENT WITH REQUIREMENTS OUTLINED IN THE PROJECT GEOTECHNICAL ENGINEERING REPORT AND ALL ADDENDA.
  - PROPER PREPARATION OF THE SUBGRADE IS ESSENTIAL FOR OPTIMUM LONG-TERM PERFORMANCE OF THE CONCRETE PAVING. WHEN SUBGRADE IS SHAPED. LARGE EMBEDDED OBJECTS SHALL BE REMOVED AND THE TOP 12-INCHES OF SOIL SHALL BE THOROUGHLY MOISTURE CONDITIONED TO THE OPTIMUM MOISTURE CONTENT AND UNIFORMLY COMPACTED TO 95% RELATIVE COMPACTION FOR ALL STRUCTURAL SECTIONS SPECIFIED ON THESE PLANS. ALL UNSUITABLE SOIL SHALL BE REMOVED AND REPLACED WITH AN ACCEPTABLE ENGINEERED FILL.
  - 3. CLASS 2 AGGREGATE BASE SHALL BE UNIFORM IN DEPTH AND COMPACTED TO 95% RELATIVE COMPACTION.
  - 4. ACCEPTABLE TOLERANCES FOR FINE GRADING OF THE SUBGRADE AND AGGREGATE BASE ARE NO MORE THAN 1/4-INCH ABOVE OR 1/2-INCH BELOW THE DESIGN GRADE.
  - 5. PORTLAND CEMENT CONCRETE (PCC): • MINIMUM COMPRESSIVE STRENGTH: 3,500 PSI IN 28 DAYS
  - SLUMP: 3" TO 4"

POSITION AND BE CONSOLIDATED.

- AIR ENTRAINMENT: 5% TO 6%
- AGGREGATE: MAXIMUM 3/4 INCH CRUSHED (ROUGH-TEXTURED, ANGULAR-SHAPED)
- ADMIXTURES CONTAINING CHLORIDES AND SULFIDES ARE NOT ACCEPTABLE.
- IS CERTIFIED BY THE SOCIETY OF CALIFORNIA ARCHAEOLOGY (SCA) AND/OR 6. REINFORCING STEEL, IF SPECIFIED ON THE PLANS, SHALL BE CHAIRED AND LOCATED MID-SLAB DEPTH. REINFORCEMENT AND SPACING SHALL BE AS SPECIFIED ON THE PAVING PLAN. DEFORMED REINFORCEMENT SHALL BE GRADE 60 STEEL.
  - 7. HEAVY DUTY TRAFFIC RATED PCC SLABS SHALL BE CONSTRUCTED WITH THICKENED EDGES, AT LEAST TWICE THE SPECIFIED SLAB THICKNESS AND TAPERED 4-FEET WIDE MEASURED HORIZONTALLY FROM THE PERIMETER OF THE SLAB. SEE DETAILS.
  - 8. FORMS SHALL BE STRAIGHT, FREE FROM WARPING, AND STRONG ENOUGH TO RESIST THE LATERAL PRESSURE OF THE CONCRETE. A FORM RELEASE AGENT SHALL BE APPLIED TO EASE STRIPPING.
  - 9. CONCRETE SHALL BE PLACED CONTINUOUSLY AS CLOSE AS POSSIBLE TO ITS FINAL

#### **GENERAL PAVING NOTES CONT.:**

- 10.IMMEDIATELY FOLLOWING STRIKE-OFF, THE SURFACE SHALL BE LEVELED WITH A BULLFLOAT OR A SCAPING STRAIGHTEDGE. THE SURFACE SHALL NOT BE FINISHED MORE THAN NECESSARY TO REMOVE IRREGULARITIES. ALL EDGES, TOOLED JOINTS, AND ISOLATION JOINTS SHALL BE ROUNDED TO THE SPECIFIED RADIUS WITH APPROPRIATE TOOLS. THE USE OF HAND OR POWER FLOATS AND TROWELS IS NOT NECESSARY AND IS NOT RECOMMENDED.
- 11. AS SOON AS THE FINISHED CONCRETE HAS SET SUFFICIENTLY TO MAINTAIN A TEXTURE AND NO BLEED WATER REMAINS ON THE SURFACE, THE SURFACE CAN BE DRAGGED WITH A SHORT LENGTH OF DAMP BURLAP OR OTHER MATERIAL SUCH AS SYNTHETIC TURF CARPETING. AS AN ALTERNATIVE, THE SURFACE CAN BE BROOMED TO DEVELOP A SKID-RESISTANCE SURFACE AND UNIFORM APPEARANCE. SEE ARCHITECTURAL PLANS FOR ADDITIONAL SPECIAL CONCRETE FINISH REQUIREMENTS AND JOINT PATTERN REQUIREMENTS. UNLESS OTHERWISE SPECIFIED ON THE ARCHITECT'S PLANS. ALL CONCRETE SHALL HAVE A LIGHT BROOM FINISH.
- 12.THE CONCRETE SHALL BE PROTECTED FROM DAMAGE DURING THE CURING PROCESS.

#### 13 CURING:

- COLD TEMPERATURES CONCRETE SHALL BE PROTECTED FROM FREEZING FOR AT LEAST 5-DAYS AFTER PLACEMENT. FOR FORECAST TEMPERATURES AROUND 32 TO 25 DEGREES FAHRENHEIT THE CONCRETE SHALL BE COVERED WITH POLYETHYLENE SHEETING. FOR COLDER TEMPERATURES, TWO SHEETS OF POLYETHYLENE SEPARATED BY 12-INCHES OF STRAW OR A SIMILAR DEGREE OF INSULATION.
- WARM TEMPERATURES WET CURING OR LIQUID MEMBRANE-FORMING CURING COMPOUND SHALL BE INITIATED IMMEDIATELY AFTER FINISHING IN SUNNY, WINDY, AND WARM CONDITIONS.
- CONTRACTOR SHALL HAVE ENOUGH PLASTIC SHEETING AVAILABLE ON THE PROJECT SITE TO COMPLETELY COVER ANY SURFACES THAT MAY BE DAMAGED IN THE EVENT OF RAIN. THERE SHALL ALSO BE ADEQUATE WEIGHTS AVAILABLE TO KEEP THE PLASTIC SHEETING FROM BLOWING AWAY. FOR CONCRETE ON A SLOPE, DIVERSION SHALL BE PROVIDED FOR POTENTIAL RUN-ON TO PROTECT FROM WATER ABOVE WASHING ACROSS THE SURFACE.
- 14. CONCRETE JOINTS:

#### ISOLATION / EXPANSION JOINTS:

CONSTRUCT WHERE PCC MEETS FIXED FOUNDATIONS SUCH AS COLUMNS, BUILDING, MACHINERY FOUNDATIONS, WALLS, MANHOLES, DRAIN INLETS, UTILITY BOXES, ETC. ALL STRUCTURAL TUBING, PIPING, ETC. THAT EXTENDS UP THROUGH THE PCC SLAB SHALL BE WRAPPED WITH TWO LAYERS OF BUILDING PAPER OR ISOLATION JOINT MATERIAL TO BREAK BOND WITH PCC SLAB.

FOR PEDESTRIAN SIDEWALKS INSTALL AT 50-FOOT INTERVALS WITH APPLICABLE CONTRACTION CONTROL JOINTS BETWEEN.

EXPANSION JOINT MATERIAL =  $\frac{1}{2}$  - INCH FELT EXPANSION FIBER BOARD, OR APPROVED EQUIVALENT. FULL DEPTH OF PCC

WIDTH =  $\frac{3}{8}$  - INCH RADIUS =  $\frac{1}{4}$  - INCH

EXPANSION JOINT TO BE GREENSTREAK PAVING CAP SEAL OR APPROVED SEALANT IF SPECIFIED ON THE PLAN.

#### CONTRACTION CONTROL JOINTS HAND TOOLED OR SAWCUT

JOINT IS A SAW CUT, TROWEL CUT OR PLASTIC OR HARDBOARD PREFORMED STRIP MINIMUM OF ONE QUARTER THE DEPTH OF THE SLAB THICKNESS, MINIMUM 1 - INCH. THIS JOINT PROVIDES A WEAK PLANE IN THE SLAB WHERE CRACKING CAN OCCUR. MAXIMUM SPACING FOR 3/4 - INCH MAXIMUM AGGREGATE IS 2 x SLAB THICKNESS (DEPTH) IN FEET (I.E. A 4-INCH SLAB WITH  $\frac{3}{4}$ " MAXIMUM AGGREGATE SHALL HAVE A MAXIMUM SPACING OF 8-FEET). MAXIMUM SPACING FOR AGGREGATE GREATER THAN 3/4 - INCH SHALL BE 2.5 x SLAB THICKNESS IN FEET (I.E. A 4-INCH SLAB WITH AGGREGATE GREATER THAN 3" SHALL HAVE A MAXIMUM SPACING OF 10-FEET). IN NO CASE SHALL SPACING BE GREATER THAN 15 - FEET.

SLAB THICKNESS (INCHES)	JOINT DEPTH (INCHES)	JOINT TROWEL RADIUS (INCHES)	MAXIMUM JOINT SPACING (FEET) (EACH DIRECTION)
4	1	3/8	8
5	11/4	3/8	10
6	11/2	3/8	12
61/2	15/8	3/8	13
7	13/4	3/8	14
8	2	3/8	15

TOOLING OR EARLY-ENTRY DRY-CUT SAW JOINTS ARE DESIRED TO PLACE JOINTS BEFORE DEVELOPMENT OF TENSILE STRESSES THAT ARE GREAT ENOUGH TO INITIATE CRACKING, THUS INCREASING THE PROBABILITY OF CRACKS FORMING AT THE JOINT. CONTRACTION JOINT PATTERNS SHOULD DIVIDE PAVEMENTS INTO APPROXIMATELY SQUARES. THE LENGTH OF A PANEL SHOULD NOT BE MORE THAN 25% GREATER THAN ITS WIDTH.

#### CONSTRUCTION JOINTS

CONSTRUCTION JOINTS ARE STOPPING PLACES IN THE PROCESS OF CONSTRUCTION

- BUTT TYPE CONSTRUCTION JOINT WITH DOWEL SMOOTH STEEL DOWEL BAR COATED TO PREVENT BOND MINIMUM 1-FOOT LONG - 6-INCHES IN EACH SIDE OF JOINT EDGE EACH SIDE WITH 1/8-INCH RADIUS.
- DOWELS SHALL BE PLACED A MINIMUM OF 12-INCHES AWAY FROM ANY JOINT

PREVENT BOND OF CONCRETE AT JOINT OR EXTEND REBAR 1' MINIMUM BEYOND INITIAL SECTION TO TIE IN SECONDARY SECTION.

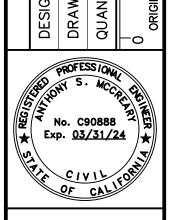
ALL NEW PCC PAVING SHALL BE TIED INTO EXISTING WITH 1/2-INCH STEEL DOWEL @ 12-INCHES O.C. EPOXY INTO EXISTING. DOWELS SHALL NOT BE WITHIN 12-INCHES OF EDGE OF CONCRETE OR JOINT INTERSECTION. EDGE NEW PCC WITH 1/8-INCH RADIUS AT JOINT.

SCORE JOINTS - HAND TROWELED FOR AESTHETICS ONLY.

15. ALL ISOLATION / EXPANSION JOINTS SHALL BE CAPPED WITH GREENSTREAK G-SEAL PAVING CAP SEAL PROFILE #610 OR #628 AS APPROPRIATE FOR USE.

#### GENERAL PAVING NOTES CONT.:

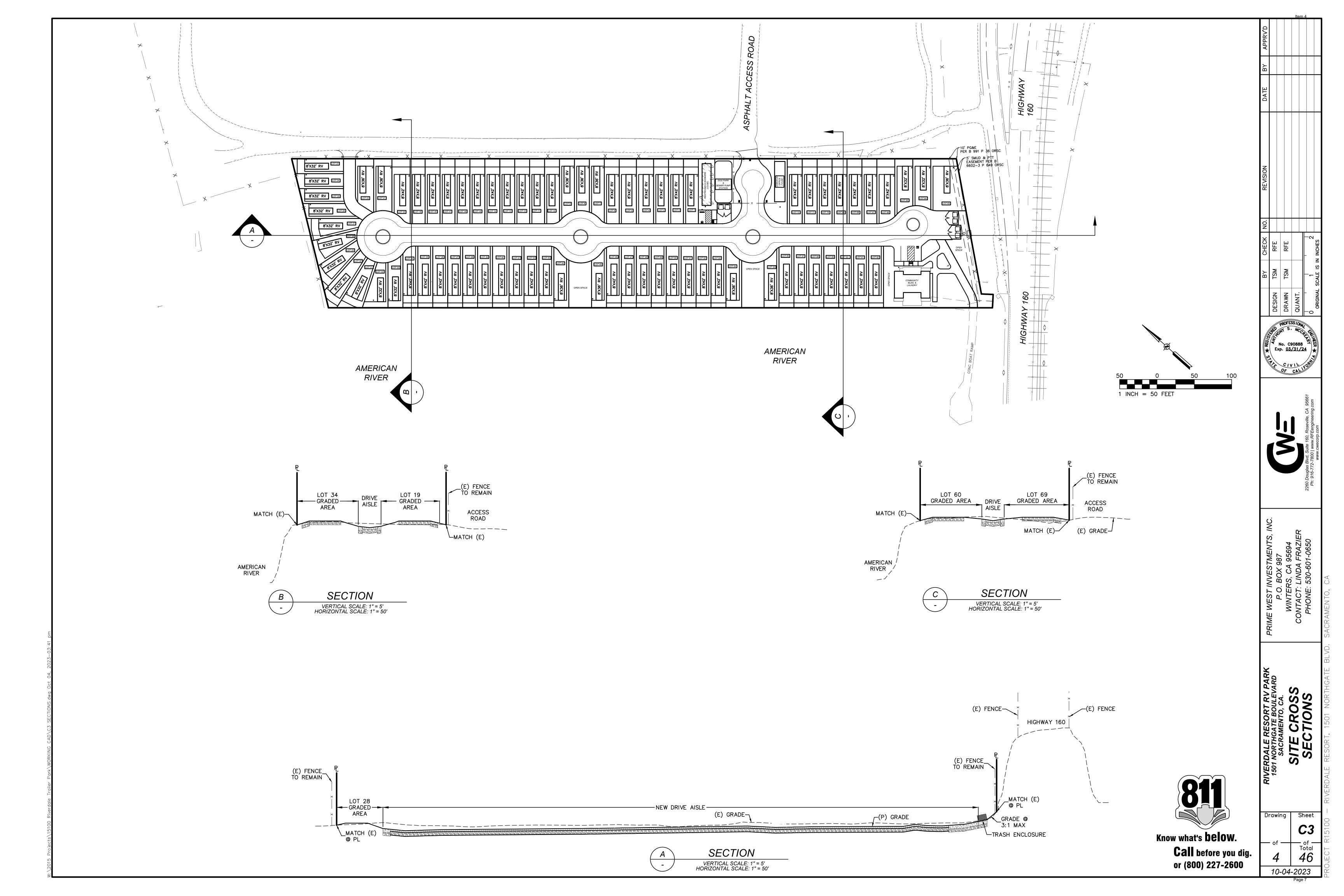
- 16. ALL CONTRACTION CONTROL AND CONSTRUCTION JOINTS SHALL BE SEALED WITH SIKAFLEX SELF-LEVELING SEALANT (COLOR TO MATCH CONCRETE) OR APPROVED EQUIVALENT. JOINT WALLS AND ALL SURFACES TO WHICH THE SEALING MATERIAL IS TO ADHERE SHALL BE SURFACE DRY FOR AT LEAST THREE HOURS PRIOR TO SEALING. THE SURFACE OF THE SEALING COMPOUND SHALL BE A MAXIMUM OF 1/8-INCH BELOW THE LEVEL OF THE PCC SLAB
- 17. CONTRACTOR SHALL TAKE PRECAUTIONS TO REDUCE RAPID LOSS OF MOISTURE FROM THE CONCRETE AND REDUCE PLASTIC SHRINKAGE CRACKING, PRIOR TO PLACEMENT, DURING PLACEMENT AND UP TO 5-DAYS AFTER PLACEMENT AND FINISHING OF THE CONCRETE.

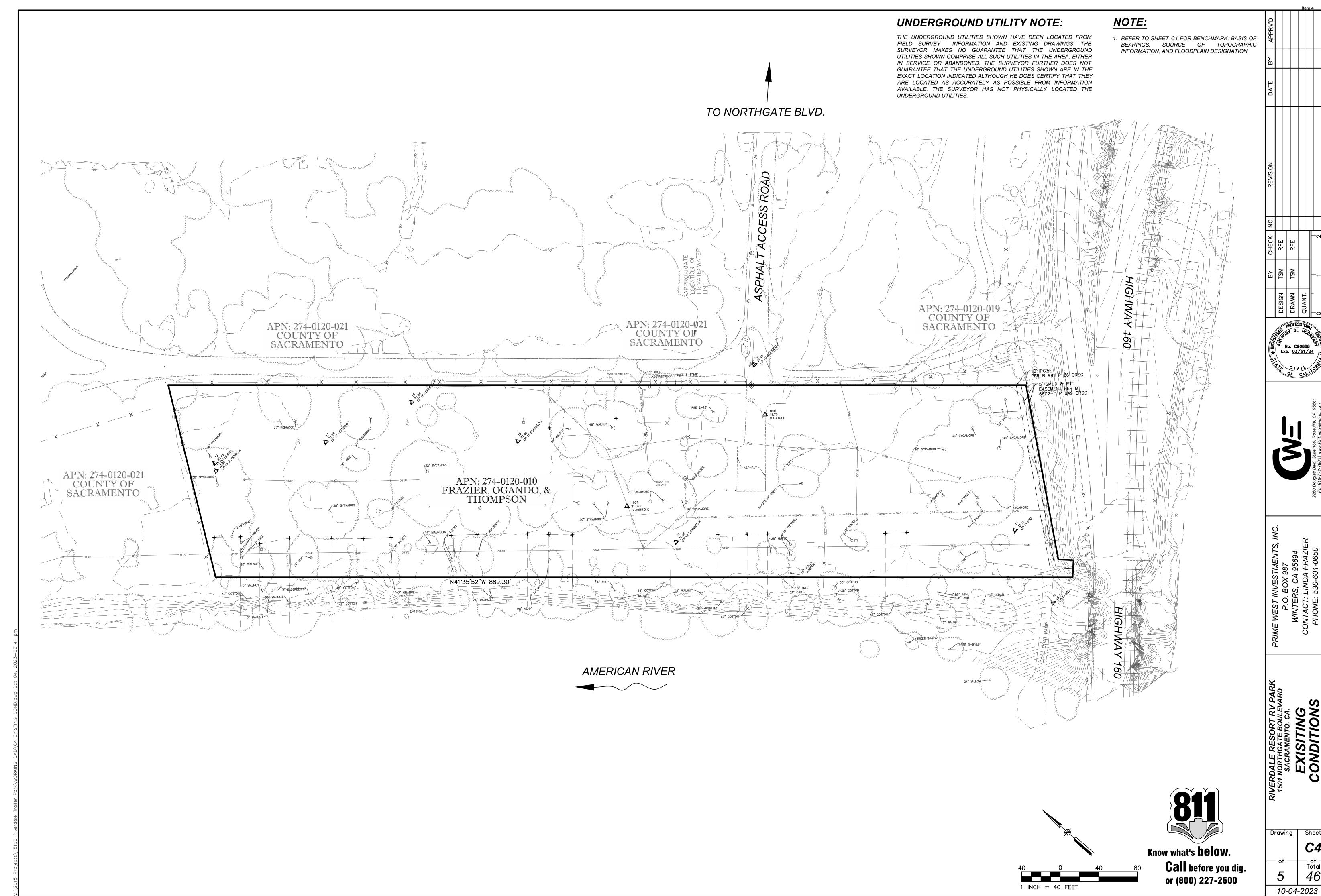


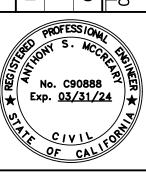


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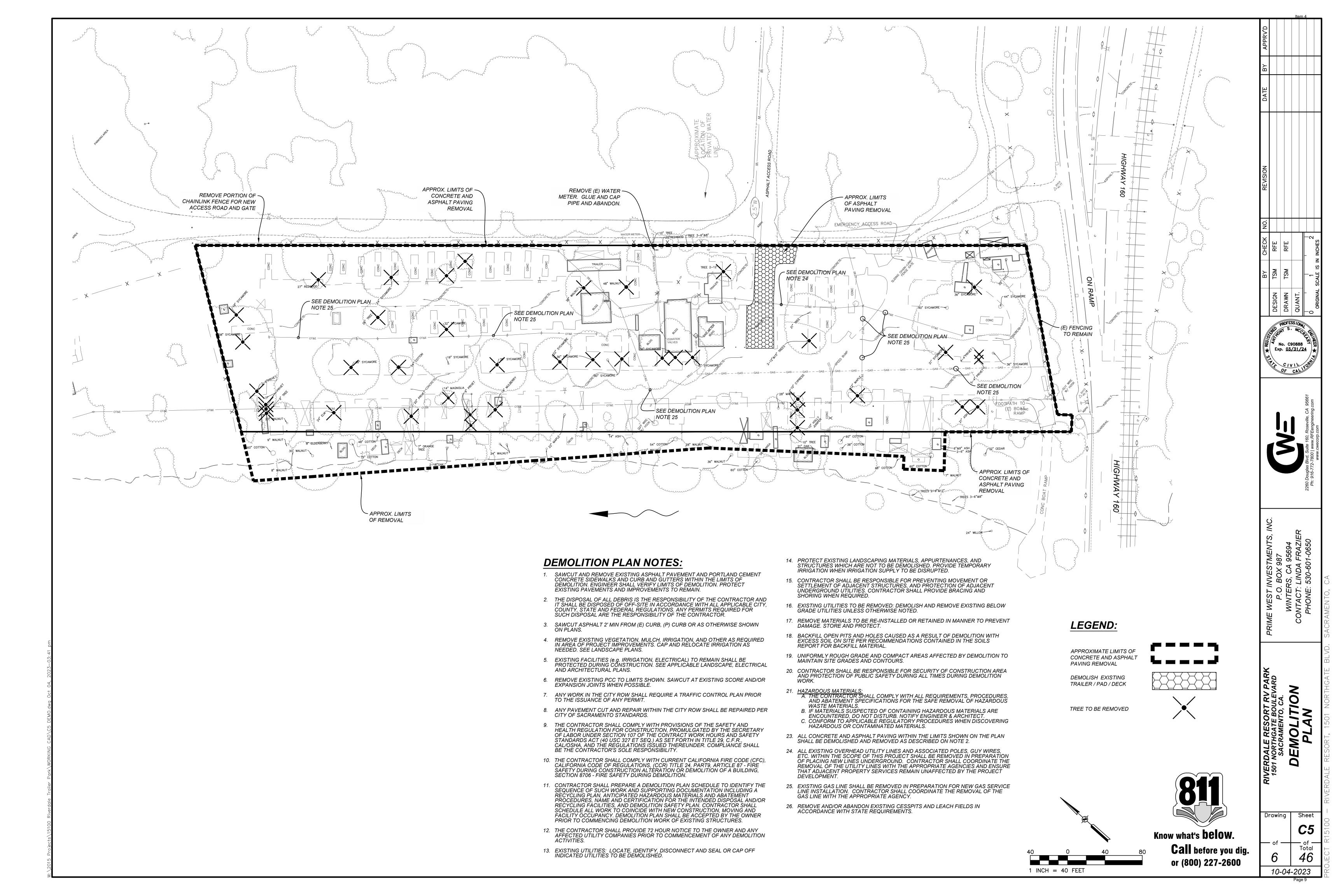


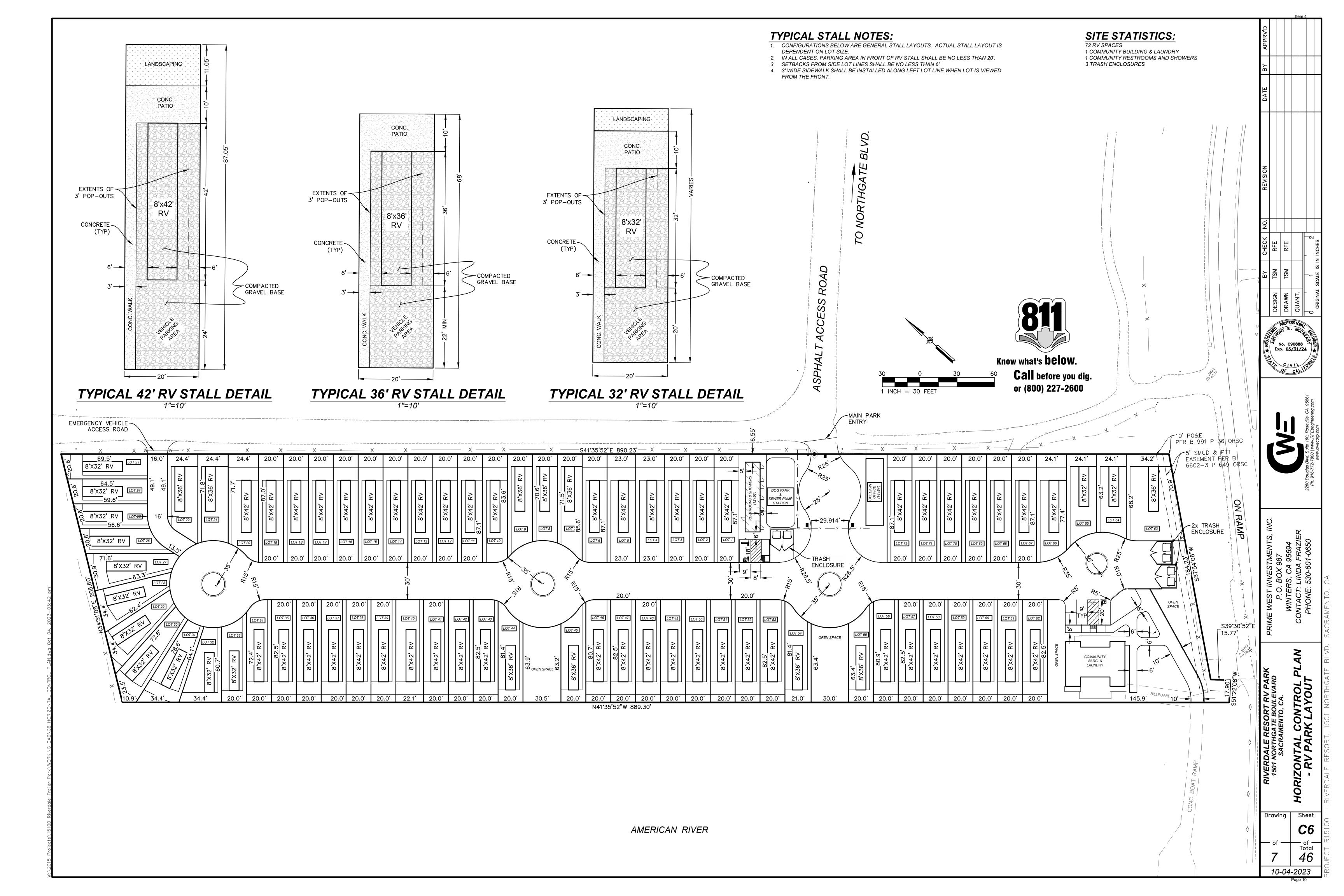


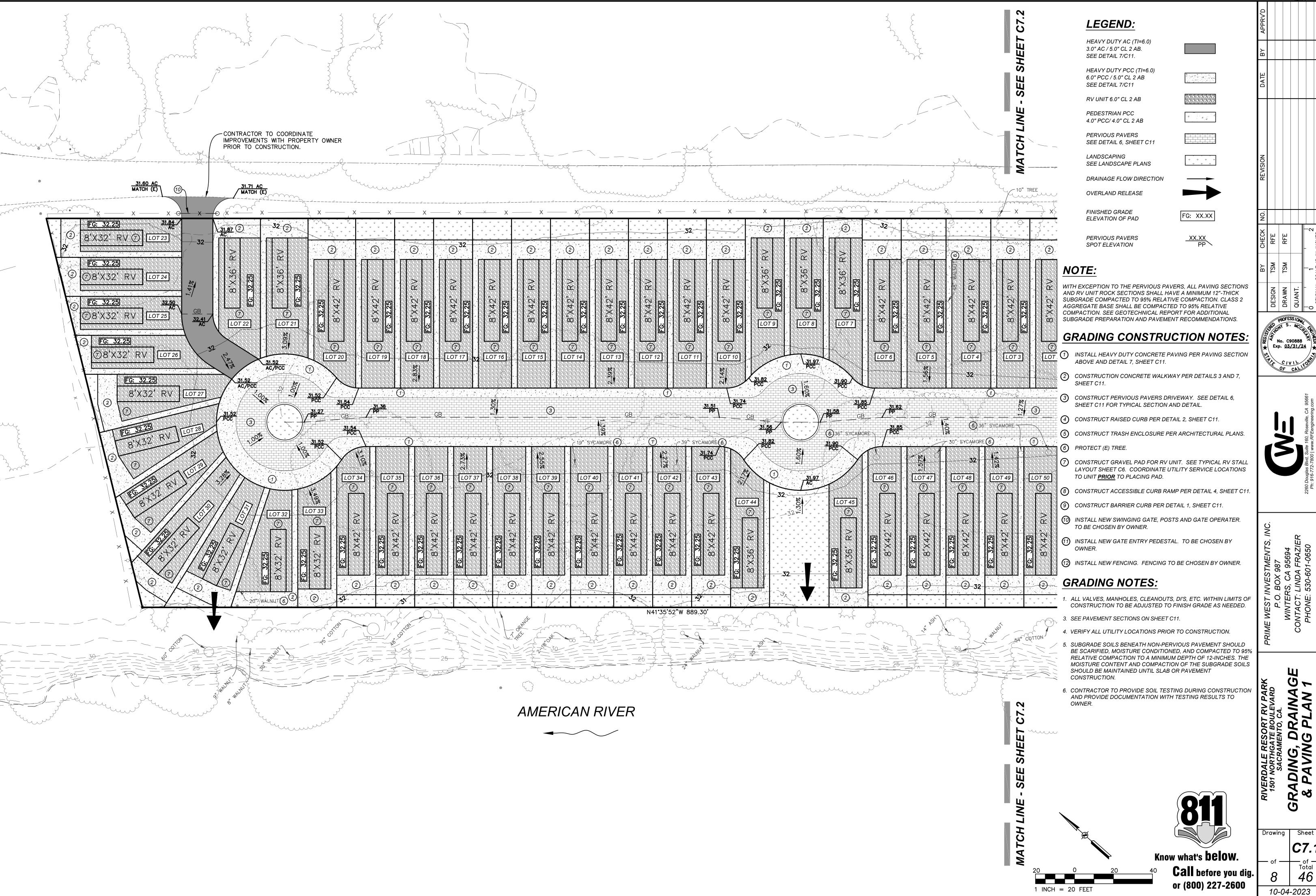




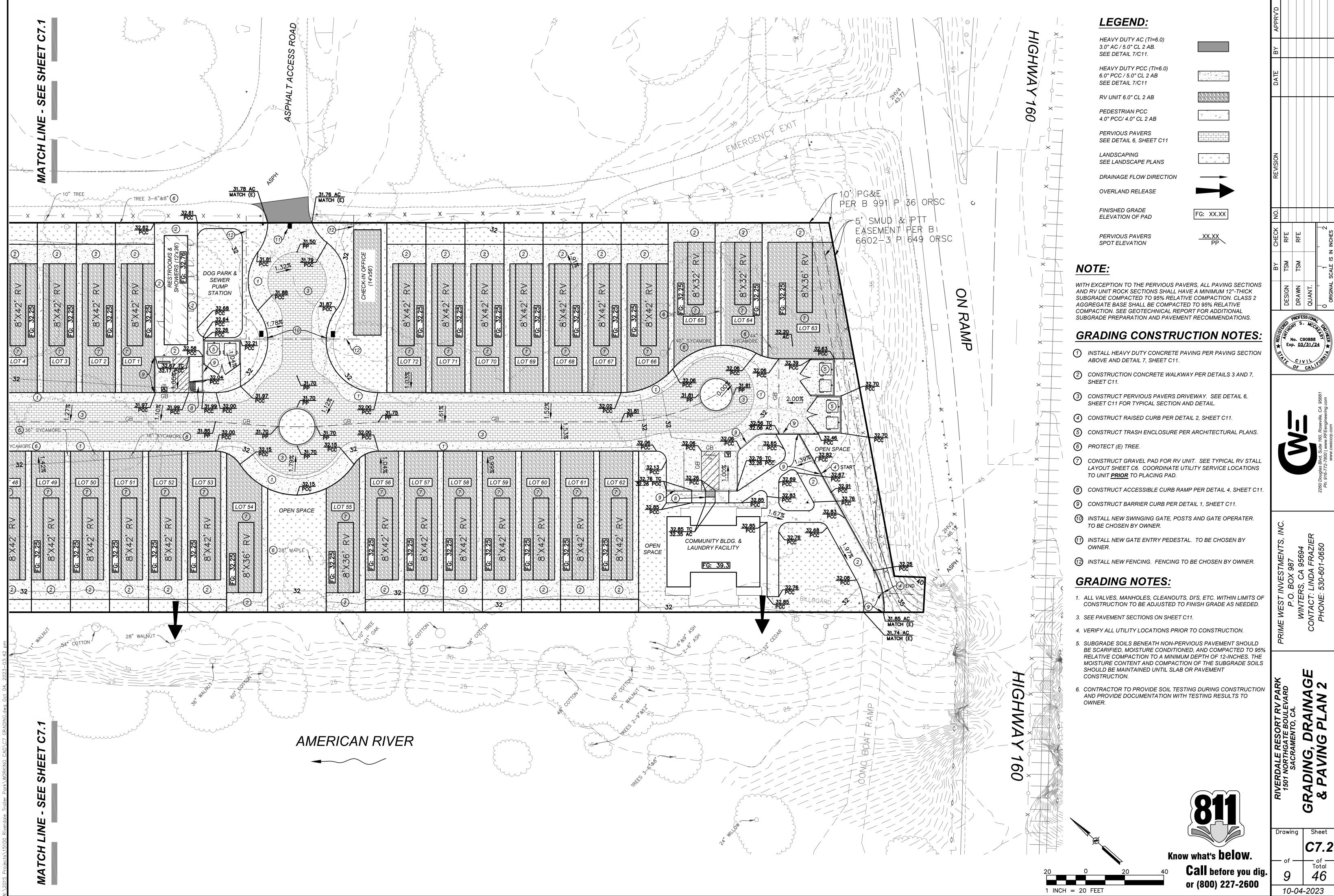
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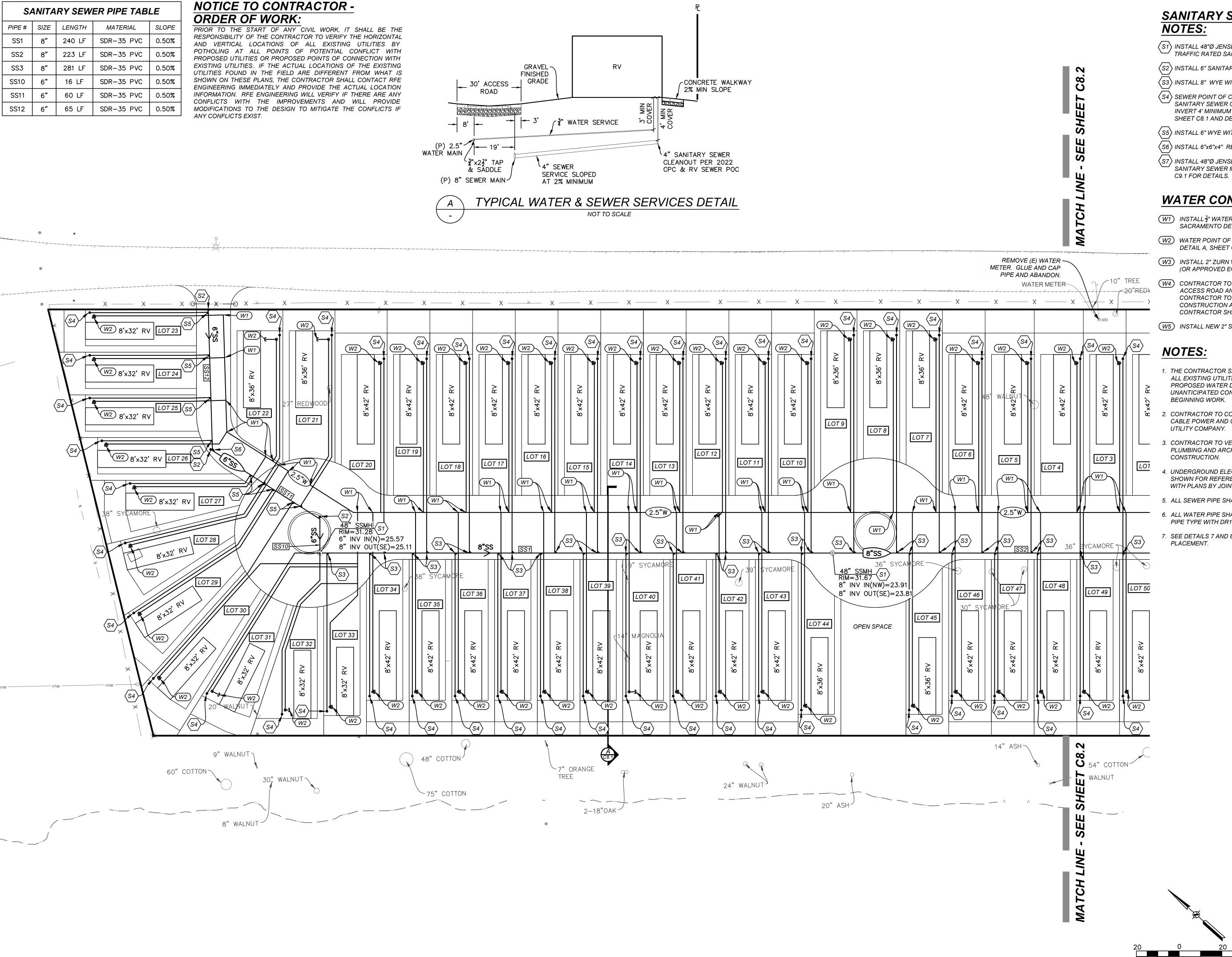






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SANITARY SEWER CONSTRUCTION

S1) INSTALL 48"Ø JENSEN PRECAST (OR APPROVED EQUAL) H-20 TRAFFIC RATED SANITARY SEWER MANHOLE.

(S2) INSTALL 6" SANITARY SEWER CLEANOUT PER 2022 CPC.

 $\langle S3 \rangle$  INSTALL 8" WYE WITH 90° ELBOW AND 8"x4" REDUCER.

 $\langle$  S4 $\rangle$  SEWER POINT OF CONNECTION TO RV OR BUILDING. INSTALL 4" SANITARY SEWER CLEANOUT PER 2022 CPC. INSTALL CLEANOUT INVERT 4' MINIMUM DEEP FROM FINISHED GRADE. SEE DETAIL A, SHEET C8.1 AND DETAILS 4 AND 6, SHEET C12.

(S5) INSTALL 6" WYE WITH 90° ELBOW AND 6"x4" REDUCER.

 $\langle S6 \rangle$  INSTALL 6"x6"x4" REDUCING WYE WITH 45° ELBOW.

 $\langle S7 \rangle$  INSTALL 48"Ø JENSEN PRECAST (OR APPROVED EQUAL) SANITARY SEWER MANHOLE AND PUMP STATION. SEE SHEET

#### **WATER CONSTRUCTION NOTES:**

(W1) INSTALL \(\frac{3}{4}\)" WATER SERVICE PER MODIFIED CITY OF SACRAMENTO DETAIL W-405. SEE DETAIL ON SHEET C13.

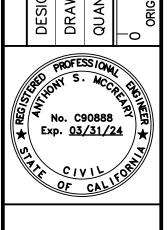
(W2) WATER POINT OF CONNECTION TO RV OR BUILDING. SEE DETAIL A, SHEET C8.1 AND DETAILS 4 AND 5, SHEET C12.

(W3) INSTALL 2" ZURN WILKINS MODEL 975XL BACKFLOW PREVENTOR (OR APPROVED EQUAL).

(W4) CONTRACTOR TO VERIFY LOCATION OF (E) 2.5" WATER LINE IN ACCESS ROAD AND CONNECT INTO (E) WATER SERVICE LINE. CONTRACTOR TO VERIFY SIZE OF LINE IS 2.5" PRIOR TO ANY CONSTRUCTION ACTIVITIES. IF SIZE IS DIFFERENT. CONTRACTOR SHALL NOTIFY CWE.

(W5) INSTALL NEW 2" SENSUS OMNI R2 WATER SUB-METER.

- 1. THE CONTRACTOR SHALL POTHOLE AND VERIFY THE DEPTH OF ALL EXISTING UTILITIES PRIOR TO THE INSTALLATION OF PROPOSED WATER DISTRIBUTION FACILITIES. ANY UNANTICIPATED CONFLICTS SHALL BE REDESIGNED PRIOR TO
- 2. CONTRACTOR TO COORDINATE TRENCHING FOR TELEPHONE, CABLE POWER AND GAS WITH JOINT TRENCH CONSULTANT AND
- 3. CONTRACTOR TO VERIFY SEWER POINT OF CONNECTION WITH PLUMBING AND ARCHITECTURAL PLANS PRIOR TO
- 4. UNDERGROUND ELECTRICAL, TV LINES, AND SITE LIGHTING SHOWN FOR REFERENCE ONLY. VERIFY LOCATIONS AND DETAILS WITH PLANS BY JOINT TRENCH CONSULTANT.
- 5. ALL SEWER PIPE SHALL BE SDR-35 PVC.
- ALL WATER PIPE SHALL BE PE4710 POLYETHYLENE PRESSURE
- 7. SEE DETAILS 7 AND 8 ON SHEET C12 FOR UTILITY TRENCH PLACEMENT.





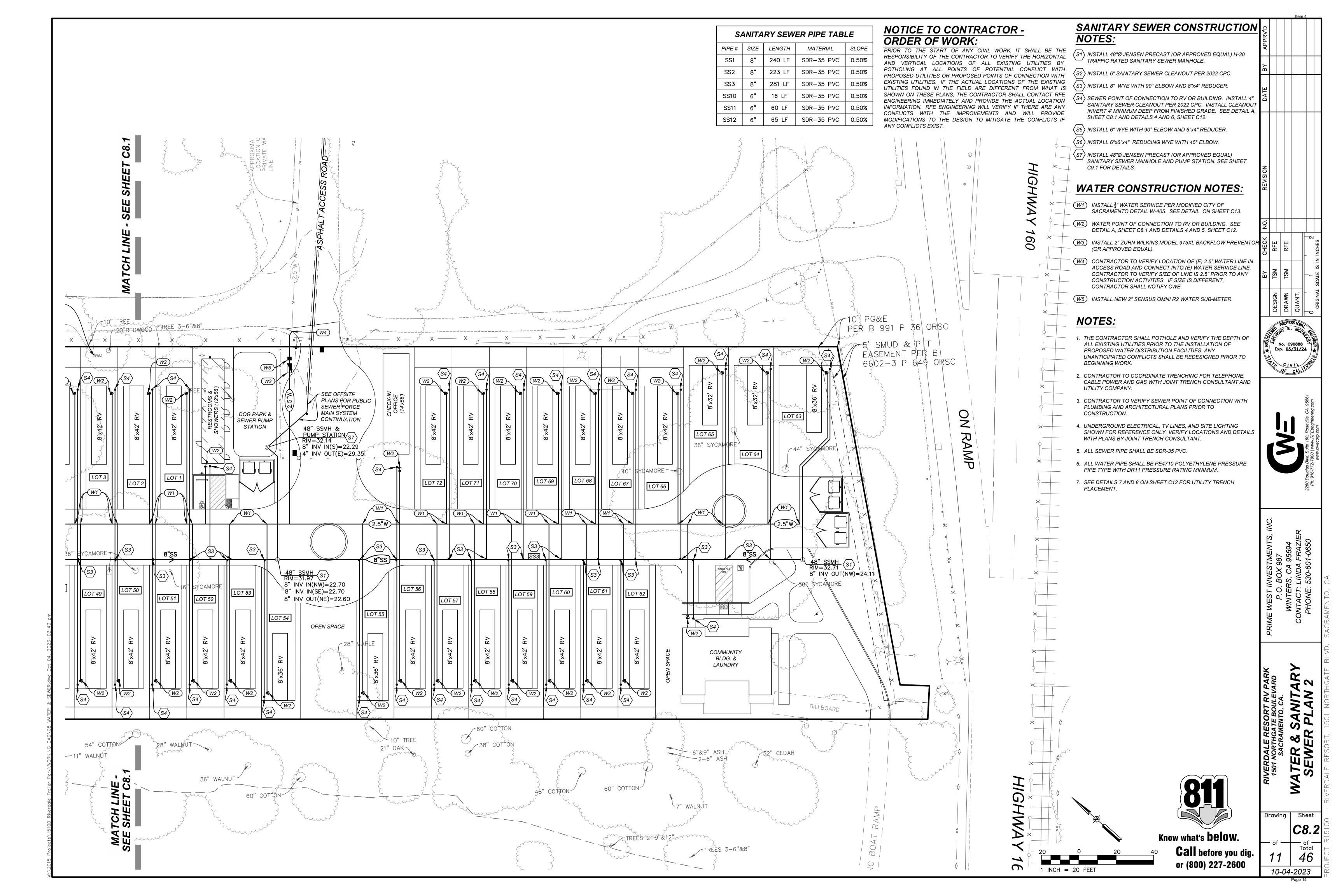
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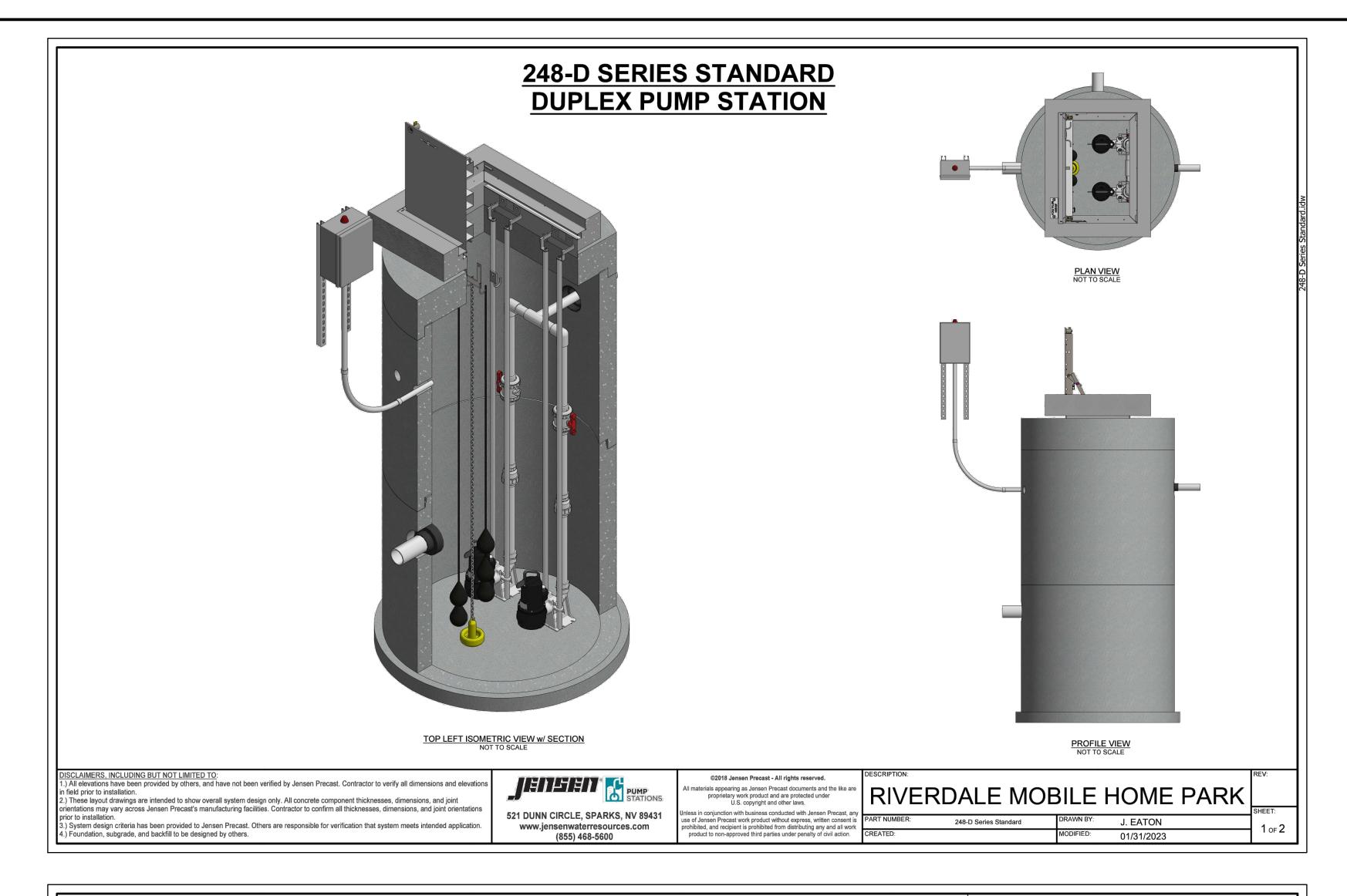
Know what's **below**.

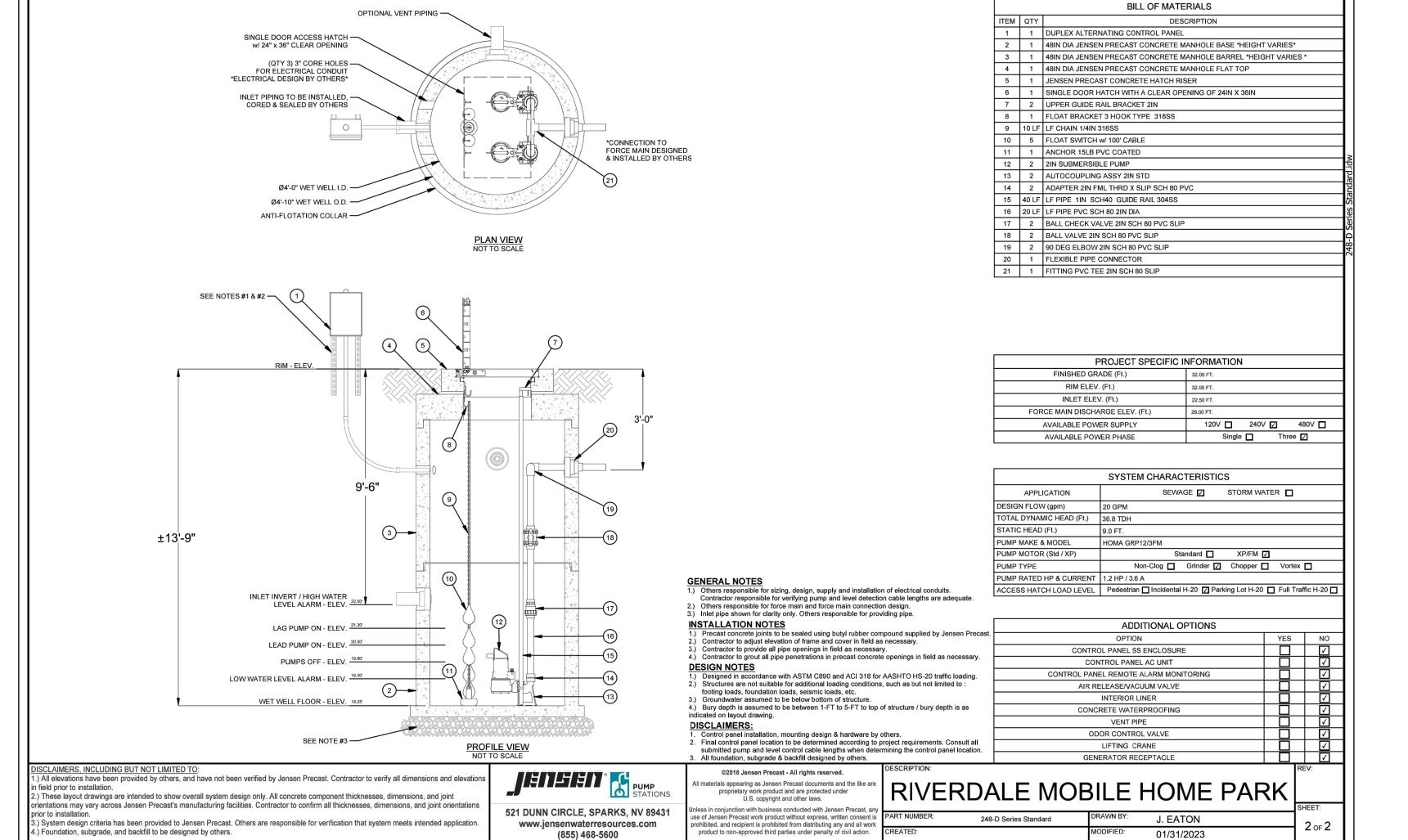
1 INCH = 20 FEET

Call before you dig.

or (800) 227-2600

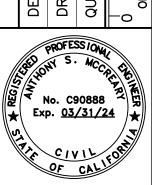






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P.O. BOX 987 VINTERS, CA 95694 JTACT: LINDA FRAZIER HONE: 530-601-0650

> CRAMENTO, CA. IRY SEWER LIFT ION DETAILS 1

C9.1

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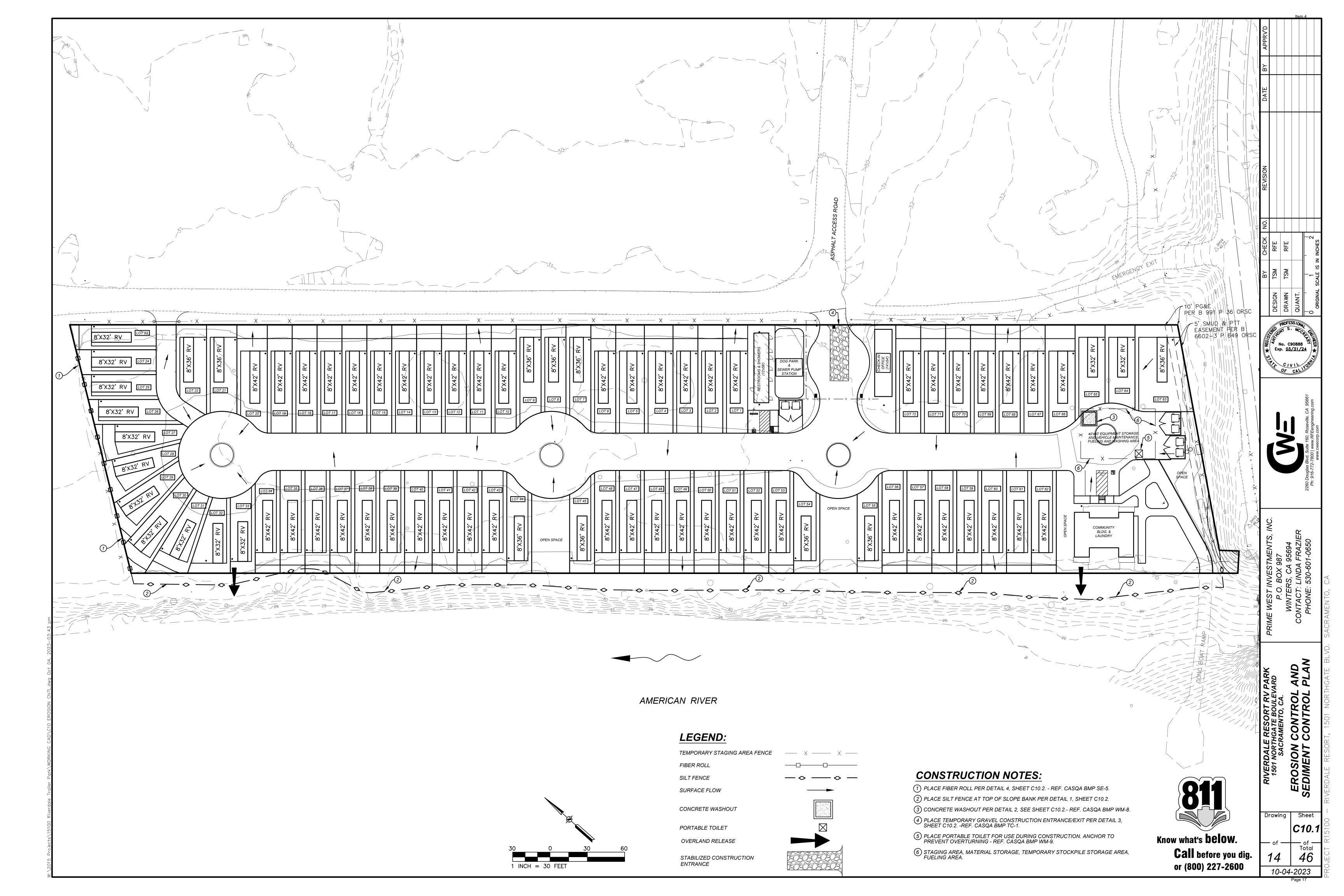
PRIME WEST INVESTMENTS, INC.
P.O. BOX 987
WINTERS, CA 95694
CONTACT: LINDA FRAZIER
PHONE: 530-601-0650 SANITARY SEWER LIFT STATION DETAILS 2 ERDALE RESORT, 1501 NORTHGATE BLY RIVERDALE RESORT RV PARK 1501 NORTHGATE BOULEVARD SACRAMENTO, CA.

Drawing Sheet C9.2

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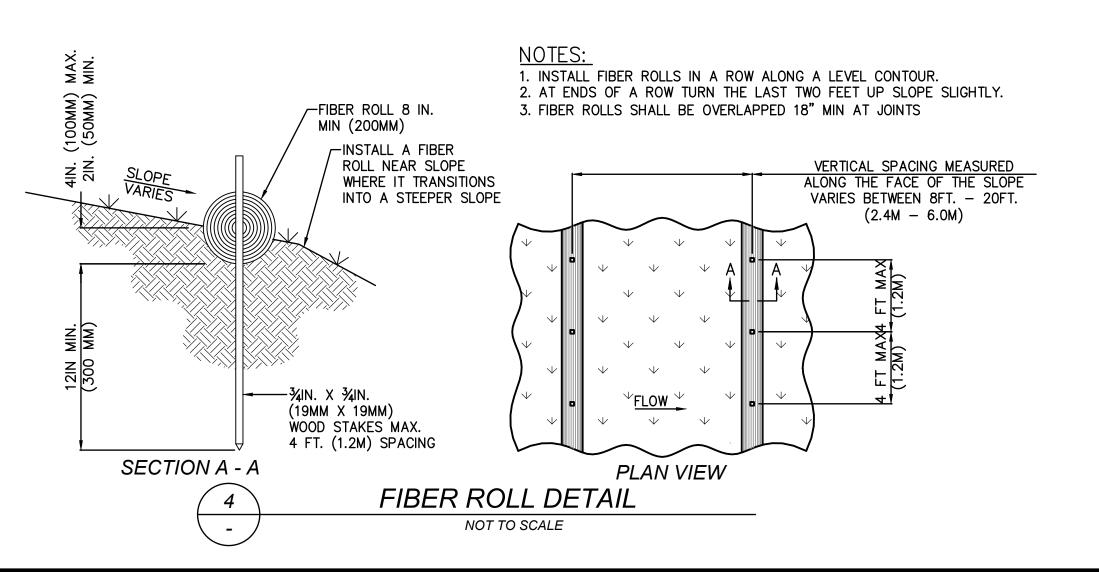
Page 16

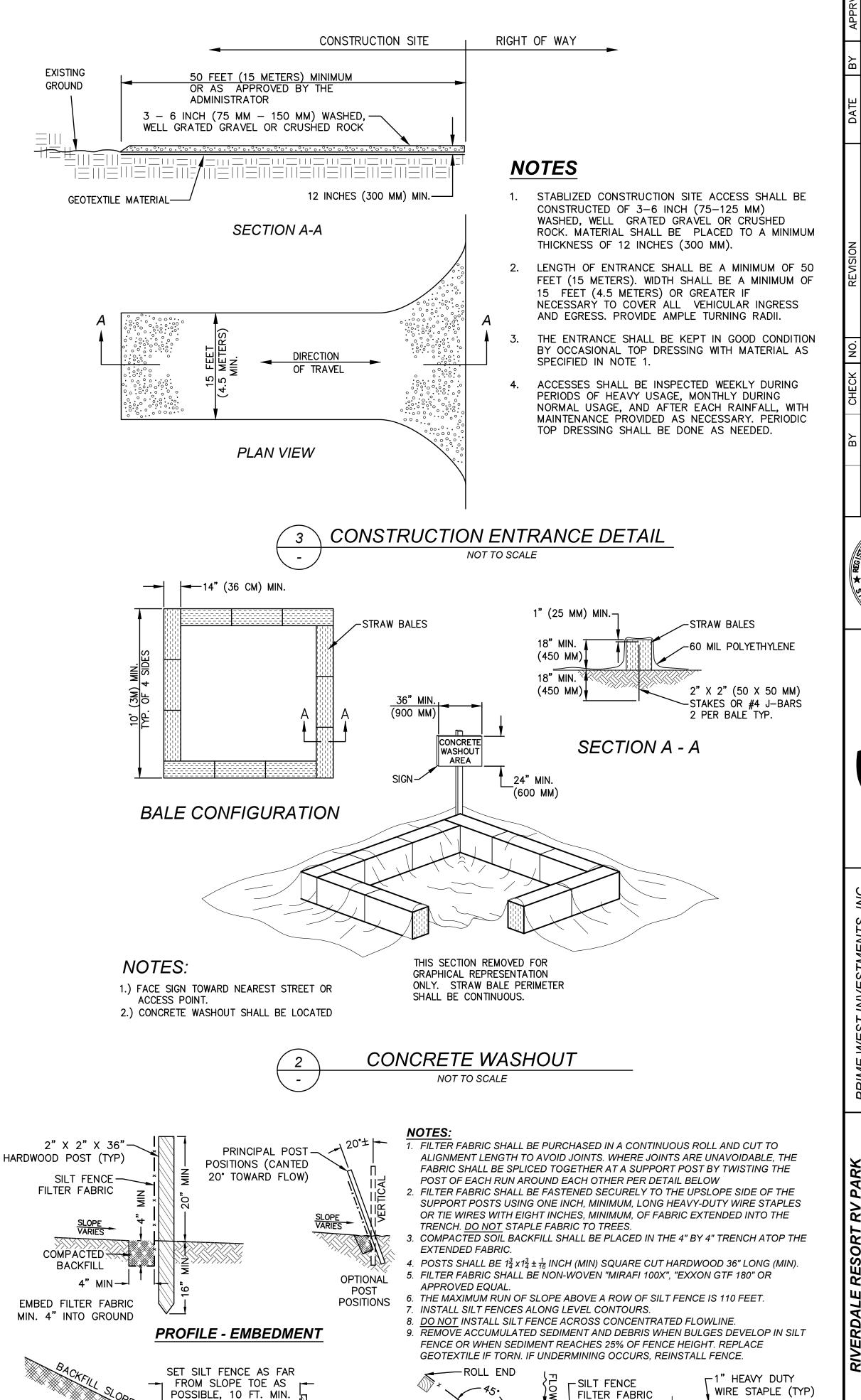


#### **EROSION AND SEDIMENT CONTROL NOTES:**

- 1. THE CONTRACTOR SHALL FOLLOW ALL JURISDICTIONAL GUIDELINES FOR GRADING AND THE EROSION AND SEDIMENT CONTROL MEASURES SHOWN OR STATED ON THESE PLANS.
- CONTRACTOR MUST ENSURE THAT THE CONSTRUCTION SITE IS PREPARED PRIOR TO THE ONSET OF ANY STORM. CONTRACTOR SHALL HAVE ALL EROSION AND SEDIMENT CONTROL MEASURES IN PLACE FOR THE WINTER MONTHS PRIOR TO OCTOBER 1.
- ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED UNTIL DISTURBED AREAS ARE STABILIZED. CHANGES TO THIS EROSION AND SEDIMENT CONTROL PLAN SHALL BE MADE TO MEET FIELD CONDITIONS ONLY WITH THE APPROVAL OF OR AT THE DIRECTION OF A REPRESENTATIVE OF THE DEPARTMENT OF UTILITIES.
- THIS PLAN MAY NOT COVER ALL THE SITUATIONS THAT ARISE DURING CONSTRUCTION DUE TO UNANTICIPATED FIELD CONDITIONS. VARIATIONS MAY BE MADE TO THE PLAN IN THE FIELD SUBJECT TO THE APPROVAL OF OR AT THE DIRECTION OF A REPRESENTATIVE OF THE DEPARTMENT OF UTILITIES.
- 5. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED BEFORE AND AFTER ALL STORMS TO ENSURE MEASURES ARE FUNCTIONING PROPERLY.
- 6. CONTRACTOR SHALL MAINTAIN A LOG AT THE SITE OF ALL INSPECTIONS OR MAINTENANCE OF BMPS, AS WELL AS, ANY CORRECTIVE CHANGES TO THE BMPS OR EROSION AND SEDIMENT CONTROL PLAN.
- 7. IN AREAS WHERE SOIL IS EXPOSED, PROMPT REPLANTING WITH NATIVE COMPATIBLE, DROUGHT-RESISTANT VEGETATION SHALL BE PERFORMED. NO AREAS WILL BE LEFT EXPOSED OVER THE WINTER SEASON.
- THE CONTRACTOR SHALL INSTALL THE STABILIZED CONSTRUCTION ENTRANCE PRIOR TO COMMENCEMENT OF GRADING. LOCATION OF THE ENTRANCE MAY BE ADJUSTED BY THE CONTRACTOR TO FACILITATE GRADING OPERATIONS. ALL CONSTRUCTION TRAFFIC ENTERING THE PAVED ROAD MUST CROSS THE STABILIZED CONSTRUCTION ENTRANCE. THE STABILIZED CONSTRUCTION ENTRANCE SHALL REMAIN IN PLACE UNTIL THE ROAD BASE ROCK COURSE IS COMPLETED.
- 9. ALL SEDIMENT DEPOSITED ON PAVED ROADWAYS SHALL BE SWEPT AT THE END OF EACH WORKING DAY OR AS NECESSARY.
- 10. CONTRACTOR SHALL PLACE GRAVEL BAG BARRIERS AROUND ALL NEW DRAINAGE STRUCTURE OPENINGS IMMEDIATELY AFTER THE STRUCTURE OPENING IS CONSTRUCTED. THESE GRAVEL BAG BARRIERS SHALL BE MAINTAINED AND REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETED.
- 11. CONTRACTOR SHALL FOLLOW DUST CONTROL METHODS INCLUDING:
  - A. WATERING THE SOIL OF THE SITE AND THE ADJACENT STREETS BEING USED IN CONNECTION WITH SOIL DISTURBANCE OPERATIONS ON THE SITE.
- B. COMPLETELY COVER GRAVEL OR ROCK LANDSCAPING UNTIL STABILIZED. C. WATER GRASSES AND LANDSCAPING UNTIL STABILIZED.
- 12. CONTRACTOR SHALL IMPLEMENT HOUSEKEEPING PRACTICES AS FOLLOWS:
- A. SOLID WASTE MANAGEMENT:
  - PROVIDE DESIGNATED WASTE COLLECTION AREAS AND CONTAINERS. ARRANGE FOR REGULAR REMOVAL AND DISPOSAL. CLEAR SITE OF TRASH INCLUDING ORGANIC DEBRIS, PACKAGING MATERIALS, SCRAP OR SURPLUS BUILDING MATERIALS AND DOMESTIC WASTE DAILY.
- B. MATERIAL DELIVERY AND STORAGE:
- PROVIDE A DESIGNATED MATERIAL STORAGE AREA WITH SECONDARY CONTAINMENT SUCH AS BERMING. STORE MATERIAL ON PALLETS AND PROVIDE COVERING FOR SOLUBLE MATERIALS. RELOCATE STORAGE AREA INTO BUILDING SHELL WHEN POSSIBLE. INSPECT AREA WEEKLY.
- PROVIDE A DESIGNATED AREA FOR A TEMPORARY PIT TO BE USED FOR CONCRETE TRUCK WASH-OUT. DISPOSE OF HARDENED CONCRETE OFFSITE. AT NO TIME SHALL A CONCRETE TRUCK DUMP ITS WASTE AND CLEAN ITS TRUCK INTO THE CITY STORM DRAINS VIA CURB AND GUTTER. INSPECT DAILY TO CONTROL RUNOFF, AND WEEKLY FOR REMOVAL OF HARDENED CONCRETE.
- D. PAINT AND PAINTING SUPPLIES: PROVIDE INSTRUCTION TO EMPLOYEES AND SUBCONTRACTORS REGARDING REDUCTION OF POLLUTANTS INCLUDING MATERIAL STORAGE, USE, AND CLEAN UP. INSPECT SITE WEEKLY FOR EVIDENCE OF IMPROPER DISPOSAL.
- E. VEHICLE FUELING. MAINTENANCE AND CLEANING:
- PROVIDE A DESIGNATED FUELING AREA WITH SECONDARY CONTAINMENT SUCH AS BERMING. DO NOT ALLOW MOBILE FUELING OF EQUIPMENT. PROVIDE EQUIPMENT WITH DRIP PANS. RESTRICT ON-SITE MAINTENANCE AND CLEANING OF EQUIPMENT TO A MINIMUM. INSPECT AREA WEEKLY.
- F. HAZARDOUS WASTE MANAGEMENT: PREVENT THE DISCHARGE OF POLLUTANTS FROM HAZARDOUS WASTES TO THE DRAINAGE SYSTEM THROUGH PROPER MATERIAL USE, WASTE DISPOSAL AND TRAINING OF EMPLOYEES. HAZARDOUS WASTE PRODUCTS COMMONLY FOUND ON-SITE INCLUDE BUT ARE NOT LIMITED TO PAINTS & SOLVENTS, PETROLEUM PRODUCTS, FERTILIZERS, HERBICIDES & PESTICIDES, SOIL STABILIZATION STABILIZATION PRODUCTS, ASPHALT PRODUCTS AND CONCRETE CURING PRODUCTS.

			ER	OSION AND SEDIMENT CONTROL MEASURES														
	(WET S	SEASON)			(WET AND DRY SEASON)													
HYDRO- SEEDING	STRAW MULCHING & TACTIFIER	PRESERVATION OF EXISTING VEGETATION	SOIL BINDERS	FIBER ROLLS	OUTLET PROTECTION	STORM DRAIN INLET PROTECTION	DEWATERING	STABILIZED CONSTRUCTION ENTRANCE	MATERIAL & WASTE DISPOSAL LOCATION	CONCRETE WASHOUT	DUST CONTROL	SEDIMENT TRAP						
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		HYDRO- SEEDING MULCHING	SEEDING MULCHING OF EXISTING	(WET SEASON)  HYDRO- SEEDING STRAW PRESERVATION OF EXISTING RINDERS	(WET SEASON)  HYDRO-SEEDING  STRAW MULCHING & TACTIFIER  PRESERVATION OF EXISTING VEGETATION VEGETATION  OF EXISTING VEGETATIO	(WET SEASON)  HYDRO-SEEDING  STRAW MULCHING & TACTIFIER  PRESERVATION OF EXISTING VEGETATION  OF EXIST	(WET SEASON)  HYDRO-SEEDING STRAW MULCHING & TACTIFIER PROTECTION  PRESERVATION OF EXISTING VEGETATION OF EXISTING	(WET SEASON)  HYDRO-SEEDING  STRAW MULCHING & TACTIFIER  PROSECUTION  SOIL BINDERS  FIBER ROLLS  OUTLET PROTECTION  DEWATERING  DEWATERING  DEWATERING	(WET SEASON)  (WET AND DRY STRAW MULCHING SEEDING TACTIFIER OF EXISTING VEGETATION OF EXISTING VEGETATION OF EXISTING AT TACTIFIER OF EXISTING STABLIZED CONSTRUCTION ENTRANCE   (WET AND DRY STRAW OUTLET PROTECTION INLET PROTECTION INLET PROTECTION DEWATERING CONSTRUCTION ENTRANCE   **OUTLET PROTECTION INLET PROTECTION OF EXISTING VEGETATION O	(WET SEASON)  (WET AND DRY SEASON)  HYDRO-SEEDING STRAW MULCHING & PRESERVATION OF EXISTING VEGETATION OF EXISTING VEGETATION OF EXISTING AND DEWATERING CONSTRUCTION DEWATERING CONSTRUCTION DISPOSAL LOCATION  • • • • • • • • • • • • • • • • • • •	(WET SEASON)  (WET AND DRY SEASON)  STRAW MULCHING & TACTIFIER OF EXISTING VEGETATION OF EXISTING VEGETATION OF EXISTING AND CONCRETE WASHOUT  MATERIAL & WASTE DISPOSAL LOCATION OF EXISTING VEGETATION  MATERIAL & WASTE DISPOSAL LOCATION OF EXISTING VEGETATION OF EXIST	(WET SEASON)  (WET AND DRY SEASON)  STRAW MULCHING & TACTIFIER PRESERVATION OF EXISTING VEGETATION OF EXISTING VEGETATION OF EXISTING AND ALLOCATION OF EXISTING VEGETATION OF EXISTING						





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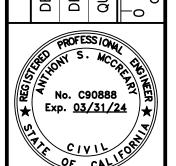
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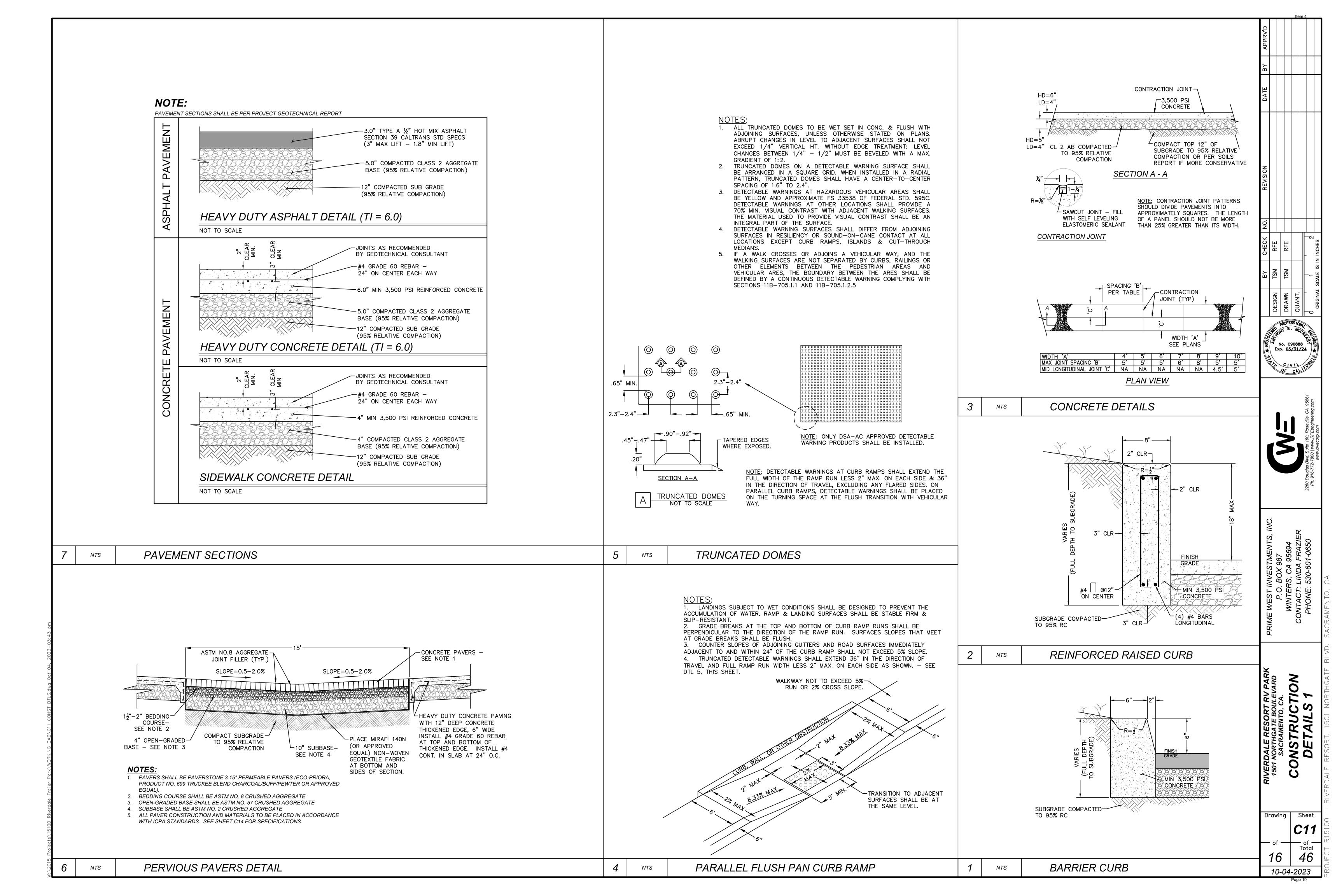
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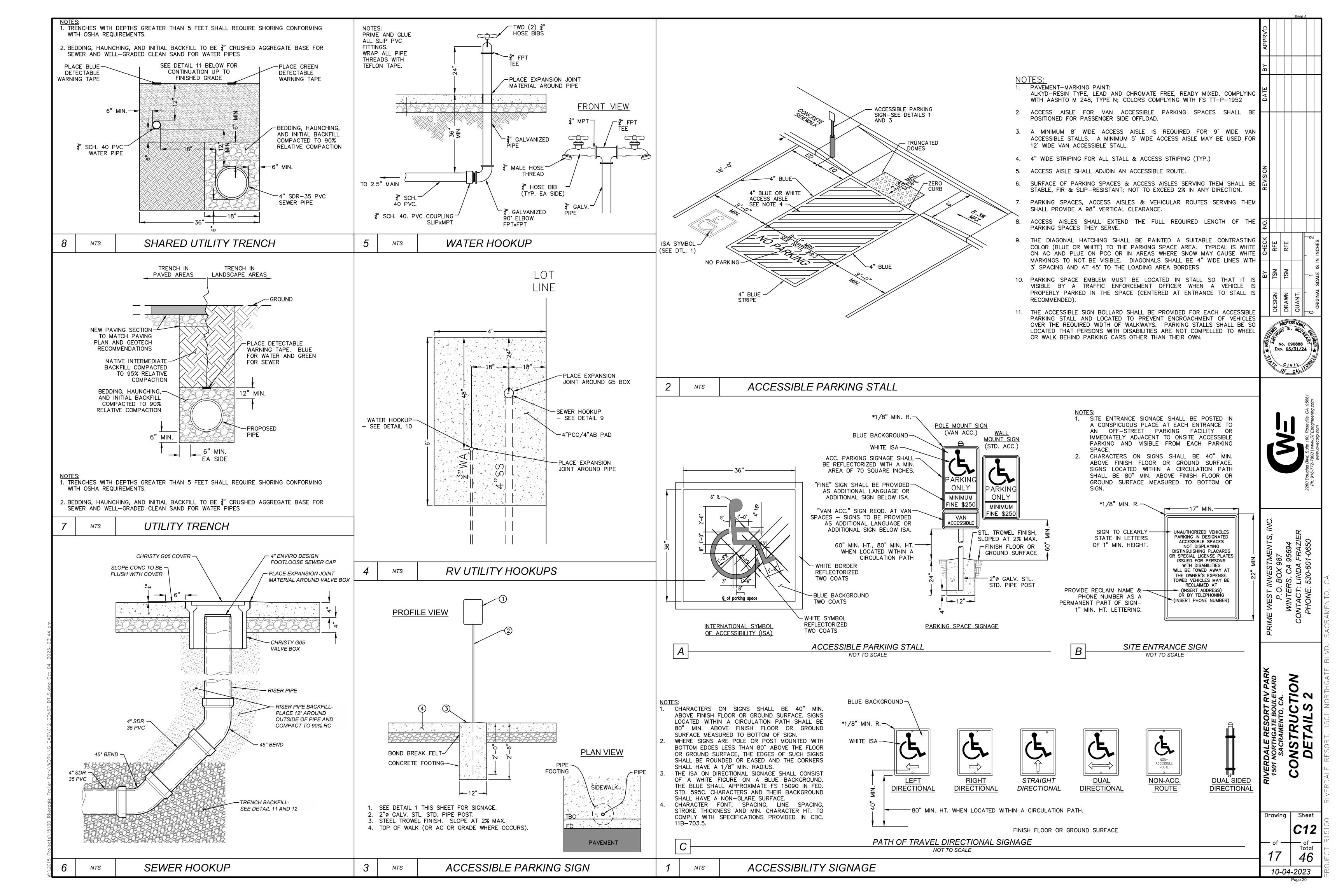
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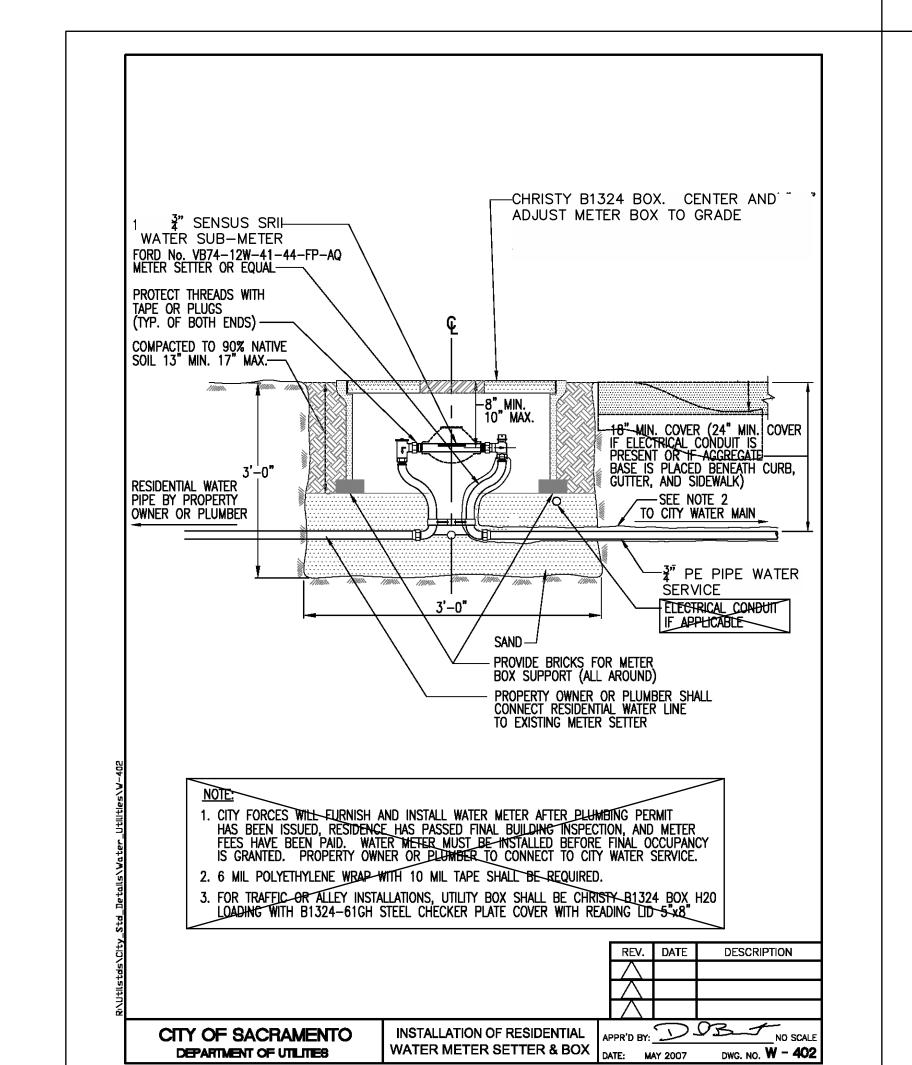
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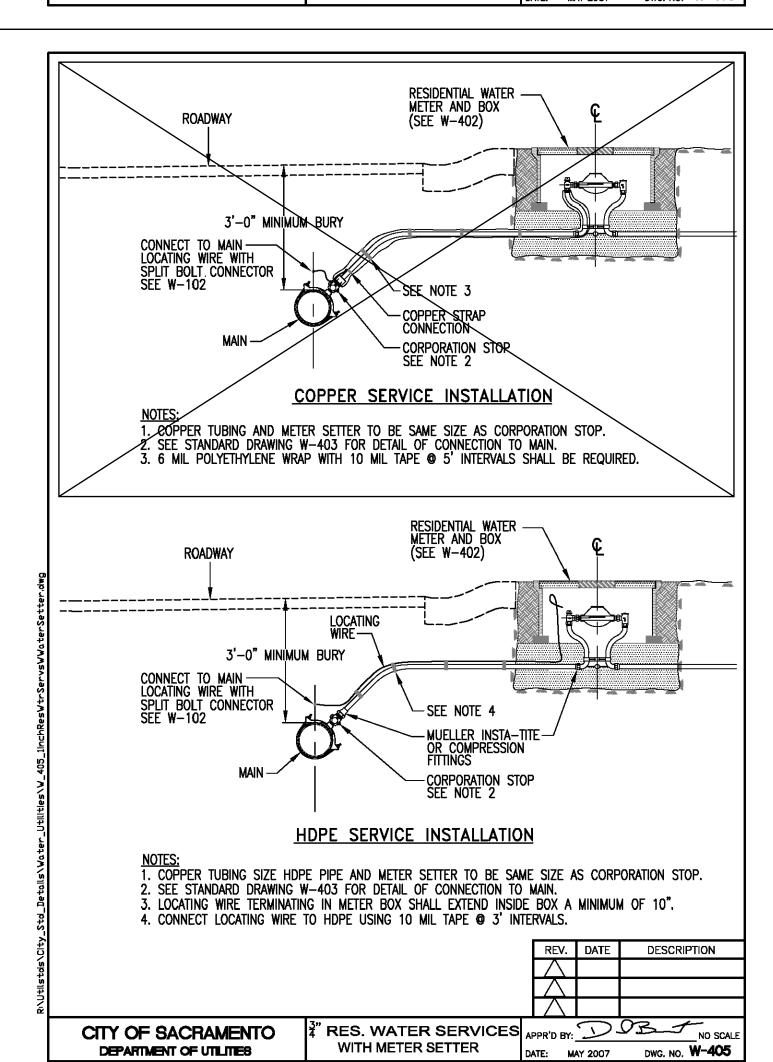
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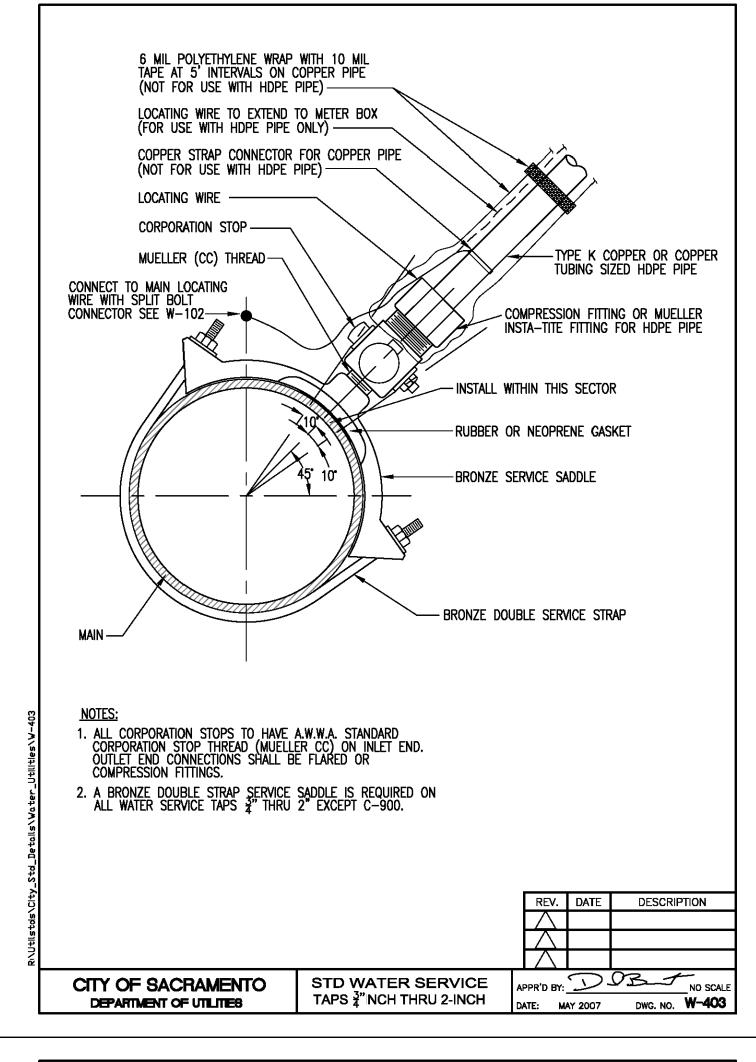
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IME WEST INVESTME P.O. BOX 987 WINTERS, CA 95 CONTACT: LINDA FF PHONE: 530-601-0

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INDA FRAZIER
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PRIME WEST INVESTMEN
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WINTERS, CA 9569
CONTACT: LINDA FRA
PHONE: 530-601-06

SACRAMENTO, CA.

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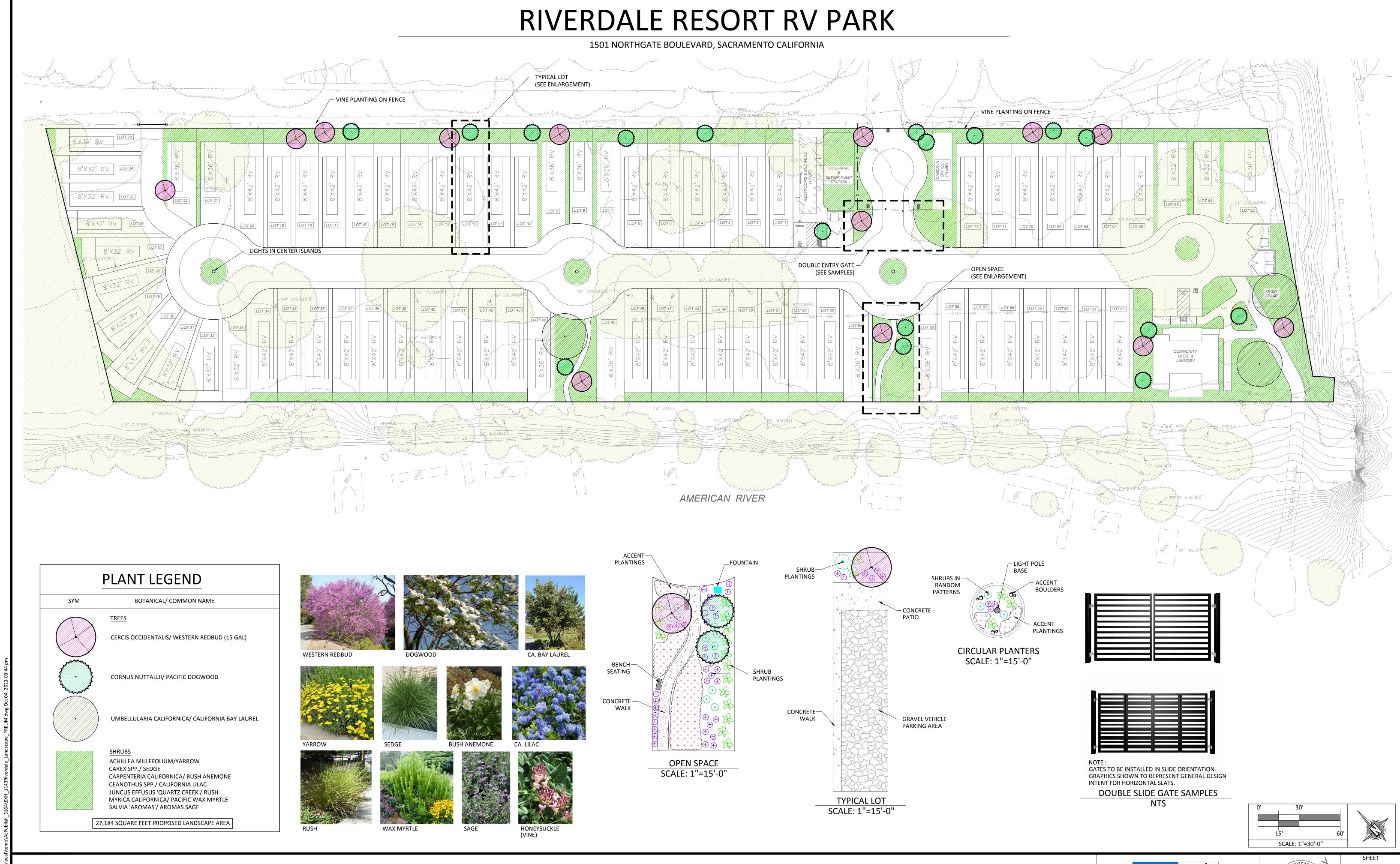
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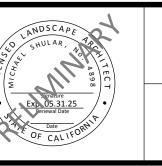
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PRELIMINARY LANDSCAPE PLAN

OCTOBER 4, 2023





Page 23

TOTAL

#### <u>LIGHTING:</u> ABBREVIATIONS: **GENERAL NOTES:** 2X4 LIGHT FIXTURE. SEE LIGHT FIXTURE SCHEDULE 1. EMPTY CONDUIT STUB-UPS ARE TO EXTEND TO ACCESSIBLE CEILING SPACE. CONDUIT ONLY WITH PULL ROPE 2. PROVIDE PULL STRING IN EMPTY CONDUITS. DOWNLIGHT FIXTURE. SEE LIGHT FIXTURE SCHEDULE. WEATHERPROOF 3. VERIFY EXACT LOCATION OF MOTORS/PUMPS, ETC. PRIOR TO BID. 1X4 OR INDUSTRIAL FIXTURE. SEE LIGHT FIXTURE SCHEDULE ABOVE FINISHED FLOOR 4. PROVIDE SEISMIC ANCHORS ON ALL EQUIPMENT INCLUDING TRANSFORMERS, SWITCHGEAR, GENERATOR, ETC. NIGHT LIGHT - CONNECT TO EXISTING NIGHT LIGHT CIRCUIT POLE MOUNTED LIGHT FIXTURE. SEE LIGHT FIXTURE SCHEDULE 5. PROVIDE ARC FLASH HAZARD WARNING SIGN AT PANELS AND EQUIPMENT IN COMPLIANCE WITH CEC SECTION 110.16. SINGLE POLE TOGGLE SWITCH, +48" TO TOP OF BOX, UNLESS OTHERWISE NOTED. EXISTING DEVICE TO REMAIN 6. COORDINATE WITH THE UTILITY COMPANY NEW SERVICE COMMITMENT PACKAGE TWO POLE TOGGLE SWITCH, +48" TO TOP OF BOX, UNLESS OTHERWISE NOTED. FOR WORK REQUIRED BY OWNER/CONTRACTOR. EXISTING DEVICE TO BE REMOVED. THREE POLE TOGGLE SWITCH, +48" TO TOP OF BOX, UNLESS OTHERWISE NOTED. 7. COORDINATE WITH PRE-MANUFACTURED BUILDING SHOP DRAWING SUBMITTALS FOR ELECTRICAL PANEL LOCATIONS. EMERGENCY - PROVIDE WITH 90 MIN EMERGENCY SWITCH SUBSCRIPTS: a, b, c = DEVICE CONTROLLED; p = PILOT; k = KEYEDBACK UP BALLAST WALL MOTION SENSOR/DIMMER SWITCH (WATTSTOPPER PW-100D OR EQUAL). GROUND FAULT CIRCUIT INTERRUPTING **ELECTRICAL DATUM PLANE:** DIMMING PC/DAYLIGHT SENSOR (LEVITON PCC1D OR EQUAL). LIGHTING CONTROL PANEL - LEVITON EZ-MAX OR THE ELECTRICAL SYSTEM DESIGN IS BASED ON THE 2022 NATIONAL EQUAL. PROVIDE A COMPLETE AND OPERATIONAL ELECTRICAL CODE, 2022 CALIFORNIA ELECTRICAL CODE, SECTION 551.3 (B), SYSTEM. DIMMER SWITCH 0-10V DIMMING & OFF. VERIFY COMPATIBILITY WITH LIGHT FIXTURE(S). ELECTRICAL DATUM PLANE DISTANCE. THIS DISTANCE IS DETERMINED BY A HORIZONTAL PLANE THAT IS 2 FT. ABOVE THE NORMAL HIGH WATER LINE FOR THE AREA THAT OCCURS UNDER NORMAL CIRCUMSTANCES. FOR **CONVENTIONS:** WALL MOTION SENSOR (LEVITON ODS-06 OR EQUAL). COMPLIANCE, ALL ELECTRICAL SWITCHGEAR AND TRANSFORMERS SHALL BE LIGHT FIXTURE TAG, LETTER INDICATES TYPE. PLACED ON CONCRETE PADS/PEDESTALS MINIMUM 2 FT ABOVE GRADE LEVEL. SEE FIXTURE SCHEDULE 4 BUTTON LIGHTING CONTROL STATION. (LEVITON RLVSW OR EQUAL.) SEE SHEET E2.1 FOR ADDITIONAL INFORMATION. BELOW GRADE CONDUIT AND CONDUCTORS: NUMBERED SHEET NOTE, SEE SHEET NOTE SCHEDULE ALL BELOW GRADE CONDUIT RISERS SHALL BE STUBBED A MINIMUM OF 24" POWER: ABOVE GRADE AND PROVIDED WITH A WATERPROOF SEALANT. DUPLEX RECEPTACLE, 15 AMP, 125V, 3W, NEMA 5-15R, +18" UNLESS OTHERWISE NOTED ALL CONDUCTORS ROUTED BELOW GRADE SHALL BE TYPE THWN OR XHWN, DUPLEX RECEPTACLE, 20 AMP, 125V, 3W, NEMA 5-20R, +18" UNLESS OTHERWISE NOTED RATED TEMPERATURE OF 75 DEGREE CELCIUS, (PER N.F.I.P. TABLE 3.3.5.) ⊕ ⊕ JUNCTION BOX, SIZE AND TYPE AS INDICATED OR REQUIRED SHEET INDEX: DISCONNECT SWITCH. SIZE AND TYPE AS REQUIRED PER EQUIPMENT MANUFACTURER'S NAMEPLATE. SYMBOLS LIST & GENERAL NOTES SWITCHBOARD/DISTRIBUTION PANEL/MOTOR CONTROL CENTER ELECTRICAL SITE PLAN - SOUTH RV POWER PEDESTAL. SEE POWER PLANS AND ONELINE DIAGRAM FOR ADDITIONAL INFORMATION. ELECTRICAL SITE PLAN - NORTH RACEWAY: SITE LIGHTING PHOTOMETRIC PLAN ------ CONDUIT RUN CONCEALED IN CEILING OR WALL LIGHTING & POWER PLAN — BATH HOUSE ---- CONDUIT RUN CONCEALED BELOW FINISHED FLOOR OR GRADE PANEL SCHEDULES → HOME RUN TO RESPECTIVE PANEL OR TERMINAL CABINET ONELINE DIAGRAM, LIGHT FIXTURE SCHEDULE $\frac{2,4}{}$ CIRCUIT INDENTIFICATION; CIRCUITS 2 & 4, CIRCUIT 4, ETC. EQUIPMENT SPEC SHEETS HASH MARKS INDICATE NUMBER OF #12 AWG CONDUCTORS. NO HASH MARKS INDICATE (2)#12 AWG CONDUCTORS,

#### **SYMBOLS LIST**

OTHER SIZES AS NOTED ON PLANS

BRANCH CIRCUIT WITH GREEN ("G") GROUND WIRE

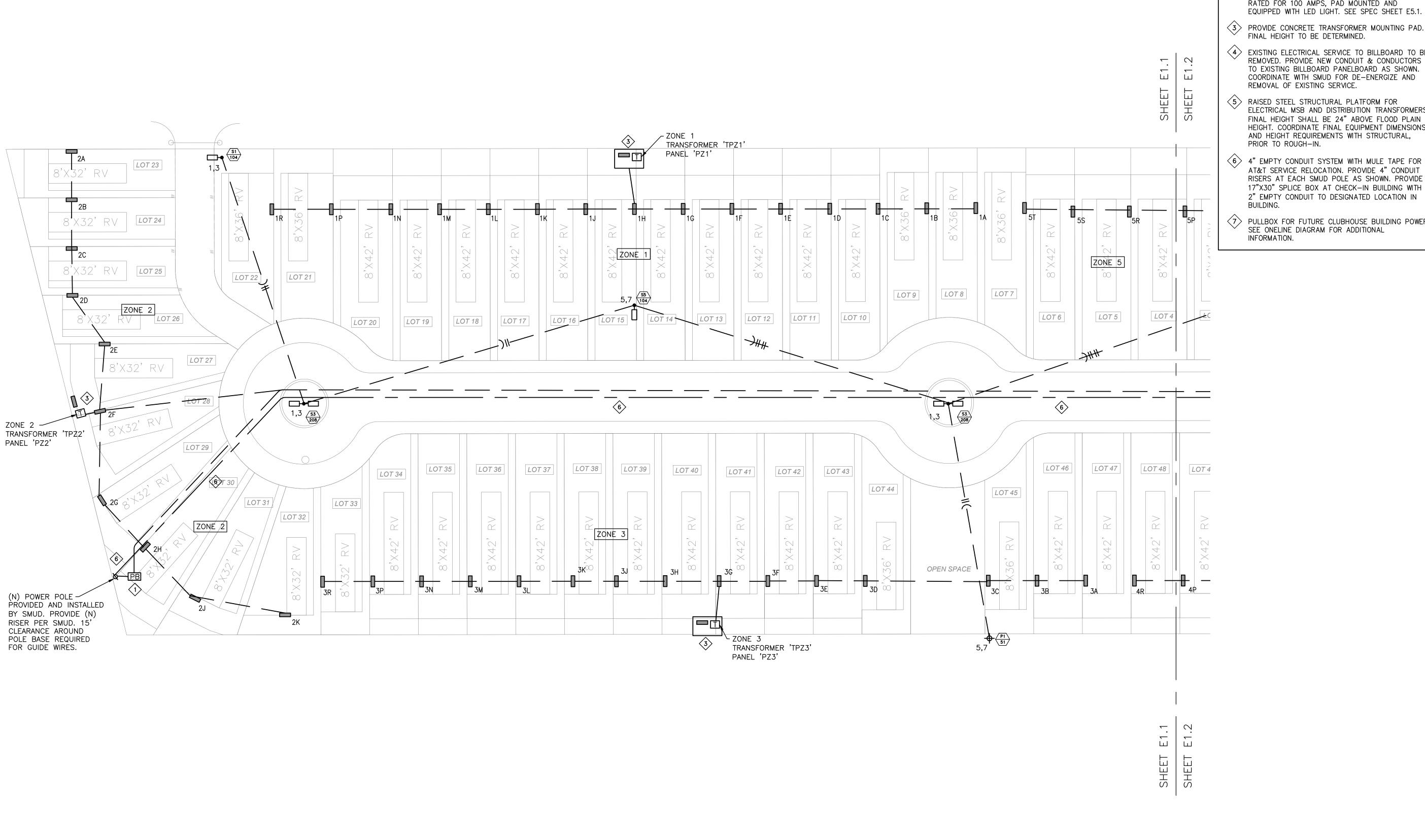
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LS&J ELECTRIC 44528 NORTH EL MACERO DRIVE DAVIS, CA. 95618 JEFF HULSE - PRESIDENT

1-530-681-5015

09-29-2023

Drawing Sheet



**ELECTRICAL SITE PLAN - NORTH** 

1"=20'-0"

SHEET NOTES

EQUIPMENT REQUIRED PER SMUD NEW SERVICE DESIGN. SEE SMUD COMMITMENT PACKAGE/DRAWING FOR OWNER/CONTRACTOR SCOPE OF WORK. EQUIPMENT INCLUDES BUT NOT LIMITED TO PULLBOXES, CONDUIT, TRANSFORMER PAD, ETC.

2 POWER PEDESTAL (MIDWEST RV EQUIPMENT U075CP4L10 OR EQUAL). PEDESTAL SHALL BE RATED FOR 100 AMPS, PAD MOUNTED AND

3 PROVIDE CONCRETE TRANSFORMER MOUNTING PAD.

4 EXISTING ELECTRICAL SERVICE TO BILLBOARD TO BE REMOVED. PROVIDE NEW CONDUIT & CONDUCTORS TO EXISTING BILLBOARD PANELBOARD AS SHOWN. COORDINATE WITH SMUD FOR DE-ENERGIZE AND

(5) RAISED STEEL STRUCTURAL PLATFORM FOR ELECTRICAL MSB AND DISTRIBUTION TRANSFORMERS. FINAL HEIGHT SHALL BE 24" ABOVE FLOOD PLAIN HEIGHT. COORDINATE FINAL EQUIPMENT DIMENSIONS AND HEIGHT REQUIREMENTS WITH STRUCTURAL,

6 4" EMPTY CONDUIT SYSTEM WITH MULE TAPE FOR AT&T SERVICE RELOCATION. PROVIDE 4" CONDUIT RISERS AT EACH SMUD POLE AS SHOWN. PROVIDE 17"X30" SPLICE BOX AT CHECK-IN BUILDING WITH A 2" EMPTY CONDUIT TO DESIGNATED LOCATION IN

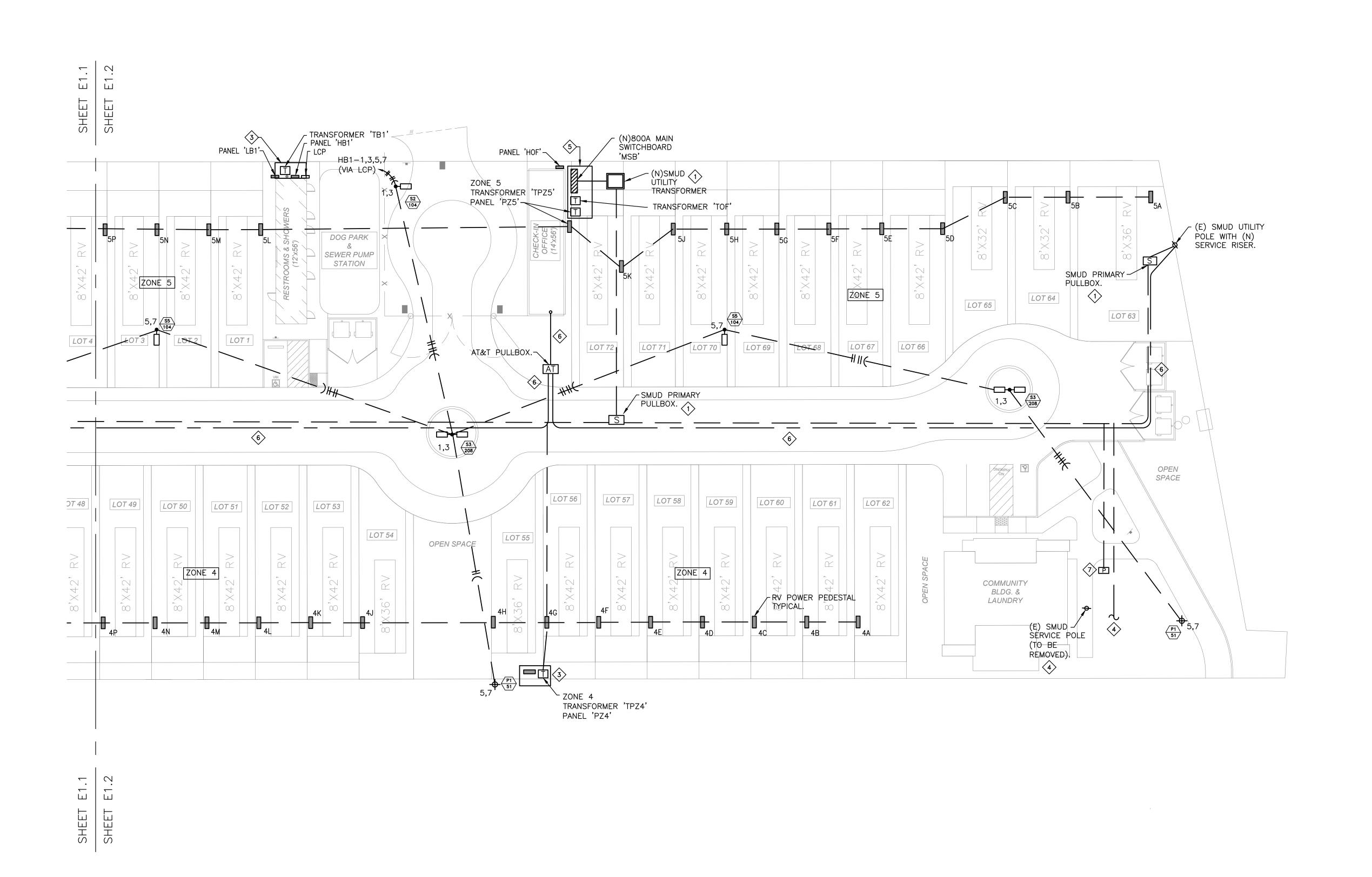
7> PULLBOX FOR FUTURE CLUBHOUSE BUILDING POWER. SEE ONELINE DIAGRAM FOR ADDITIONAL

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LS&J ELECTRIC 44528 NORTH EL MACERO DRIVE DAVIS, CA. 95618

JEFF HULSE - PRESIDENT 1-530-681-5015

09-29-2023



#### SHEET NOTES

- 1> EQUIPMENT REQUIRED PER SMUD NEW SERVICE DESIGN. SEE SMUD COMMITMENT PACKAGE/DRAWING FOR OWNER/CONTRACTOR SCOPE OF WORK. EQUIPMENT INCLUDES BUT NOT LIMITED TO PULLBOXES, CONDUIT, TRANSFORMER PAD, ETC.
- 2 POWER PEDESTAL (MIDWEST RV EQUIPMENT U075CP4L10 OR EQUAL). PEDESTAL SHALL BE RATED FOR 100 AMPS, PAD MOUNTED AND EQUIPPED WITH LED LIGHT. SEE SPEC SHEET E5.1.
- PROVIDE CONCRETE TRANSFORMER MOUNTING PAD. FINAL HEIGHT TO BE DETERMINED.
- 4 EXISTING ELECTRICAL SERVICE TO BILLBOARD TO BE REMOVED. PROVIDE NEW CONDUIT & CONDUCTORS TO EXISTING BILLBOARD PANELBOARD AS SHOWN. COORDINATE WITH SMUD FOR DE-ENERGIZE AND REMOVAL OF EXISTING SERVICE.
- 5 RAISED STEEL STRUCTURAL PLATFORM FOR ELECTRICAL MSB AND DISTRIBUTION TRANSFORMERS. FINAL HEIGHT SHALL BE 24" ABOVE FLOOD PLAIN HEIGHT. COORDINATE FINAL EQUIPMENT DIMENSIONS AND HEIGHT REQUIREMENTS WITH STRUCTURAL, PRIOR TO ROUGH-IN.
- 6 4" EMPTY CONDUIT SYSTEM WITH MULE TAPE FOR AT&T SERVICE RELOCATION. PROVIDE 4" CONDUIT RISERS AT EACH SMUD POLE AS SHOWN. PROVIDE 17"X30" SPLICE BOX AT CHECK-IN BUILDING WITH A 2" EMPTY CONDUIT TO DESIGNATED LOCATION IN BUILDING.
- 7 PULLBOX FOR FUTURE CLUBHOUSE BUILDING POWER. SEE ONELINE DIAGRAM FOR ADDITIONAL INFORMATION.

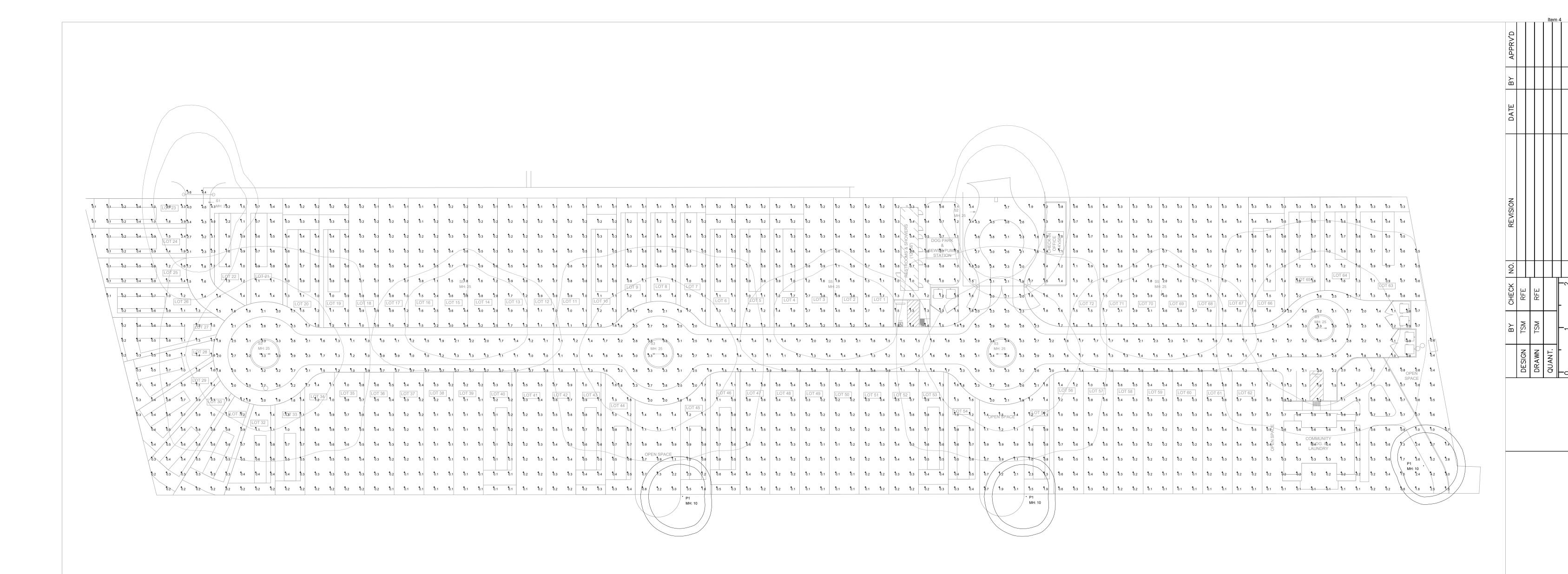
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LS&J ELECTRIC 44528 NORTH EL MACERO DRIVE DAVIS, CA. 95618

1"=20'-0"

JEFF HULSE - PRESIDENT 1-530-681-5015

09-29-2023 Page 26



AMERICAN RIVER

#### SITE LIGHTING PHOTOMETRIC PLAN

NO SCALE

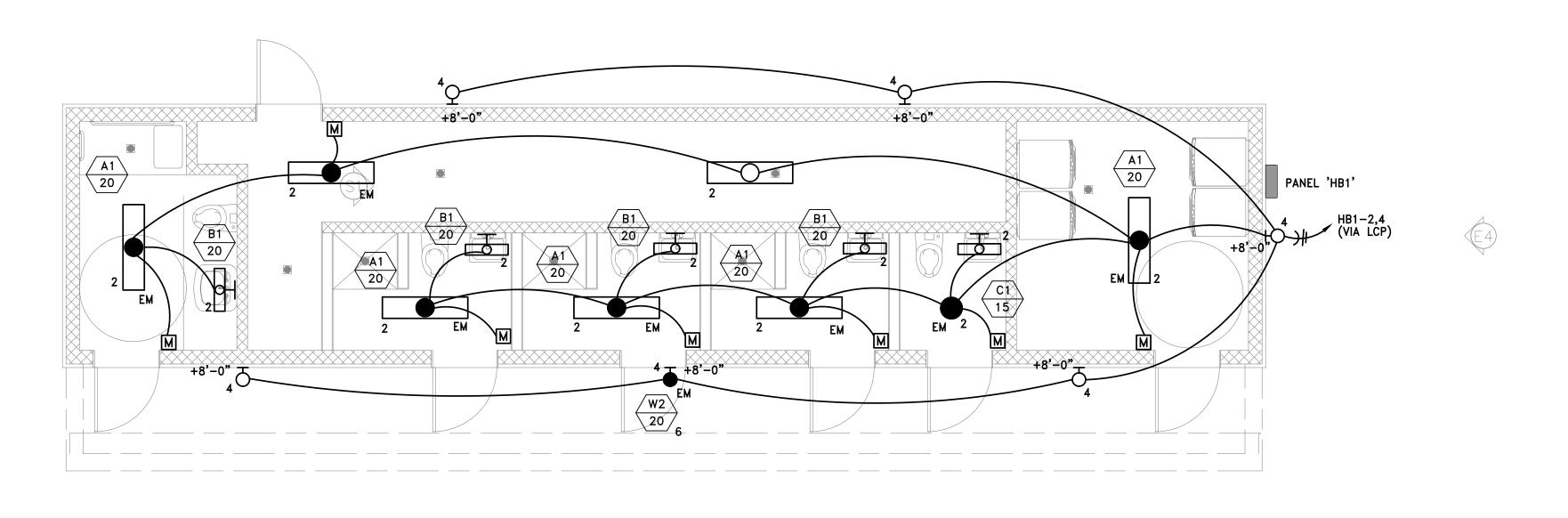
Luminaire Schedule	uminaire Schedule													
Scene: GENERAL	Scene: GENERAL													
Symbol	Qty	Label	Arrangement	Description	Lum. Lumens	LLF	Filename							
	1	S1	SINGLE	GARDCO OPF-S-A05-740-T2M-AR1-UNV	17154	0.900	OPF-S-A05-740-T2M.ies							
	1	S2	SINGLE	GARDCO OPF-S-A05-740-T4M-AR1-UNV	17247	0.900	OPF-S-A05-740-T4M.ies							
<b>↔</b>	4	S3	Back-Back	GARDCO OPF-S-A05-740-T5W-AR1-UNV	16995	0.900	OPF-S-A05-740-T5W.ies							
	3	S5	SINGLE	GARDCO OPF-S-A05-740-T3M-AR1-UNV	17018	0.900	OPF-S-A05-740-T3M.ies							
$\square$	3	P1	SINGLE	GARDCO PPT-196L-1150-WW-G2-3-UNV	5439	0.900	PPT-196L-1150-WW-G2-3-UNV.ies							

Calculation Summary							
Scene: GENERAL							
Label	СаІсТуре	Units	Avg	Max	Min	Avg/Min	Max/Min
ROADWAY	Illuminance	Fc	1.98	4.6	0.7	2.83	6.57
RV PARKING	Illuminance	Fc	0.80	5.2	0.1	8.00	52.00

LS&J ELECTRIC 44528 NORTH EL MACERO DRIVE DAVIS, CA. 95618 JEFF HULSE - PRESIDENT 1-530-681-5015

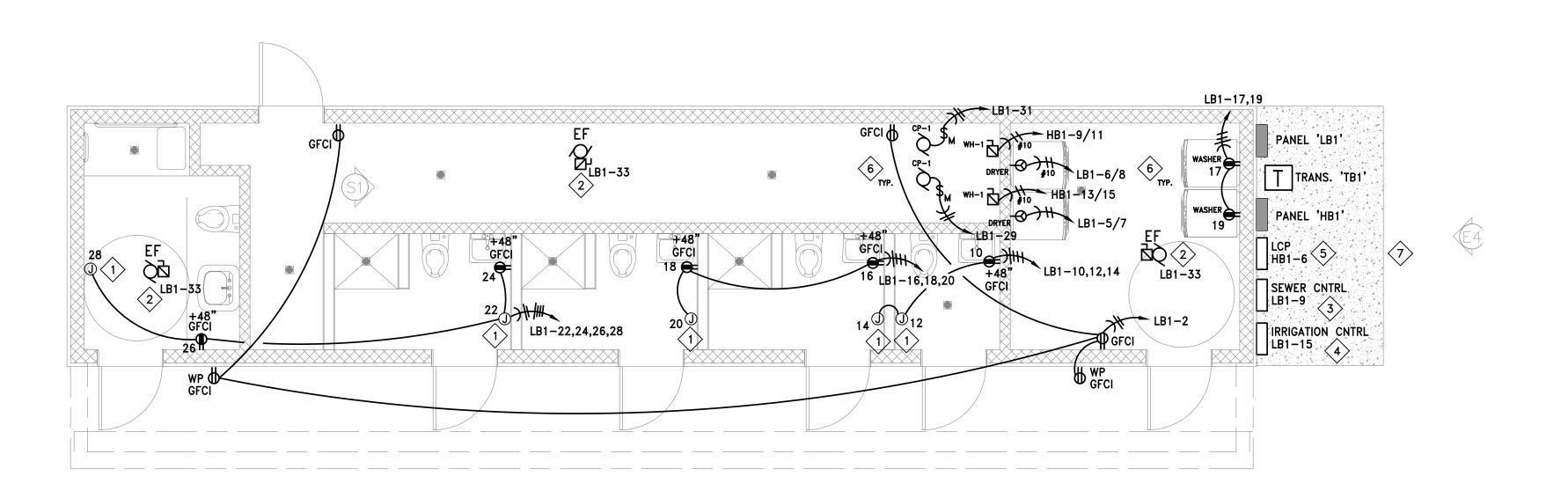
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		LIGHT FIXTU	JRE S	CH	łΕ	D	UL	.E							
NOTES:	NOTES: 1. ALL FIXTURES LABELED WITH 'EM' SHALL BE PROVIDED WITH 90 MIN BATTERY BACK UP. 2. COORDINATE WITH DIMMING CONTROL DEVICES PRIOR TO ORDER. 3. EXCEEDING THE FIXTURE WATTAGE SHOWN MAY REQUIRE RE-DESIGN & RE-SUBMITTAL.														
SYM	DESCRIPTION	MANUFACTURER CATALOG NUMBER	LAMPS	VA		/OLT 277	S 480	MOUNTING	REMARKS						
A1	1X4 WRAPAROUND LED	TO BE SELECTED BY CONTRACTOR	LED	20	•			SURFACE							
B1	VANITY LIGHT	TO BE SELECTED BY CONTRACTOR	LED	20	•			SURFACE							
C1	SURFACE ROUND	TO BE SELECTED BY CONTRACTOR	LED	15	•			SURFACE							
W2	WALLPAK	TO BE SELECTED BY CONTRACTOR	LED	20	•			WALL @ 8'-0"							



# LIGHTING PLAN

1/4"=1'-0"



## **POWER PLAN**

1/4"=1'-0

LS&J ELECTRIC

44528 NORTH EL MACERO DRIVE
DAVIS, CA. 95618

JEFF HULSE - PRESIDENT 1-530-681-5015

#### SHEET NOTES

- JUNCTION BOX FOR ELECTRIC HAND DRYER CONNECTION. VERIFY INSTALLATION REQUIREMENTS PRIOR TO ROUGH—IN.
- CEILING EXHAUST FANS 'M1' (TYPICAL OF 3). CONNECT TO CIRCUIT LB1-33. COORDINATE CONTROL REQUIREMENTS PRIOR TO ROUGH-IN. SEE MECHANICAL SHEET M1 FOR ADDITIONAL INFORMATION.
- SEWER PUMP CONTROL PANEL. CONTRACTOR SHALL COORDINATE CONDUIT/WIRE REQUIRED FROM CONTROL PANEL TO PUMPS(S).
- IRRIGATION CONTROL PANEL. PROVIDE POWER PER CIRCUIT INDICATED.
- 5 LIGHTING CONTROL PANEL (LEVITON EZ-MAX OR EQUAL). PROVIDE REQUIRED RELAYS, HARDWARE TO MAKE A COMPLETE AND OPERATIONAL SYSTEM.
- SPECIFIC EQUIPMENT OUTLETS, DISCONNECT SWITCHES, ETC TO BE MOUNTED AT MINIMUM +24" A.F.F. WHERE APPLICABLE.
- 6'x12'x2' RAISED CONCRETE PAD/PEDESTAL FOR ELECTRICAL EQUIPMENT INSTALLATION. SEE SITE PLAN SHEET E1.2 FOR ADDITIONAL INFORMATION.

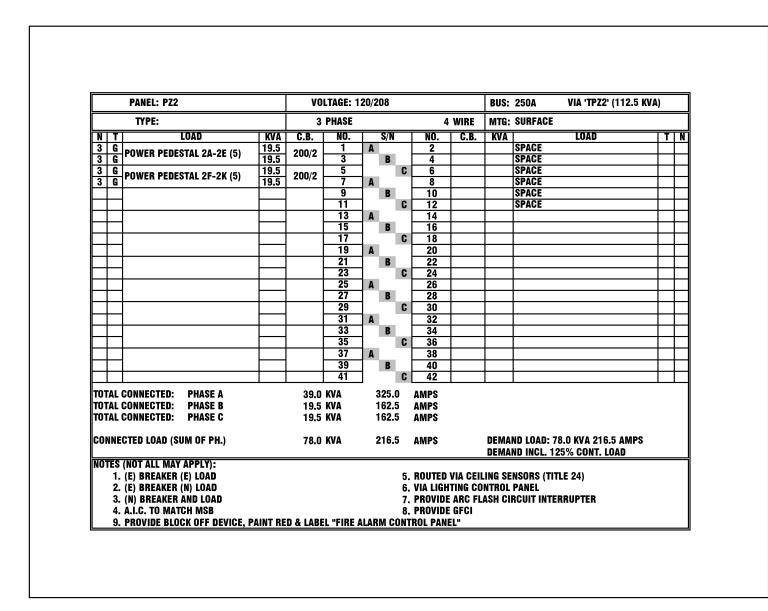
IME WEST INVESTMENTS, INC.
P.O. BOX 987
WINTERS, CA 95694
CONTACT: LINDA FRAZIER
PHONE: 530-601-0650

/ERDALE RESORT RV PARK
1501 NORTHGATE BOULEVARD
SACRAMENTO, CA.

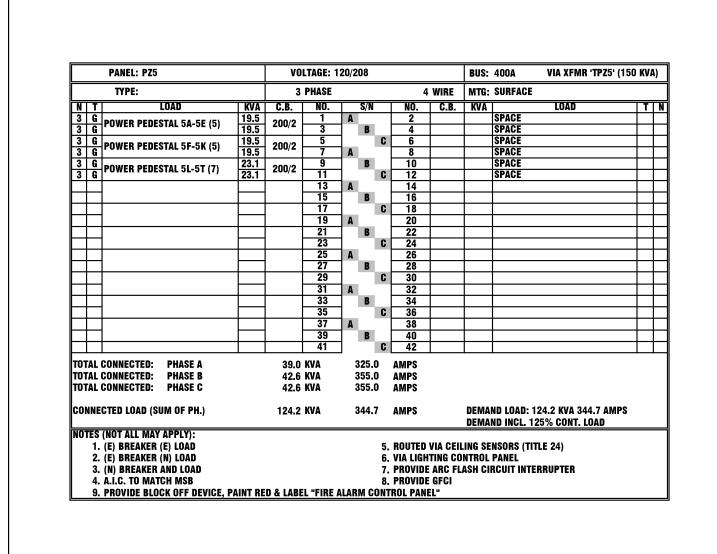
Drawing Sheet

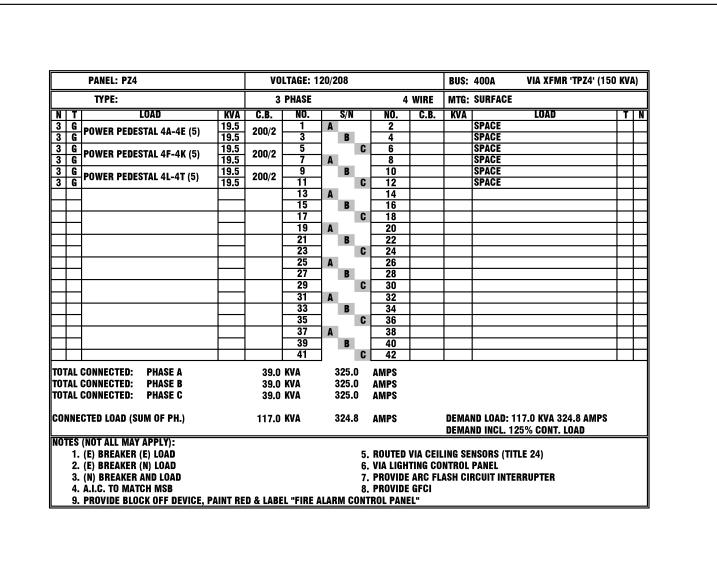
E2.1

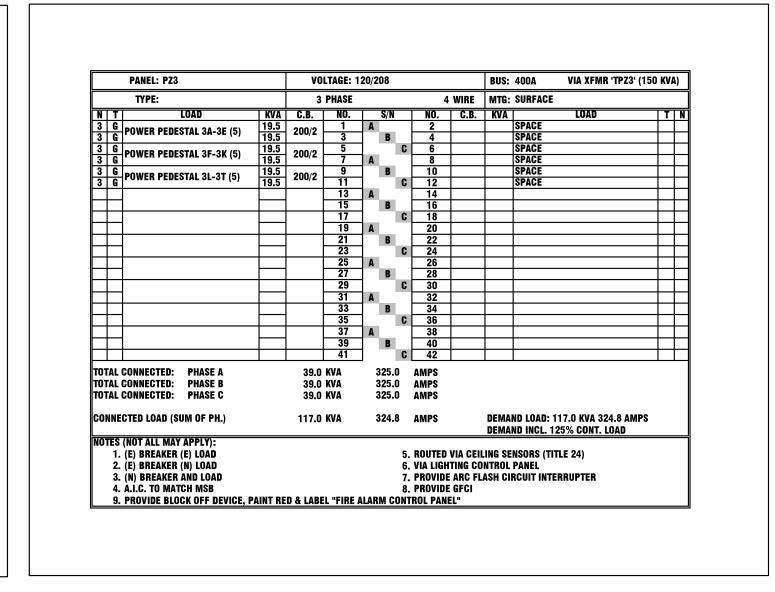
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		PANEL: PZ1		VO	VOLTAGE: 120/208 BUS: 400A VIA 'TPZ1' (150								(VA)	
		TYPE: CU		3	PHASE				4	WIRE	MTG:	SURFACE		
N	T	LOAD	KVA	C.B.	NO.		S/N		NO.	C.B.	KVA	LOAD	T	N
3	G	POWER PEDESTAL 1A-1E (5)	19.5	200/2	1	Α			2			SPACE		
3	G	` ,	19.5	200/2	3		В		4			SPACE		┖
3	G	POWER PEDESTAL 1F-1K (5)	19.5	200/2	5	_		C	6		ļ	SPACE		┡
3	G	, ,	19.5		7	A			8		-	SPACE		⊢
3	G	POWER PEDESTAL 1L-1R (5)	19.5 19.5	200/2	9 11	4	В	C	10 12		-	SPACE SPACE		⊢
<u>ა</u>	u		19.5		13	A		U	14	-	1	SPACE	_	⊢
		1			15	_ ~	В		16		1			┢
			1		17	1		C						t
		1			19	Α			20					T
					21	T	В		22					T
					23			C	24					
					25	Α			26					
					27	4	В		28					┖
					29			C	30					┖
			_		31	A			32					┡
		4			33 35	-	В	C	34 36		<u> </u>			⊢
			+		37	A		U	38		1			⊢
	_	1			39	- A	В		40	-	1		_	⊢
					41	1	D	C						⊢
		COMMENTED BULGE				J ,		_					I	_
		CONNECTED: PHASE A CONNECTED: PHASE B		39.0 39.0			325. 325.		AMPS AMPS					
		CONNECTED: PHASE C		39.0 39.0			325. 325.	-	AMPS					
101	AL	CONNECTED. FIRSE C		33.0	RVA	,	JZJ.	U	AIVIFS					
COI	NNE	CTED LOAD (SUM OF PH.)		117.0	KVA	:	324.	8	AMPS		DEMA	ND LOAD: 117.0 KVA 324.8 AM	PS	
		· · · · · · · · · · · · · · · · · · ·						-			DEMA	ND INCL. 125% CONT. LOAD	-	
NO.	ΓES	(NOT ALL MAY APPLY):												
	1.	(E) BREAKER (E) LOAD						5.	ROUTED	VIA CEII	LING SE	NSORS (TITLE 24)		
		. (E) BREAKER (N) LOAD							. VIA LIGH					
		. (N) BREAKER AND LOAD									ASH CI	RCUIT INTERRUPTER		
		A.I.C. TO MATCH MSB							PROVIDE					
	9.	<u>PROVIDE BLOCK OFF DEVICE, P</u>	AINT RE	D & LABI	L "FIRE A	ALAR	M C	ONT	TROL PANI	EL"				







PANEL: LB1		VO	LTAGE: 1	20/20	08			BUS	: 125A 22K AIC	NEMA 3R	
TYPE: CU		3	PHASE				4 WIRE	мте	: SURFACE		
N T LOAD	KVA	C.B.	NO.		S/N	NO.		KV		T	
3 M EF-1	1.0	20/1	1	Α		2	20/1	0.8		R	_;
3 M EF-2	1.0	20/1	3		В	4		٠.,	SPACE		L
3 B 208V RECP - DRYER	1.8	20/2	5			C 6	20/2	1.8		R	
3 B C SEWER PUMP CNTRL PANEL	1.8	20/1	7	A	В	8 10	20/1	1.8		R	
	0.4 1.2	20/1	11	ا ا		C 12				R	1
3 M SEWER PUMP #1	1.2	20/2	13	Α		14				M	-
3 C IRRIGATION CNTRL PANEL	0.4	20/1	15	^	В	16				R	-;
3 R RECP WASHER	1.5	20/1	17	1 '		C 18				R	3
3 R RECP WASHER	1.5	20/1	19	Α		20				<del>M</del>	3
SPACE	+		21		В	22				M	
3 M SEWER PUMP #2	1.2	20/2	23	1 '		C 24				R	1
3 M SEWER PUMP #2	1.2	20/2	25	Α		26		1.0		R	
SPACE			27		В	28		1.0		M	``
3 M CP-1	0.1	20/1	29			C 30			SPACE		
3 M CP-2	0.1	20/1	31	A		32			SPACE		L
3 M EXHAUST FANS	1.6	20/1	33		В	34			SPACE		L
SPACE			35	_	- (	36			SPACE		L
SPACE			37	A		38			SPACE		L
SPACE			39		В	40		_	SPACE		L
SPACE			41	j		C 42			SPACE		
TOTAL CONNECTED: PHASE A		12.4			03.3	AMPS					
TOTAL CONNECTED: PHASE B			KVA		31.7	AMPS					
TOTAL CONNECTED: PHASE C		10.6	KVA	8	38.3	AMPS					
CONNECTED LOAD (SUM OF PH.)		30.4	KVA	8	34.4	AMPS			AND LOAD: 30.3 KVA 84.1 A AND INCL. 125% CONT. LOA		
NOTES (NOT ALL MAY APPLY): 1. (E) BREAKER (E) LOAD									SENSORS (TITLE 24)		
2. (E) BREAKER (N) LOAD							GHTING C				
3. (N) BREAKER AND LOAD								LASH (	CIRCUIT INTERRUPTER		
4. A.I.C. TO MATCH MSB	AINT PE	D 0 1 4 P.	ueine 1				IDE GFCI				
9. PROVIDE BLOCK OFF DEVICE, F	AINT RE	υ & LABE	L "FIRE !	LAKI	VI COI	VIKUL PA	ANEL"				_

		PANEL: HB1		VO	LTAGE: 2	77/4	180				BUS:	125A	22K AIC	NEMA 3R	<u> </u>
		TYPE: CU.		3	PHASE				4	WIRE	MTG:	SURFACE			
N .	_	LOAD	KVA	C.B.	NO.		S/N		NO.	C.B.	KVA		LOAD		N
	L	SITE LIGHTING	1.0	20/2	1 3	A	В		2	20/1		LTG - BATH	HOUSE INT. HOUSE EXTERIO	<u> </u>	6
_	L L		1.0		5	+	R	C	6	20/1 20/1			ONTROL PANEL	R. L	6
6	늰	SITE LIGHTING	1.0	20/2	<del>  7</del>	A		U	8	20/1	0.4	SPACE	MINUL FANLL	<u> </u>	۲
	c		6.1	00/0	9	1	В		10			SPACE			H
	C	HWH-1	6.1	30/2	11			C	12			SPACE			П
	C	HWH-1	6.1	30/2	13	A	ш		14			SPACE			
3 (	5		6.1	00,2	15	1	В		16	1	12.4			<u>s</u>	3
+		SPACE			17	١.		C	18	60/3	7.4	PANEL 'LB1'	(VIA 'TB1' 45KV		3
+		SPACE SPACE	-		19 21	A			20	-	10.6	SPACE		S	3
+		SPACE			23	-	В	C	22 24			SPACE			Н
+	-	OF AUL	+		20	A		U			-	JI AUL			Н
+	_					┪^	В								Н
十						1		C							П
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4						A									Ш
+	_		-			4	В	C		-		ļ			Н
						J									Щ
		CONNECTED: PHASE A		18.9			68.2		AMPS						
		CONNECTED: PHASE B CONNECTED: PHASE C		25.8 14.9			93.1 53.8		AMPS AMPS						
1014	4L	CONNECTED: PHASE C		14.9	KVA		JJ.(	•	AIVIP3						
CON	NF	CTED LOAD (SUM OF PH.)		596	KVA		71.7	,	AMPS		DEMA	ND LOAD: 66.	.8 KVA 80.3 AMF	s	
JO11		OILD LOAD (OOM OF THE)		03.0			• • • • •		AIIII U				% CONT. LOAD	•	
TOV	ES	(NOT ALL MAY APPLY):													=
	1.	(E) BREAKER (E) LOAD						5.	ROUTED	VIA CEII	LING SE	NSORS (TITLI	E 24)		
		(E) BREAKER (N) LOAD							VIA LIGH						
		(N) BREAKER AND LOAD									ASH CI	RCUIT INTERI	RUPTER		
		A.I.C. TO MATCH MSB							PROVIDE						
		PROVIDE BLOCK OFF DEVICE, I	'AINT RE	D & LABI	EL "FIRE /	ALAF	KM C	UNT	ROL PAN	EL"					

### PANEL SCHEDULES

NO SCALE

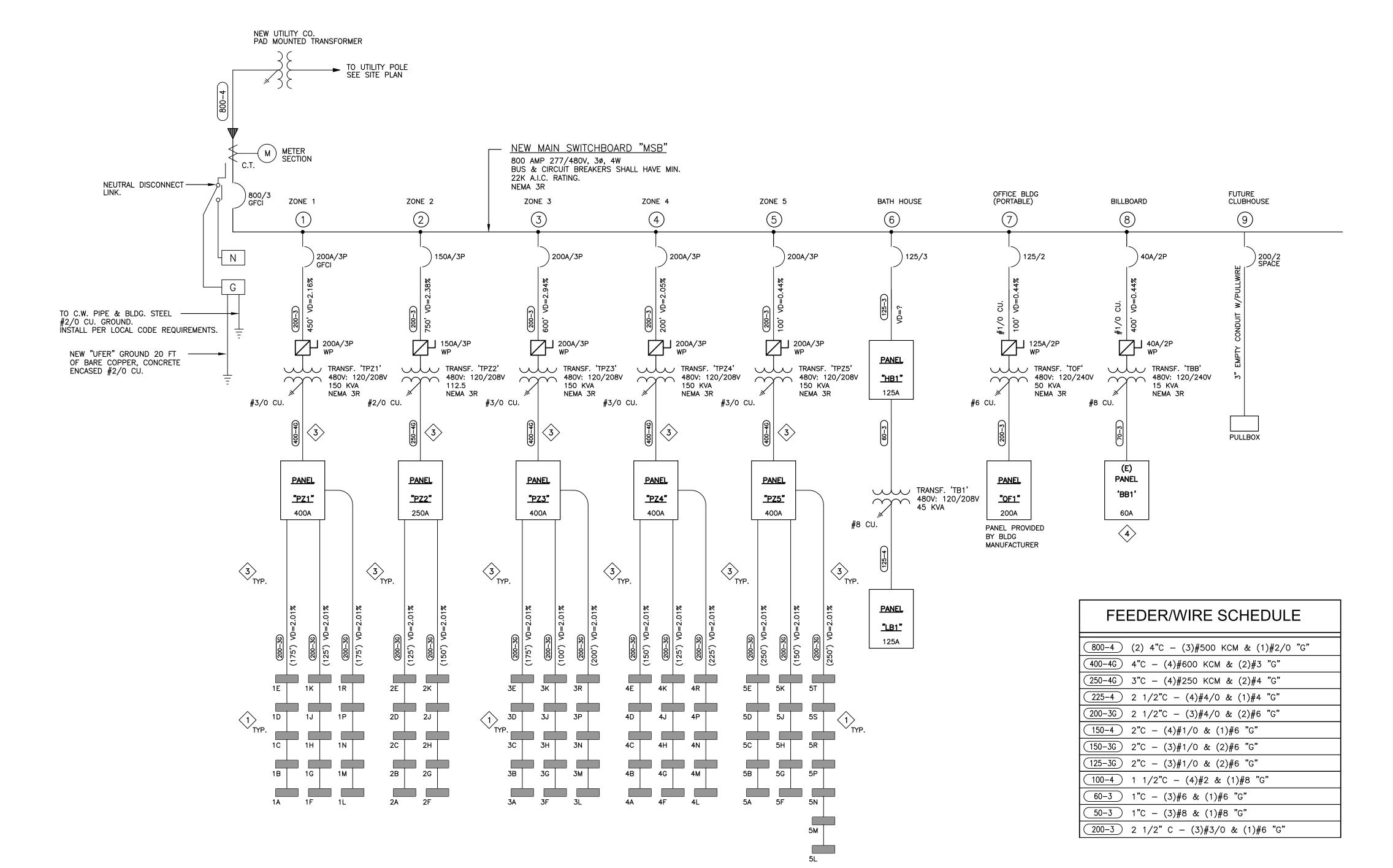
LS&J ELECTRIC 44528 NORTH EL MACERO DRIVE DAVIS, CA. 95618 JEFF HULSE - PRESIDENT 1-530-681-5015

Drawing Sheet Total 09-29-2023

#### LOAD CALCULATIONS

1. RV POWER PEDESTALS: <u>KVA</u> PANELS 'PV1' - 'PV5' 12.0 KVA EA. X QTY. (72) = 864 PER NEC. 551.73(A) @ 41% = 354.3RESTROOMS & SHOWER BLDG: PANEL 'HB1' = 66.8 CHECK-IN OFFICE BLDG: 160 AMPS @ 240V = 38.4 4. EXISTING BILLBOARD = 15.0 5. FUTURE COMMUNITY BUILDING 160 AMPS @ 240V = <u>38.4</u> 512.9

512.9 KVA @ 480V/277, 3 PHASE, 4 WIRE = 617.2 AMPS



AN 800 AMP SERVICE IS ADEQUATE.

Powering forward. Together.

**SMUD**<sup>™</sup>

August 4, 2023 PRIME WEST INVESTMENTS INC ATTENTION: LINDA FRAZIER 27038 COUNTY ROAD 92F WINTERS CA 95694

#### Notification # 32238823

Thank you for submitting your plans for **1501 NORTHGATE BL** for an electric service commitment. Your cooperation enables us to give you the best service possible, as well as provide for your future requirements.

SMUD COMMITMENT LETTER

We are returning one copy of your plans indicating the service location and other requirements checked below. Our commitment is subject to changing conditions and, as a result, may not be valid after twelve months.

Please contact the Designer if additional information is desired.

Designer: LEIGH CARRUTH Telephone (916) 732-6746 Volts: 277/480 Wire: 4 Type: WYE (Street light service voltage will be the same as above.)

Transformer pad required: No [] SMUD Dwg. UVD 2.2 & 2.2A Conduit required: No [] (see sketch) Right-of-way required:

Transformer protection required: No [ ] see sketch and SMUD Dwg. UVD 2.5 Primary pull box required: No [] SMUD Dwg. UVC 1.2, 1.2.2 & 1.2.9 No [X] SMUD Dwg. N/A Secondary J – Box Required: Yes [] Service box required: No [X] SMUD Dwg. N/A No [X] SMUD Dwg. N/A Switchgear pad required: Other requirements: See enclosed Booklet [X] Prints [X]

\*A maximum fault current of 17,100 amps, symmetrical, is based on the largest transformer that could be needed to serve the Single [X] Combined [ ] main sizes of 800 amps under the following assumptions:

- 1. The largest transformer that could be needed is 750 kVA with 5.3 % impedance 2. A primary system impedance of zero ohms
- 3. No motor contributions to the fault, and 4. Zero ohms fault impedance

The meter(s) shall be located on the exterior of the building. When it is absolutely necessary to locate meters in locked rooms, cabinets, or fenced enclosures, consult SMUD's Field Metering at (916) 732-5167.

\*If future load growth necessitates increasing the main switch size, the available fault current should be recalculated.

NOTE: This commitment letter may be required by local inspection authority as part of its plan check requirements.

#### SHEET NOTES

- RV POWER PEDESTAL (MIDWEST U075CP4L10 OR EQUAL). PEDESTAL SHALL BE RATED FOR 100 AMPS, PAD MOUNT, UNMETERED, FEED THRU LUGS, TYPE WITH LED LIGHT. PEDESTAL LOCATION PER 2022 CEC SECTION 551.77; (A)-(F). LOOP FEED PEDESTALS WITH SPECIFIED CONDUIT/CONDUCTORS. SEE PANEL SCHEDULE FOR ADDITIONAL INFORMATION.
- 2 NEW 800 AMP, 480/277V, 3 PHASE, 4 WIRE MAIN SWITCHBOARD 'MSB'.
- EXPOSED, FIXED, NON-CURRENT CARRYING EQUIPMENT OF THE SITE SUPPLY (PEDESTALS) THAT IS NOT ELECTRICALLY CONNECTED TO GROUND, SHALL BE PROVIDED WITH AN EQUIPMENT GROUNDING CONDUCTOR. ROUTE CONDUCTOR WITH THE CIRCUIT CONDUCTORS TO THE SECONDARY SERVICE TRANSFORMER. INSTALL PER NEC/CEC SECTION 551.76; (A)-(E). SEE FEEDER SCHEDULE FOR ADDITIONAL INFORMATION.
- 4 EXISTING BILLBOARD POWER PANEL. PANEL LOCATED ON NORTH COLUMN OF BILLBOARD STRUCTURE. MOUNT NEW 15 KVA TRANSFORMER ON EXISTING BILLBOARD NEAR EXISTING PANEL 'BB1'. PROVIDE A COMPLETE AND OPERATIONAL SYSTEM. COORDINATE WITH SMUD FOR DISCONNECT OF EXISTING SERVICE AND SMUD POLE THAT CURRENTLY FEEDS BILLBOARD.
- 5 LOOP FEED POWER TO PEDESTALS IN DESIGNATED AREA/ZONE.

000 Drawing Sheet

— of — of —

LS&J ELECTRIC 44528 NORTH EL MACERO DRIVE

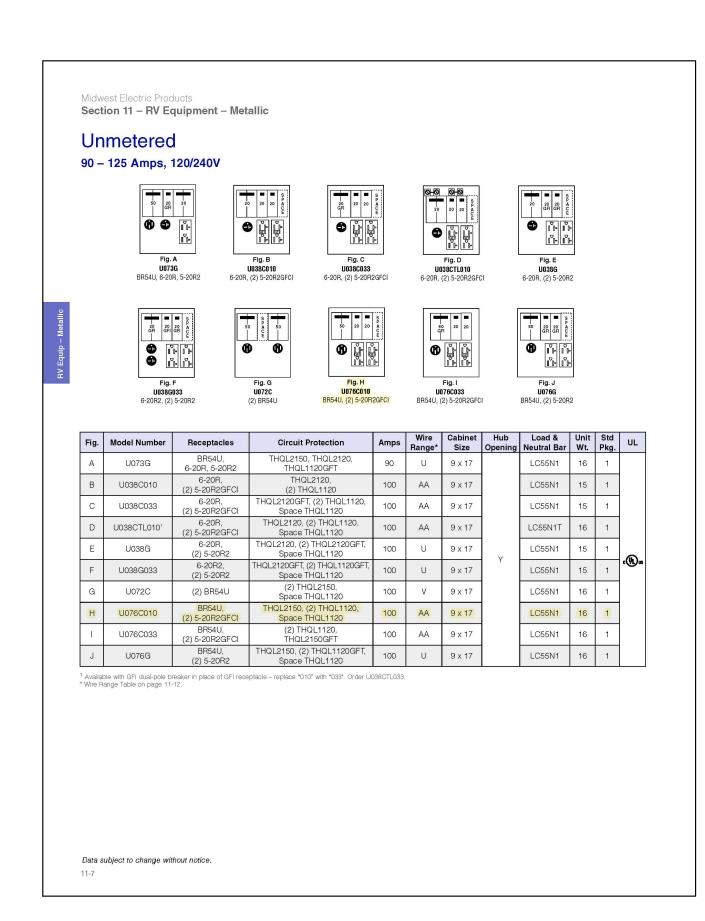
ONELINE DIAGRAM

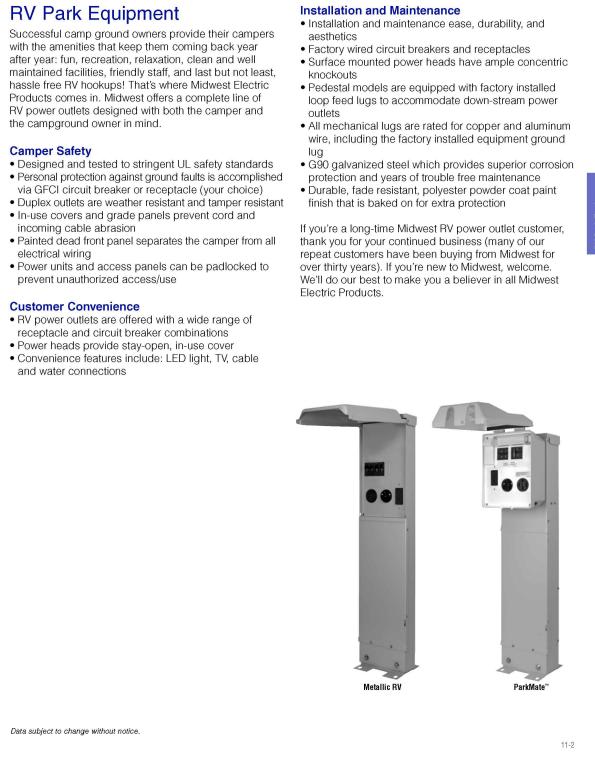
NO SCALE

DAVIS, CA. 95618 JEFF HULSE - PRESIDENT 1-530-681-5015

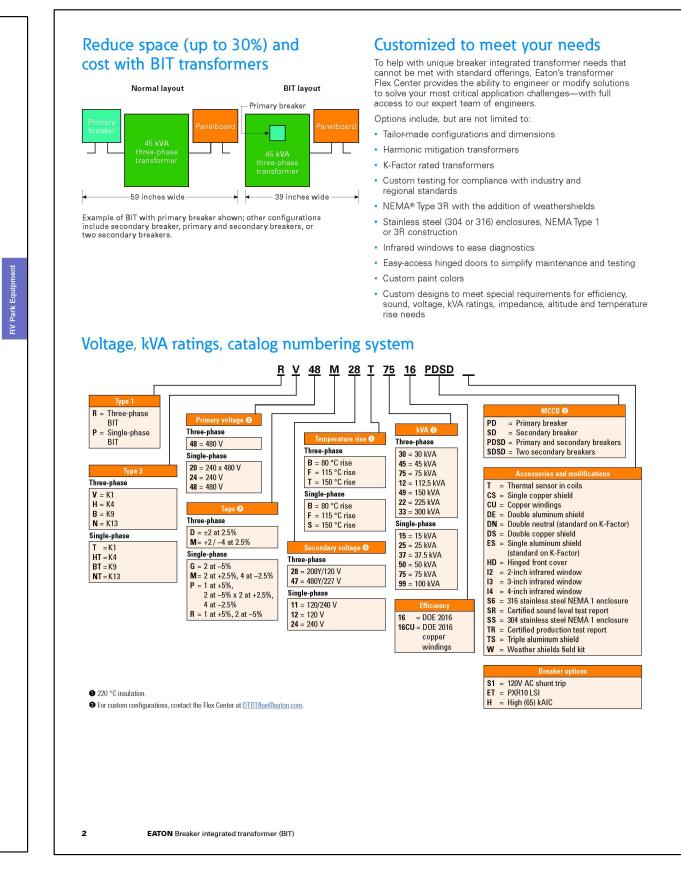
09-29-2023

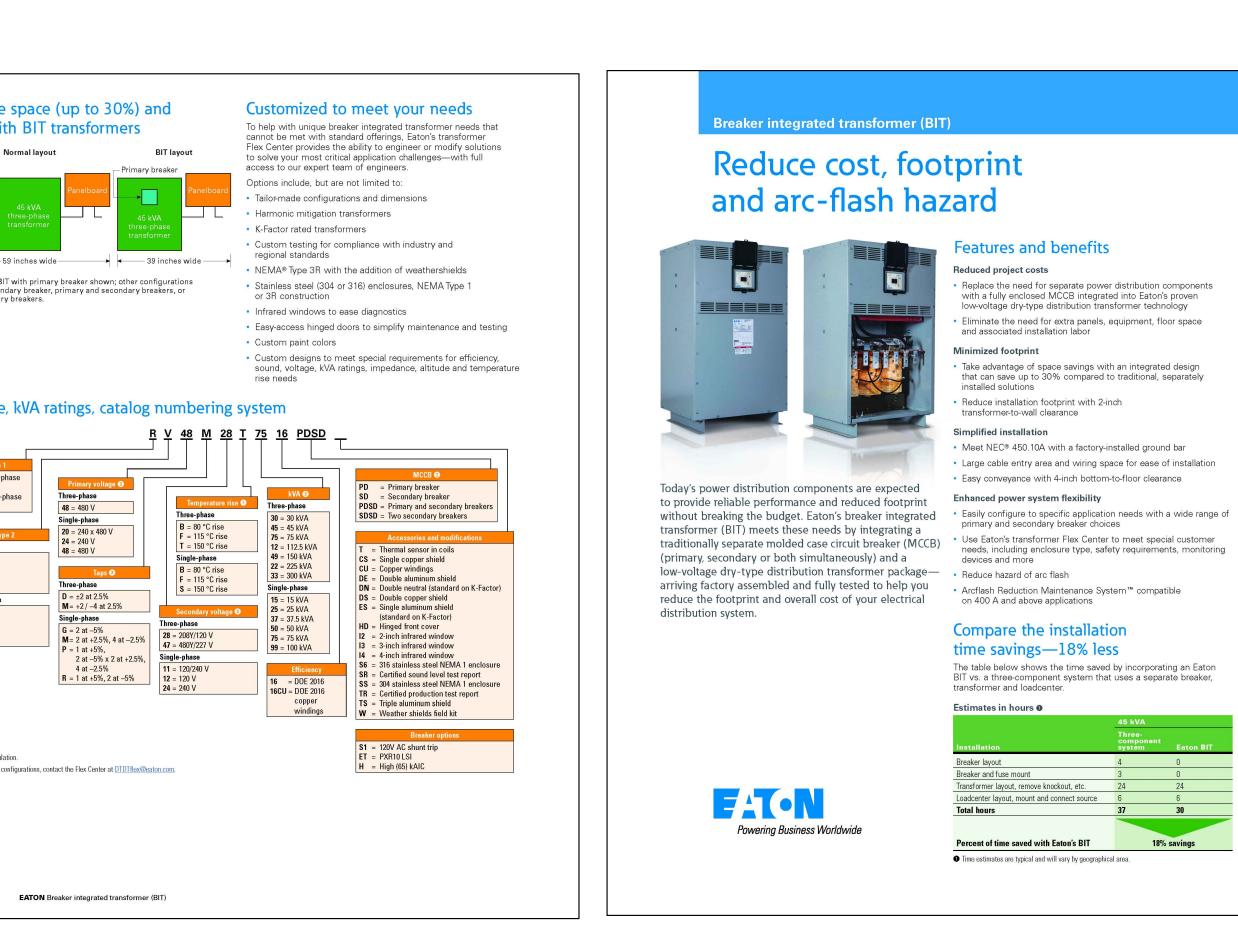
Total





Section 11 – RV Park Equipment





Drawing Sheet Total

LS&J ELECTRIC 44528 NORTH EL MACERO DRIVE DAVIS, CA. 95618 JEFF HULSE - PRESIDENT

1-530-681-5015

09-29-2023

#### GENERAL NOTES:

- 1. ALL NAILING SHALL BE IN ACCORDANCE W/CBC TABLE R602.3(1) AND SECTION 2308
- 2. ALL EXTERIOR DOORS AND WINDOWS SHALL BE WEATHER STRIPPED. ALL JOINTS AND PENETRATIONS SHALL BE CAULKED AND SEALED.
- 3. AFTER THE INSTALLATION OF THE INSULATION, THE INSTALLER SHALL POST IN A CONSPICUOUS LOCATION AN INSULATION CERTIFICATE SIGNED BY THE INSTALLER AND THE BUILDER STATING THAT "THE INSTALLATION CONFORMS WITH THE REQUIREMENTS OF TITLE 24, PART 2, CHAPTER 2-53 OF THE CALIFORNIA ADMINISTRATION CODE.
- 4. THE INSULATION INSTALLED SHALL CONFORM TO FLAME-SPREAD RATING AND SMOKE DENSITY REQUIREMENTS OF CBC SCTION 719
- 5. MANUFACTURED FRAMING HARDWARE SHALL BE SIMPSON STRONG -TIE OR EQUAL HARDWARE SHALL BE INSTALLED PER MANUFACTURES SPECIFICATIONS
- 6. WHEN GYPSUM BOARD IS INSTALLED AS A BASE FOR TILE OR WALLS PANELS AT TUB, SHOW OR WATER CLOSET COMPARTMENT WALLS, WATER-RESISTANT BACKING BOARD SHALL BE INSTALLED PER CBC SECTION 2509
- 7. WATER RESISTANT GYPSUM BOARD SHALL NOT BE INSTALLED IN THE FOLLOWING LOCATIONS:
  - A. OVER VAPOR RETARDER
  - B. IN AREAS SUBJECT TO HIGH HUMIDITY, SUCH AS SAUNAS , STEAM ROOMS OR GANG SHOWERS
  - C. ON CEILINGS WHERE FRAME SPACING EXCEEDS 12"O.C
- 8. GLAZING WITHIN 18" OF THE FLOOR AND 24" OF A DOOR SHALL BE TEMPERED GLASS PER CRC SECTION 308. PROVIDE PERMANENT IDENTIFICATION LABEL PER CRC SECTION 308.1
- 9. SHOWER AND TUB-SHOWER COMBINATIONS SHALL BE PROVIDED WITH INDIVIDUAL CONTROL VALVES SETTING OF 120\*F PER CBC SECTION 418.0
- 10. WATER HEATER
  - SEISMIC STRAPPING: ANCHOR WATER HEATER TO WALL WITH STRAPS AT UPPER AND LOWER 1/3 POINTS PER CPC 508.2
  - VENTING: TYPE B DOUBLE WAL VENT THROUGH THE ROOF W/CAP
- 11. PLUMBING FIXTURES MAXIMUM FLOW RATE (20% REDUCTION REQUIREMENT) PER CGBSC 4.303.1.3.1

SHOWERHEADS: 1.8 GPM @ 80 PSI TUB/SHOWER COMBO: 1.8 GPM @ 80 PSI GRAVITY TANK TOILET: 1.28 GAL/FLUSH LAVATORY FAUCETS: 1.2 GPM @ 60 PSI UTILITY SINK FAUCET: 1.8 GPM @ 60 PSI 1.8 GPM @ 60 PSI

- 12. IRRIGATION CONTROLLERS SHALL BE WEATHER OR SOIL MOISTURE BASED CONTROLLER THAT AUTOMATICALLY ADJUST IRRIGATION IN RESPONSE TO WEATHER CONDITION CHANGES. WEATHER BASED CONTROLLERS WOUT INTEGRAL RAIN SENSORS OR COMMUNICATION SYSTEMS THAT FOR LOCAL RAINFALL SHALL HAVE SEPARATE WIRED OR WIRELESS RAIN SENSOR THAT CONNECTS OR COMMUNICATES WITH THE CONTROLLER PER CGBSC 4.304
- 13. ALL HOSE BIBS SHALL HAVE NON-REMOVABLE BACKFLOW DEVICES ATTACHED
- 14. PROVIDE 4" TALL STREET ADDRESS NUMBERS PLAINLY VISIBLE AND ON CONTRASTING BACK GROUNDS COMPLYING WITH CBC 501.2 AND LOCAL ORDINANCES. VERIFY REQUIREMENTS WITH BUILDING DEPT PRIOR TO INSTALLATION.
- 17. PROVIDE FOR A MINIMUM OF 60% RECYCLE/SALVAGE/REUSE OF NON-HAZARDOUS CONSTRUCTION MATERIALS AND DEMOLITION DEBRIS OR MEET LOCAL CONSTRUCTION/DEMOLITION WASTE MANAGEMENT ORDINANCE, WHICHEVER IS MORE STRINGENT PER CGBSC 4.408
- 18. PROJECT SHALL COMPLY WITH SENATE BILL 407, INSTALLATION OF WATER-CONSERVING PLUMBING FIXTURES THROUGHOUT THE HOUSE IS REQUIRED.

# CODES AND ORDINANCES

CONSTRUCTION SHALL CONFORM TO THE REQUIREMENTS OF THE FOLLOWING CODES AND ORDINANCES:

2022 CALIFORNIA BUILDING CODE
2022 CALIFORNIA RESIDENTIAL CODE
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE
2022 CALIFORNIA MECHANICAL CODE
2022 CALIFORNIA PLUMBING CODE
2022 CALIFORNIA ELECTRICAL CODE
2022 CALIFORNIA FIRE CODE
2022 CALIFORNIA FRE CODE
2022 CALIFORNIA ENERGY CODE (2022 RESIDENTIAL ENERGY STANDARDS)
2022 CALIFORNIA REFERENCED STANDARDS CODE

APPLICABLE LOCAL CODES AND ORDINANCES

BATHHOUSE AND TRASH ENCLOSURE DESIGN FOR:
RIVERDALE RESORT MOBILE HOME PARK
1501 NORTHGATE BOULEVARD
SACRAMENTO, CA

### DESIGN CRITERIA

ROOF LIVE LOAD

ROOF DEAD LOAD

BASIC WIND SPEED

WIND EXPOSURE

SEISMIC DESIGN CATEGORY

SITE CLASS

SEISMIC RESPONSE FACTOR

Sds

O.64g

SOIL BEARING PRESSURE

20PSF

95 MPH

95 MPH

95 MPH

95 MPH

95 MPH

95 MPH

96 MPH

97 MPH

98 MPH

98 MPH

98 MPH

99 MPH

90 MPH

90 MPH

91 MPH

92 MPH

95 MPH

96 MPH

96 MPH

97 MPH

98 MPH

98 MPH

98 MPH

99 MPH

90 MPH

91 MPH

91 MPH

91 MPH

91 MPH

92 MPH

93 MPH

94 MPH

95 MPH

96 MPH

96 MPH

97 MPH

98 MP

# CONSTRUCTION CRITERIA

BUILDING AREA: 672 S.F.

OCCUPANCY TYPE: U

TYPE OF CONSTRUCTION: III-B

	Layout Page Table
Label	Title
A-1	COVER
A-2	FLOOR PLAN
A-3	CMU REINFORCING LAYOUT/ FOUNDATION
A-4	ROOF FRAMING PLAN
A-5	TRASH ENCLOSURE
A-6	ACCESSIBILITY DETAILS
A-7	ACCESSIBILITY DETAILS
A-8	ACCESSIBILITY DETAILS
A-9	ACCESSIBILITY DETAILS
ELECTRICAL	
E2.1	LIGHTING AND POWER PLAN
MECHANICAL	
M1	MECHANICAL PLAN
	<u> </u>

PLUMBING SCHEDULE AND NOTES

WASTE AND VENT PIPING PLAN

WATER PIPING PLAN



NUMBER DATE REVISED BY DESCRIPTION

COVER

SATHHOUSE AND TRASH ENCLOSURE FOR: RIVERDALE RESORT

DGREN ENGINEERIN N. AUBURN STREET SUITE 20 GRASS VALLEY, CA 95945

DATE:

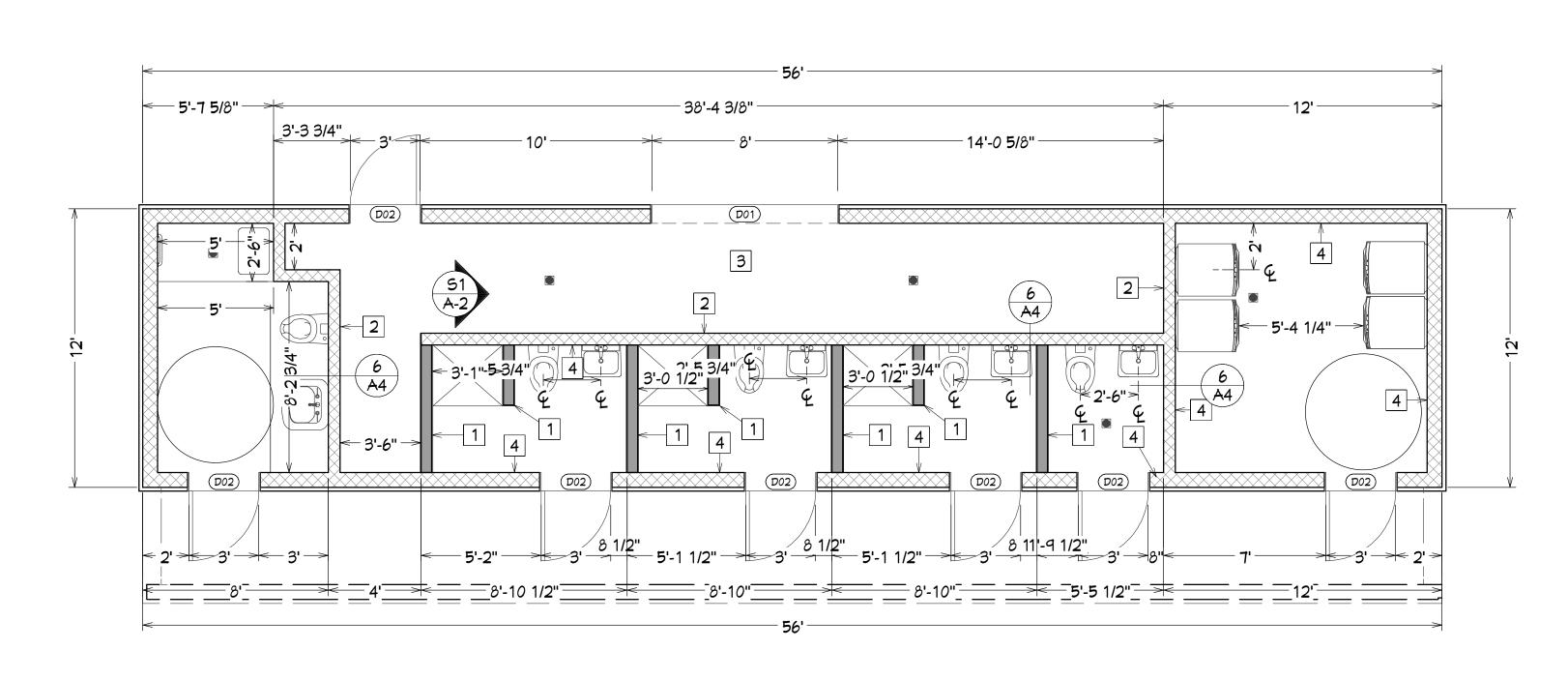
9/20/2023

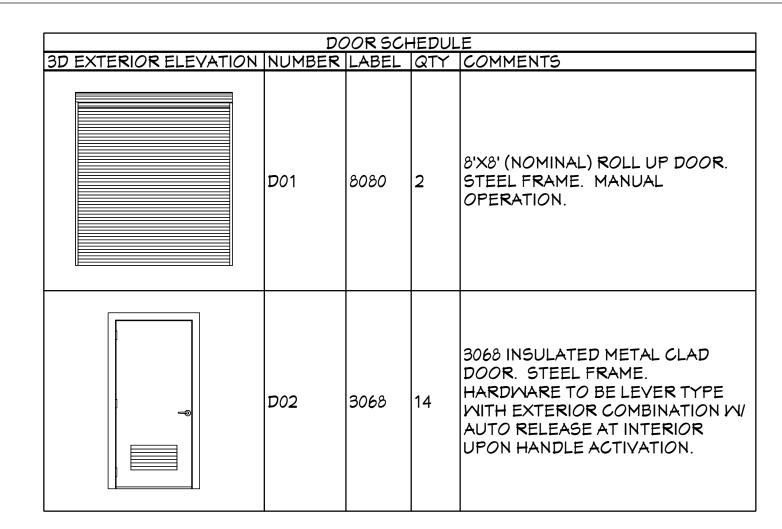
SCALE:

1/4" = 1'-0"

SHEET:

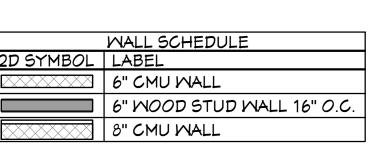
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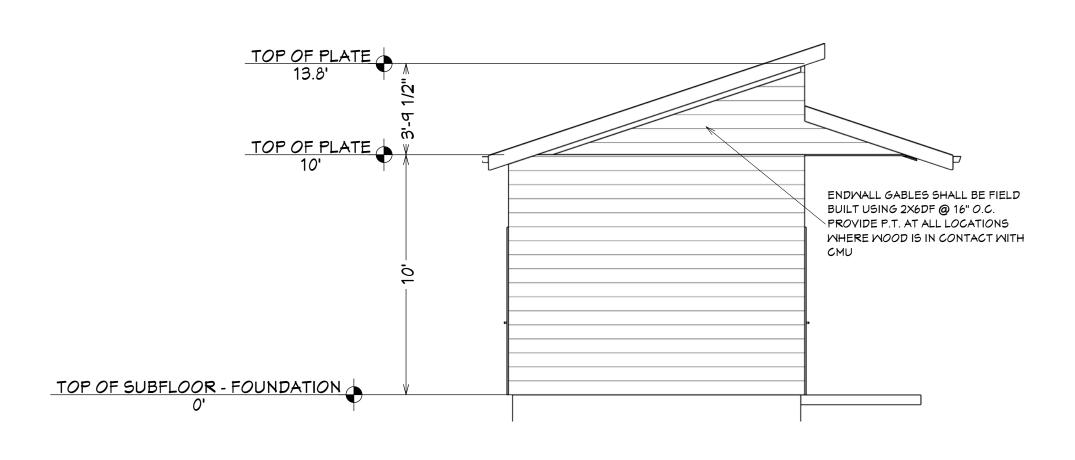




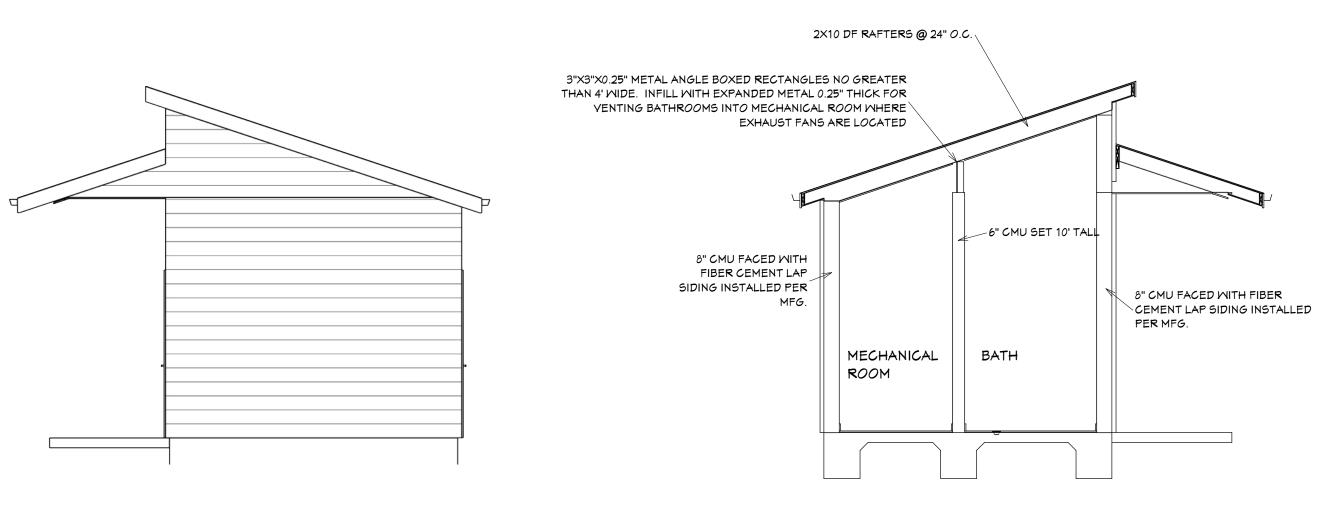
	NOTE SCHEDULE
1	INTERIOR WALLS SHALL BE FACED WITH FRP PANELING INSTALLED PER MFG
2	SPECIFICATIONS INTERIOR 6" CMU WALL. PROVIDE #4 REBAR VERTICAL AND HORIZONTAL
	SPACED MAX 40" O.C. PROVIDE VENTILATION IN MECHANICAL
3	ROOM FOR ALL EQUIPMENT AND EXHAUST VENTILATION FROM ADJACENT
	BATHROOMS THAT ARE OPEN TO THE MECHANICAL ROOM
4	PROVIDE GLOSS LATEX PAINT WITH ACRYLIC AT INTERIOR CMU WALLS

WALL SCHEDULE	
2D SYMBOL	LABEL
	6" CMU WALL
	6" MOOD STUD WALL 16" O.C.
	8" CMU WALL



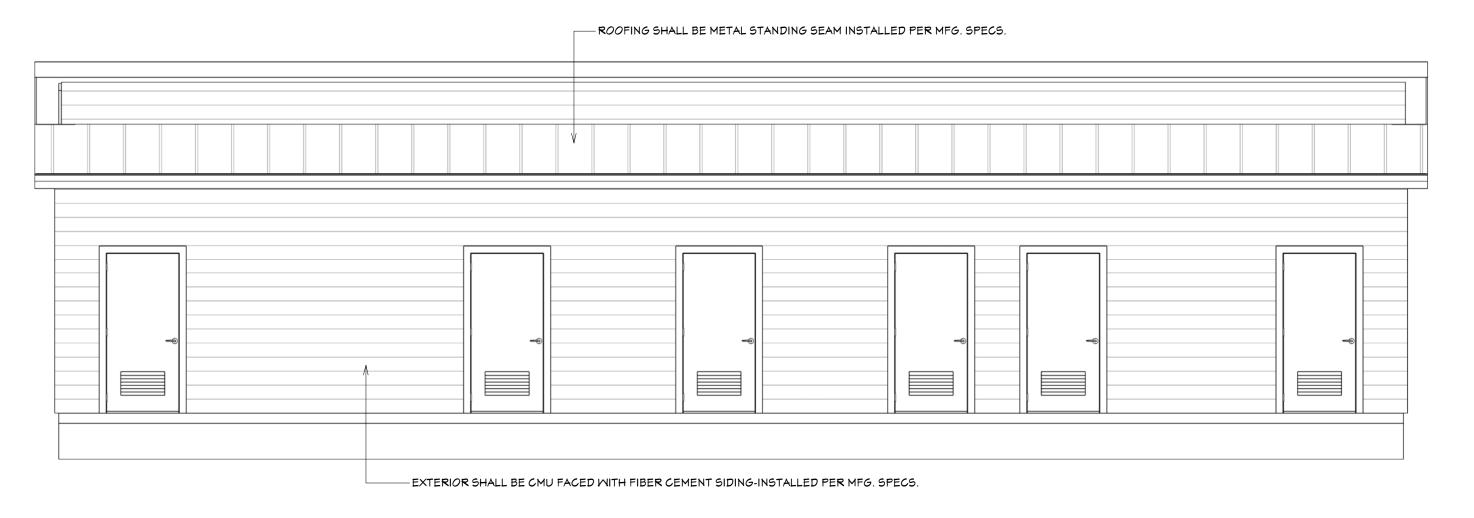


# SIDE ELEVATION

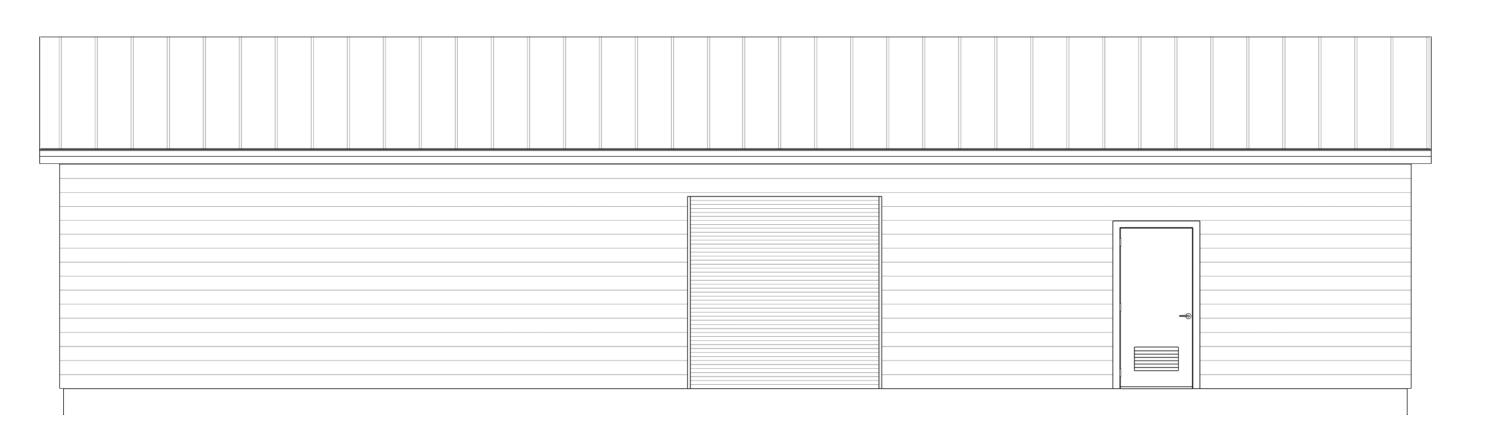


SIDE ELEVATION Cross Section 1

# FLOOR PLAN



# FRONT ELEVATION



REAR ELEVATION

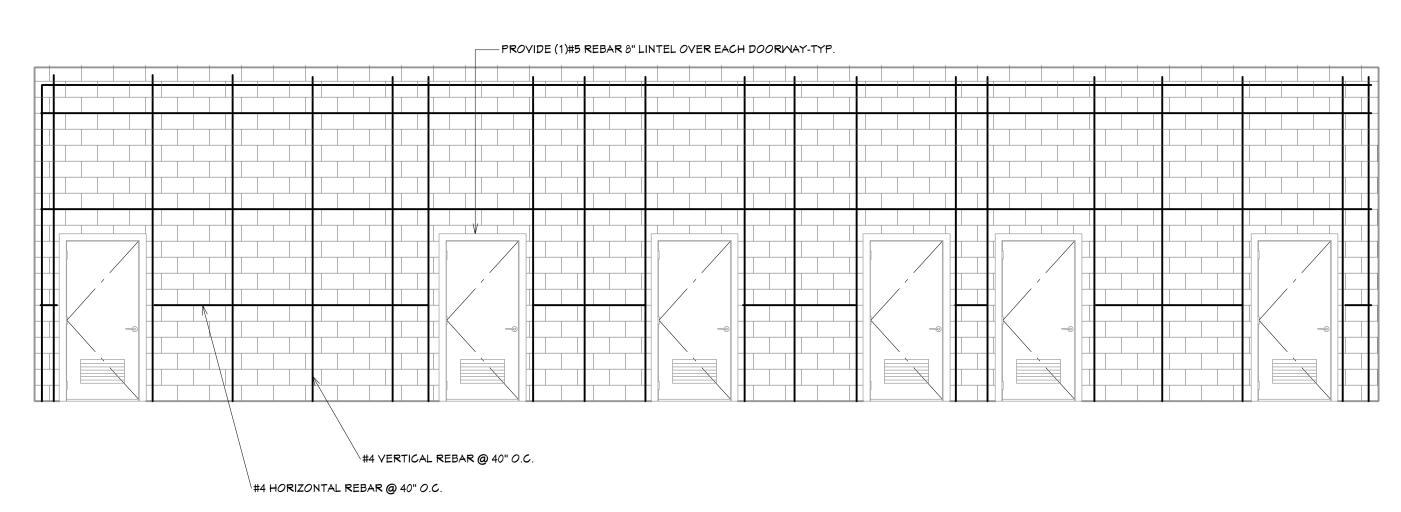
DATE:

9/20/2023

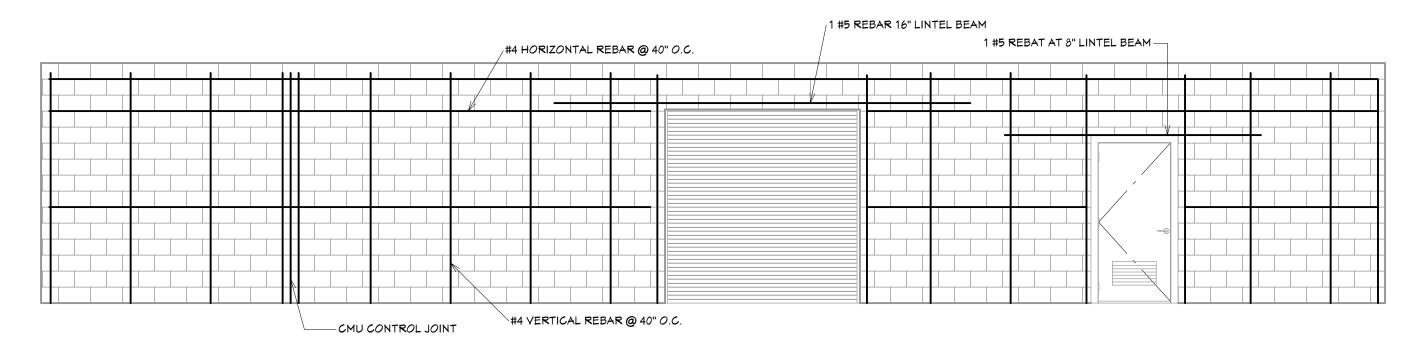
SCALE:

SHEET:

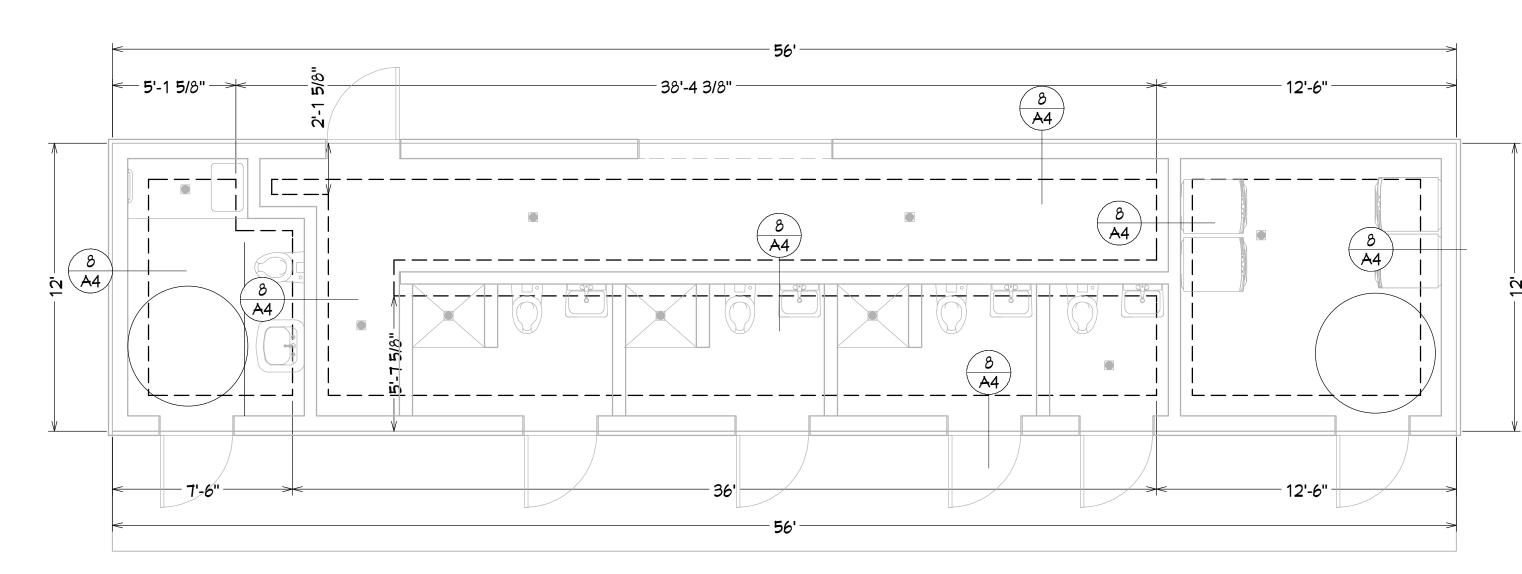
SHEET:



## FRONT MALL



# REAR MALL



FOUNDATION PLAN

# -- #4 HORIZONTAL REBAR @ 40" O.C. \*#4 VERTICAL REBAR @ 40" O.C.

# ENDMALLS

#### 1. CONCRETE MASONRY UNITS (CMU) SHALL BE LIGHTWEIGHT UNITS NOT EXCEEDING 105 PCF CONFORMTING TO ASTM C90, GRADE N, W/MINIMUM COMPRESSIVE STRENGTH = 1,900 PSI FOR 8" BLOCK, UNO. CMU UNITS MUST BE SAMPLED AND TESTED IN ACCORDANCE WITH ASTM C140.

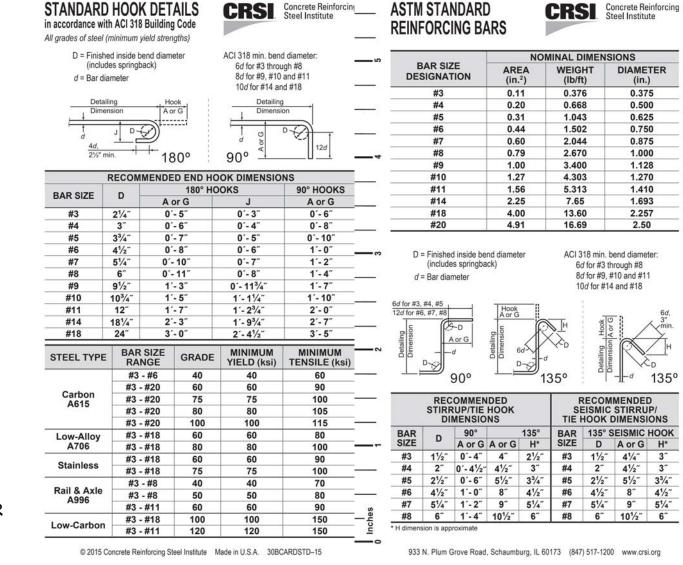
- 2. MORTAR TO BE TYPE S AND BE FRESHLY PREPARED AND UNIFORMLY MIXED IN THE RATIO BY VOLUMES OF 1-PART CEMENT, 1/2 PART LIME PUTTY, 3 PARTS SAND W/ NO MORE WATER THAN IS REQUIRED FOR A WORKABLE CONSISTENCY, MORTAR SHALL BE IN ACCORDANCE WITH ASTM C270.
- 3. NORMAL WEIGHT GROUTE SHALL BE 1-PART CEMENT, 3 PARTS SAND, 2 PARTS PEA GRAVEL BY VOLUME AND BE OF FLUID CONSISTENCY AND A UNIT MEIGHT NOT EXCEEDING 140 PCF, THE MINIMUM 28 DAY ULTIMATE STRENGTH OF THE GROUT SHALL BE 2000 PSI IN ACCORDANCE WITH ASTM C476.
- 4. CONCRETE MASONRY SHALL BE SOLID GROUTED UNO ON DRAWINGS. MECHANICALLY VIBRATE EACH GROUT LIFT, EACH VERTICAL LIFT.
- 5. TYPICAL MASONRY UNIT SIZE SHALL BE NOMINAL 8 X 8 X 16 OPEN END BOND BEAM UNITS UNO. SOLID BOTTOM LINTEL BLOCKS MUST BE USED OVER OPENINGS IN WALLS.
- 6. UNLESS SHOWN OTHERWISE, TYPICAL REINFORCEMENT #4 VERTICAL BARS AT 32" O.C. AT CENTER OF WALL. HORIZONTAL BARS AT 40" O.C. PROVIDE DOWELS FROM FOOTING TO MATCH SIZE AND LOCATION OF EACH VERTICAL BAR, LAP DOWELS PER PLAN.
  - A. 2 #4 HORIZONTAL BARS AT TOP OF WALL

CMU NOTES

- B. 2 #4 HORIZONTAL BARS AT HEAD OF OPENINGS 16'-0" OR LESS IN WIDTH.
- C. 2 #4 VERTICAL BARS FULL HEIGHT IN END, JAMB AND CORNER CELLS.
- D. PROVIDE MIN. LAP SPLICE 62 DIAMETERS FOR #5 AND SMALLER BARS UNO. AT CORNERS PROVIDE HORIZONTAL LAP SPLICE OF 48 BAR DIAMETERS (30" MIN.)
- 7. MINIMUM GROUT LIFT SHALL NOT EXCEED 5'-0" IN ONE DAY UNLESS PROPER PROCEDURES FOR HIGH LIFT GROUTING OF THE GOVERNING AGENCIES ARE FOLLOWED, INCLUDING PROVISION OF CLEAN-OUTS AT THE BOTTOM OF EACH GROUTE LIFT AT EACH CELL CONTAINING VERTICAL REINFORCEMENT.
- 8. MASONRY UNITS SHALL BE CLEAN AND FREE OF ALL SUBSTANCE THAT MAY IMPAIR BOND.
- 9. BOND BEAM TYPE UNITS SHALL BE USED FOR ALL COURSES CONTAINING HORIZONTAL REINFORCEMENT.
- 10. WHEN GROUTING IS STOPPED FOR ONE HOUR OR LONGER, PROVIDE A HORIZONTAL CONSTRUCTION JOINT BY STROPPING THE GROUT POUR 1 1/2" BELOW A HORIZONTAL MORTAR JOINT.
- 11. CONTRACTOR SHALL ADEQUATELY BRACE ALL MASONRY WALLS UNTIL BACKFILL COMPACTION AND/OR PLACEMENT IS COMPLETE.
- 12. REINFORCEMENT SHALL BE ACCURATELY PLACED AS DIMENSIONED ON DRAWINGS AND HELD IN POSITION DURING GROUTING. WHERE NO DIMENSIONS ARE SHOWN, PLACE VERTICAL REINFORCEMENT IN CENTER OF WALL.

# FOUNDATION NOTES

- 1. ALL CONCRETE SHALL HAVE A MINIMUM 28 DAY STRENGTH OF 3,000 PSI (WITHOUT INSPECTION) 2. CEMENT SHALL CONFORM TO ASTM C-150 TYPE 11.
- 3. CONCRETE AGGREGATE SHALL CONFORM TO ASTM C-33.
- 4. ALL REINFORCED STEEL SHALL BE ASTM A-615, GRADE 40 MINIMUM (FS-40,000 PSI) UNLESS OTHERWISE NOTED. MINIMUM LAP SPLICE SHALL BE 40 DIA. UNLESS NOTED OTHERWISE. PROVIDE 3" CLEAR BETWEEN REINFORCING STEEL AND EARTH AT ALL CONDITIONS.
- 5. ALL FOOTINGS SHALL BE PLACED AGAINST FIRM UNDISTURBED SOIL AT DEPTH BELOW GRADE AS SHOWN IN DRAWINGS.
- 6. ALLOWABLE SOIL BEARING VALUES SHALL BE PER GEOTECHNICAL REPORT OR AS ALLOWED BY
- 7. WIRE FABRIC SHALL BE AS INDICATED ON THE PLANS AND CONFIRMED TO ASTM A-185
- 8. SEE DRAWINGS FOR MISCELLANEOUS IRON AND STEEL, ETC. TO BE CAST IN CONCRETE, LOCATIONS OF FLOOR FINISHES AND SLAB DEPRESSIONS. TILE FLOORS AREAS SHALL BE SEPARATED FLOOR AREAS SHALL BE SEPERATED FROM ADJACENT SLAB AREAS WITH A CONTROL OR DEEP JOINT.
- 9. PIPES MAY PASS THROUGH STRUCTURAL CONCRETE IN SLEEVES OR OTHER APPROVED METHOD, BUT MAY NOT BE EMBEDDED THEREIN.
- 10. ALL HARDWARE SPECIFIED ON THE FOUNDATION PLAN SHALL BE SIMPSON STRONG-TIE UNLESS NOTED OTHERWISE. ALL FASTENERS USED ON THIS HARDWARE SHALL BE AS RECOMMENDED BY THE MANUFACTURED.
- 11. THE DISTANCE FROM THE CENTER OF THE HOLDOWN STRAP TO THE NEAREST CONCRETE CORNER SHALL BE PER MANUFACTURE'S REQUIREMENTS.
- 12. ALL ANCHOR BOLTS SHALL BE ASTM A-307, F1554 GRADE 36 AND PLACED WITHIN 12 INCHES OF ALL SPLICES, ENDS, AND CORNERS. ANCHOR BOLTS SPACING SHALL BE A MAXIMUM OF 4'-0" ON CENTER UNLESS NOTED OTHERWISE. PROVIDE 3"X3"X.229" STEEL PLATE WASHERS. MINIMUM ANCHOR BOLT EMBEDMENT SHALL BE 7 INCHES. SEE FOUNDATION PLAN AND SHEARMALL SCHEDULE FOR SPECIFIC REQUIREMENTS.
- 13. SEE PLANS FOR A MINIMUM EMBEDMENT REQUIREMENTS FOR ANCHOR BOLTS AND ALL-THREADED ANCHORS.
- 14. BOTTOM OF FOOTING TRENCHES SHALL BE CLEAN AND LEVEL.
- 15. VERIFY ALL DIMENSIONS WITH THE FLOOR PLAN ANY DISCREPANCIES SHALL BE CALLED TO THE ATTENTION OF THE DESIGNER AND SHALL BE RESOLVED BEFORE PROCEEDING IN THE WORK.
- 16. WHERE 1/2"X10" ANCHOR BOLTS HAVE NOT BEEN PROPERLY LOCATED, USE 1/2" DIAMETER ALL-THREAD AND SIMP. SET EPOXY WITH 41/4" MIN. EMBEDMENT. INSTALL PER MFR'S RQMNTS. VERIFY INSPEC. RQMTS WITH BLDG. DEPT.
- 17. WHERE 5/8"X12" ANCHOR BOLTS HAVE NOT BEEN PROPERLY LOCATED. USE 5/8" DIAMETER ALL-THREAD AND SIMP. SET APOXY WITH 5" MIN. EMBEDMENT. INSTALL PER MFR'S RQMTS. VERIFY INSPEC. RQMTS WITH BLDG. DEPT.
- 18. WHERE 3/4"X15" ANCHOR BOLTS HAVE NOT BEEN PROPERLY LOCATED, USE 3/4" DIAMETER ALL-THREAD AND SIMP. SET EPOXY WITH 63/4" MIN. EMBEDMENT. INSTALL PER MFR'S RQMTS. VERIFY INSPEC. RQMTS WITH BLDG. DEPT.
- 19. FOUNDATION PLATES AND SILLS SHALL BE FOUNDATION GRADE SEE PLANS FOR SIZE AND LOCATION.
- 20. PLUMBING FIXTURES SHOW FOR REFERENCE ONLY SEE FLOOR PLAN FOR LOCATIONS.
- 21. ANCHOR BOLTS, HOLDOWN ANCHORS, REINFORCING STEEL AND FORMS SHALL BE IN-PLACE PRIOR TO CALLING FOR INSPECTION.



# ROOF FRAMING PLAN

5" CONC. SLAB

#4 DOWEL W/24" LAP

8 PERIMETER FOOTING DETAIL-TYP.

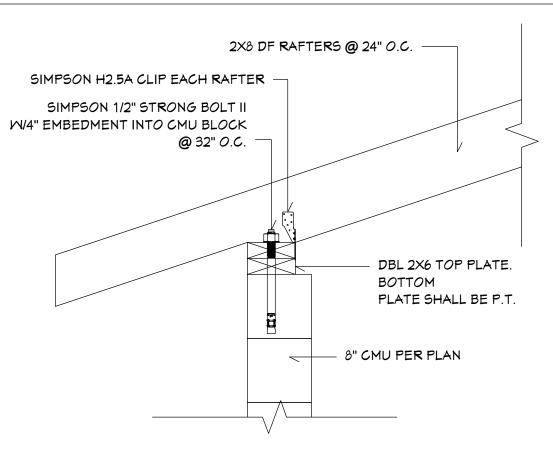
TOP (3) AT BOTTOM

#3 REBAR @ 18" O.C.

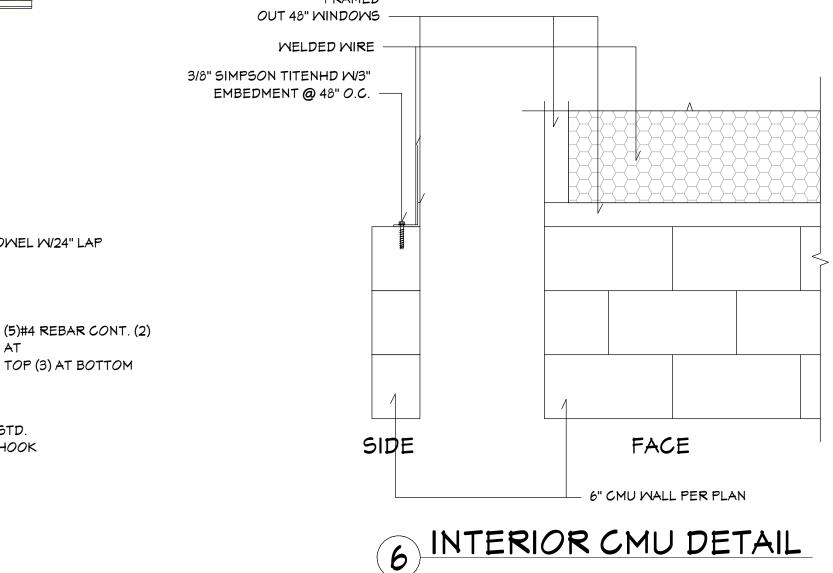
4" MIN. CRUSHED ROCK

# ROOF SHEATHING

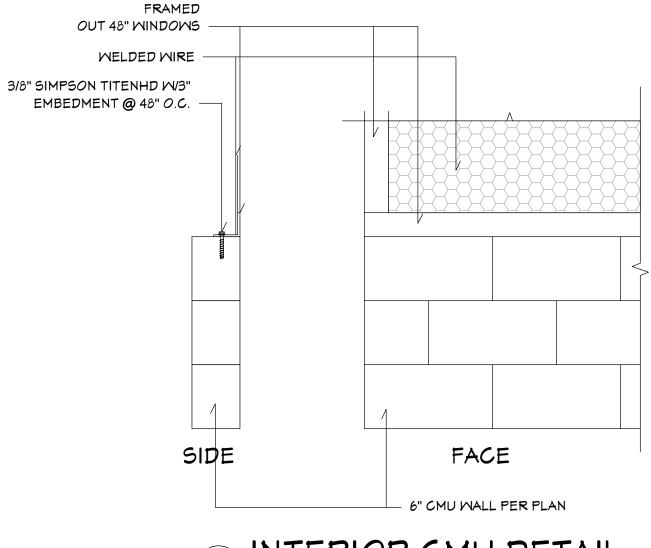
APA rated 15/32" OSB sheathing or equal, span rating 32/16 nailed w/ 8d at 6" o.c. sheathing ends and 12" o.c. field and 6" o.c. roof boundary.



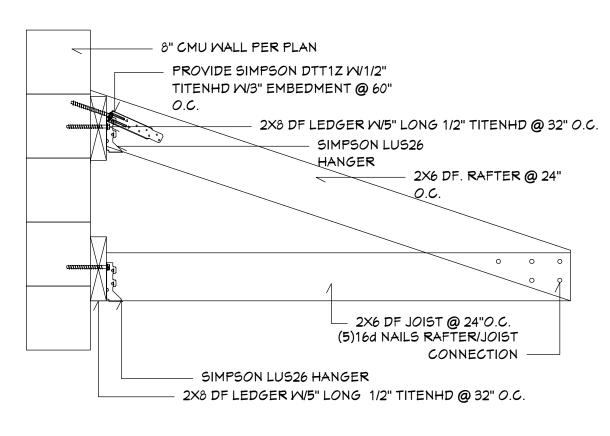
# 5 EAVE DETAIL



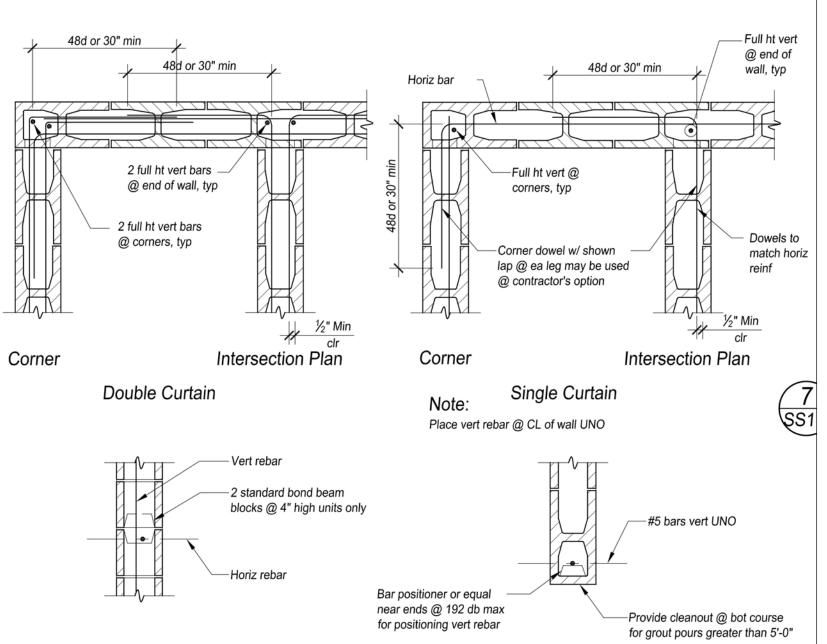
3"X3"X0.25" ANGLE

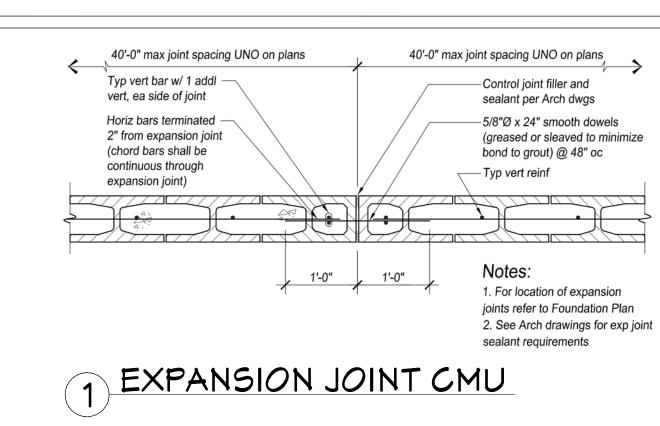


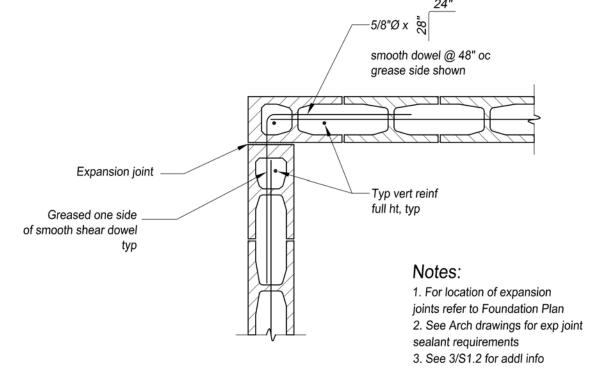
3 CONTROL JOINT CMU



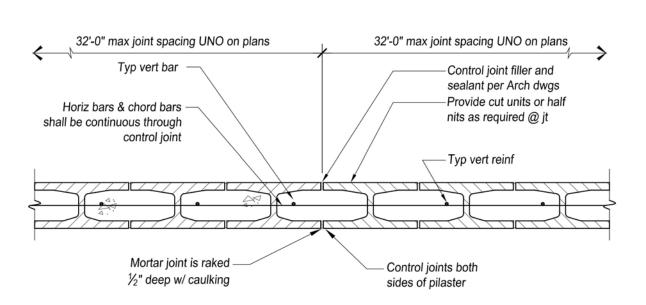
7 OYERHANG DETAIL

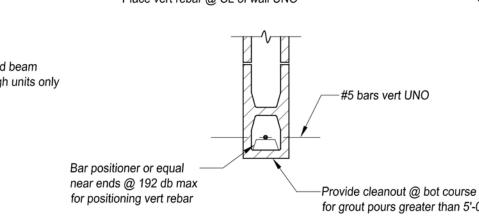






# 2 EXPANSION JOINT CMU





Bond Beam Block - Section Jamb or Wall End Plan (@ all horiz rebar)

4 CMU WALLS

AMING

DATE: 9/20/2023

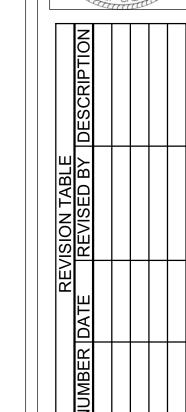
SCALE:

1/4" = 1'-0"

SHEET:

A-4





TRASH ENCLOSURE

ENCLOSURE FOR: RIVERDALE RESORT SACRAMENTO, CA

NDGREN ENGINEERING
N. AUBURN STREET SUITE 200
GRASS VALLEY, CA 95945
PHONE: 530-788-8794

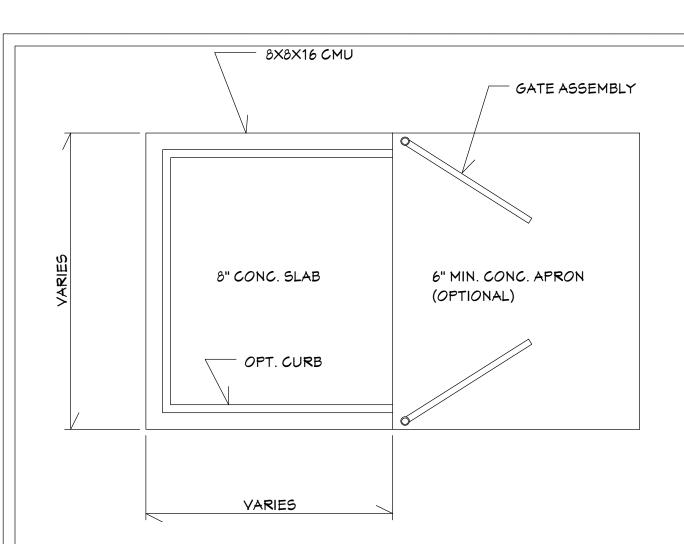
DATE:

9/20/2023

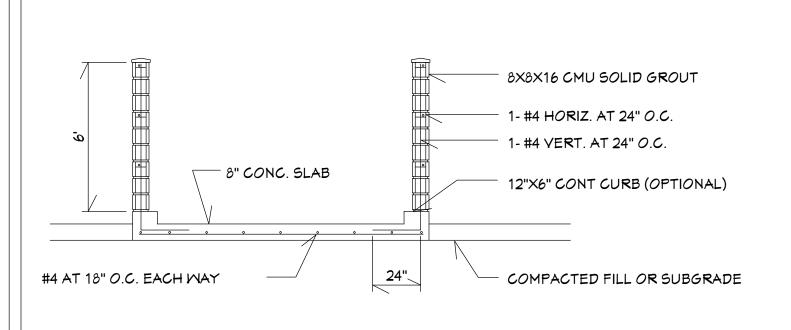
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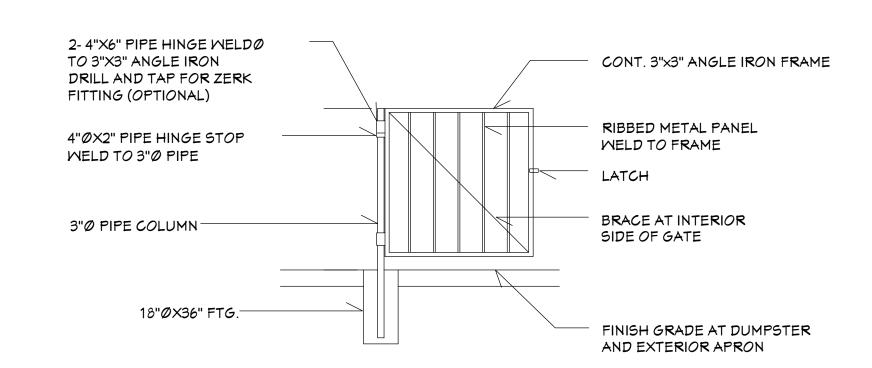
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A-5



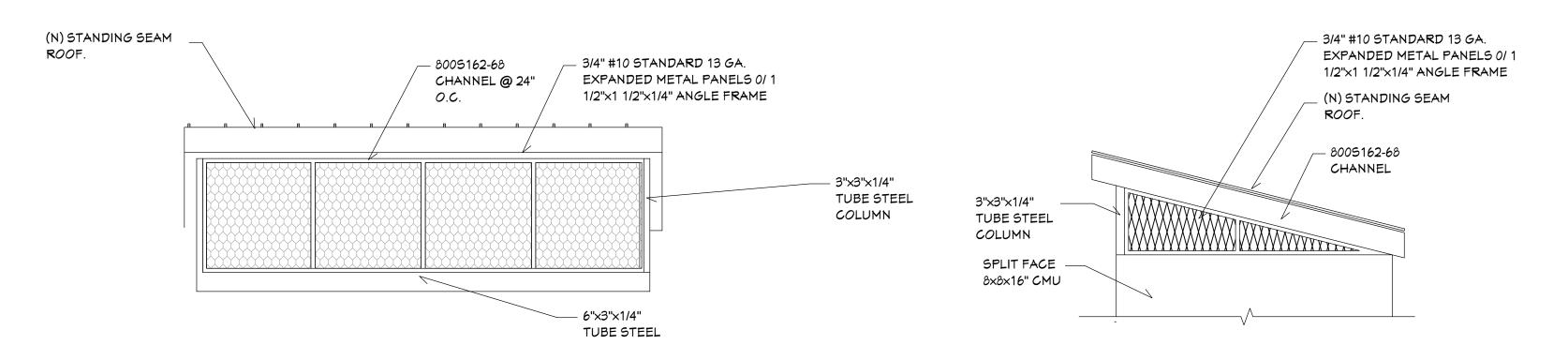
## PLAN VIEW





# SECTION

# GATE ASSEMBLY



TRASH ENCLOSURE ROOF-FACE VIEW

TRASH ENCLOSURE ROOF-SIDE VIEW

### Exceptions:

1. Within animal containment areas, floor and ground surfaces shall not be required to be stable, firm and

#### slip resistant. 2. Areas of sport activity shall not be required to comply with Section 11B-302.

#### 11B-302.2 Carpet.

Carpet or carpet tile shall be securely attached and shall have a firm cushion, pad, or backing or no cushion or pad. Carpet or carpet tile shall have a level loop, textured loop, level cut pile, level cut/uncut pile texture. Pile height shall be  $\frac{1}{2}$  inch (12.7 mm) maximum. Exposed edges of carpet shall be fastened to floor surfaces and shall have trim on the entire length of the exposed edge. Carpet edge trim shall comply with Section 11B-303.



#### 11B-302.3 Openings.

Openings in floor or ground surfaces shall not allow passage of a sphere more than 1/2 inch (12.7 mm) diameter except as allowed in Sections 11B-407.4.3, 11B-409.4.3, 11B-410.4, 11B-810.5.3 and 11B-810.10. Elongated openings shall be placed so that the long dimension is perpendicular to the dominant direction of travel.

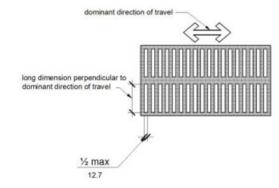


FIGURE 11B-302.3 **ELONGATED OPENINGS IN FLOOR OR GROUND SURFACES** 

#### 11B-303 Changes in level

## 11B-303.1 General.

Where changes in level are permitted in floor or ground surfaces, they shall comply with Section 11B-303.

#### Exceptions:

1. Animal containment areas shall not be required to comply with Section 11B-303.

### 2. Areas of sport activity shall not be required to comply with Section 11B-303.

#### 11B-303.2 Vertical.

Changes in level of  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permitted to be vertical  $^{1}/_{4}$  inch (6.4 mm) high maximum shall be permit



#### 11B-303.3 Beveled.

Changes in level between  $\frac{1}{4}$  inch (6.4 mm) high minimum and  $\frac{1}{2}$  inch (12.7 mm) high maximum shall be beveled with a slope not steeper than 1:2.

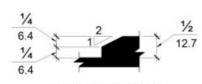


FIGURE 11B-303.3 **BEVELED CHANGE IN LEVEL** 

## 11B-303.4 Ramps.

Changes in level greater than 1/2 inch (12.7 mm) high shall be ramped, and shall comply with Section 11B-405 or 11B-406.

## 11B-303.5 Warning curbs.

Abrupt changes in level exceeding 4 inches (102 mm) in a vertical dimension between walks, sidewalks or other pedestrian ways and adjacent surfaces or features shall be identified by warning curbs at least 6 inches (152 mm) in height above the walk or sidewalk surface.

## Exceptions:

- 1. A warning curb is not required between a walk or sidewalk and an adjacent street or driveway.
- 2. A warning curb is not required when a guard or handrail is provided with a guide rail centered 2 inches (51 mm) minimum and 4 inches (102 mm) maximum above the surface of the walk or sidewalk.

## 11B-304 Turning space

## 11B-304.1 General.

Turning space shall comply with Section 11B-304.

## 11B-304.2 Floor or ground surfaces.

Floor or ground surfaces of a turning space shall comply with Section 11B-302. Changes in level, slopes exceeding 1:48, and detectable warnings shall not be permitted.

# Exception: Reserved.

## 11B-304.3 Size.

Turning space shall comply with Section 11B-304.3.1 or 11B-304.3.2.

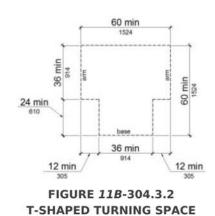
## 11B-304.3.1 Circular space.

The turning space shall be a space of 60 inches \$\pm\$524 mm) diameter minimum. The space shall be permitted to include knee and toe clearance complying with Section 11B-306.

## 11B-304.3.2 T-Shaped space.

The turning space shall be a T-shaped space within a 60 inch (1524 mm) square minimum with arms and base 36 inches (914 mm) wide minimum. Each arm of the T shall be clear of obstructions 12 inches (305 mm)

minimum in each direction and the base shall be clear of obstructions 24 inches (610 mm) minimum. The space shall be permitted to include knee and toe clearance complying with Section 11B-306 only at the end of either the base or one arm.



## 11B-304.4 Door swing.

Doors shall be permitted to swing into turning spaces.

## 11B-305 Clear floor or ground space

## 11B-305.1 General.

Clear floor or ground space shall comply with Section 11B-305.

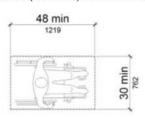
#### 11B-305.2 Floor or ground surfaces.

Floor or ground surfaces of a clear floor or ground space shall comply with Section 11B-302. Changes in level, slopes exceeding 1:48, and detectable warnings shall not be permitted.

#### Exception: Reserved.

#### 11B-305.3 Size.

The clear floor or ground space shall be 30 inches (762 mm) minimum by 48 inches (1219 mm) minimum.



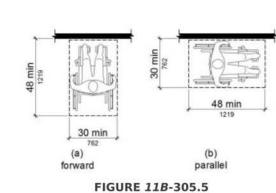
## CLEAR FLOOR OR GROUND SPACE

#### 11B-305.4 Knee and toe clearance.

Unless otherwise specified, clear floor or ground space shall be permitted to include knee and toe clearance complying with Section 11B-306.

## 11B-305.5 Position.

Unless otherwise specified, clear floor or ground space shall be positioned for either forward or parallel approach to



#### POSITION OF CLEAR FLOOR OR GROUND SPACE

#### 11B-305.6 Approach.

One full unobstructed side of the clear floor or ground space shall adjoin an accessible route or adjoin another clear floor or ground space. Clear floor or ground space may overlap an accessible route, unless specifically prohibited elsewhere in this chapter.

## 11B-305.7 Maneuvering clearance.

Where a clear floor or ground space is located in an alcove or otherwise confined on all or part of three sides, additional maneuvering clearance shall be provided in accordance with Sections 11B-305.7.1 and 11B-305.7.2.

#### 11B-305.7.1 Forward approach.

Alcoves shall be 36 inches (914 mm) wide minimum where the depth exceeds 24 inches (610 mm).

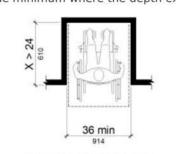
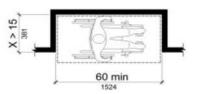


FIGURE 11B-305.7.1 MANEUVERING CLEARANCE IN AN ALCOVE, FORWARD APPROACH

### 11B-305.7.2 Parallel approach.

Alcoves shall be 60 inches (1524 mm) wide minimum where the depth exceeds 15 inches (881 mm).



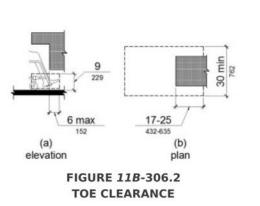
#### FIGURE 11B-305.7.2 MANEUVERING CLEARANCE IN AN ALCOVE, PARALLEL APPROACH

## 11B-306 Knee and toe clearance

## 11B-306.1 General.

Where space beneath an element is included as part of clear floor or ground space or turning space, the space shall comply with Section 11B-306. Additional space shall not be prohibited beneath an element but shall not be considered as part of the clear floor or ground space or turning space.

## 11B-306.2 Toe clearance



## 11B-306.2.1 General.

Space under an element between the finish floor or ground and 9 inches £29 mm) above the finish floor or ground shall be considered toe clearance and shall comply with Section 11B-306.2.

## 11B-306.2.2 Maximum depth.

Toe clearance shall extend 25 inches (635 mm) maximum under an element.

Exception: Toe clearance shall extend 19 inches (483 mm) maximum under lavatories required to be accessible by Section 11B-213.3.4.

# 11B-306.2.3 Minimum required depth.

Where toe clearance is required at an element as part of a clear floor space, the toe clearance shall extend 17 inches (432 mm) minimum under the element.

1. The toe clearance shall extend 19 inches (483 mm) minimum under sinks required to be accessible

#### 2. The toe clearance shall extend 19 inches (483 mm) minimum under built-in dining and work surfaces required to be accessible.

# 11B-306.2.4 Additional clearance.

Space extending greater than 6 inches (152 mm) beyond the available knee clearance at 9 inches (229 mm) above the finish floor or ground shall not be considered toe clearance.

## 11B-306.2.5 Width.

Toe clearance shall be 30 inches (762 mm) wide minimum.

### 11B-306.3 Knee clearance.

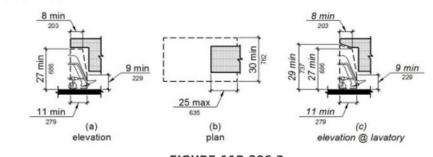


FIGURE 11B-306.3 KNEE CLEARANCE

#### 11B-306.3.1 General.

Space under an element between 9 inches (229 mm) and 27 inches (686 mm) above the finish floor or ground shall be considered knee clearance and shall comply with Section 11B-306.3.

Exception: At lavatories required to be accessible by Section 11B-213.3.4, space between 9 inches (229 mm) and 29 inches (737 mm) above the finish floor or ground, shall be considered knee clearance.

#### 11B-306.3.2 Maximum depth.

Knee clearance shall extend 25 inches (635 mm) maximum under an element at 9 inches 229 mm) above the finish floor or ground.

#### 11B-306.3.3 Minimum required depth.

Where knee clearance is required under an element as part of a clear floor space, the knee clearance shall be 11 inches (279 mm) deep minimum at 9 inches (229 mm) above the finish floor or ground, and 8 inches (203 mm) deep minimum at 27 inches (686 mm) above the finish floor or ground.

1. At lavatories required to be accessible by Section 11B-213.3.4, the knee clearance shall be 27 inches (686 mm) high minimum above the finish floor or ground at a depth of 8 inches (203 mm) minimum increasing to 29 inches (737 mm) high minimum above the finish floor or ground at the front edge of a counter with a built-in lavatory or at the front edge of a wall-mounted lavatory fixture.

2. At dining and work surfaces required to be accessible, knee clearance shall extend 19 inches (483 mm) deep minimum at 27 inches (686 mm) above the finish floor or ground.

#### 11B-306.3.4 Clearance reduction.

Between 9 inches (229 mm) and 27 inches (686 mm) above the finish floor or ground, the knee clearance shall be permitted to reduce at a rate of 1 inch (25 mm) in depth for each 6 inches (152 mm) in height.

Exception: The knee clearance shall not be reduced at built-in dining and work surfaces required to be accessible by Section 11B-226.1.

#### 11B-306.3.5 Width.

Knee clearance shall be 30 inches (762 mm) wide minimum.

#### 11B-307 Protruding objects

#### 11B-307.1 General.

Protruding objects shall comply with Section 11B-307.

#### 11B-307.2 Protrusion limits.

Objects with leading edges more than 27 inches (686 mm) and not more than 80 inches (2032 mm) above the finish floor or ground shall protrude 4 inches (102 mm) maximum horizontally into the circulation path.

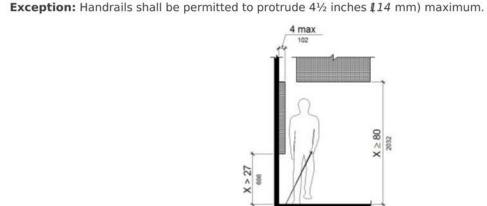
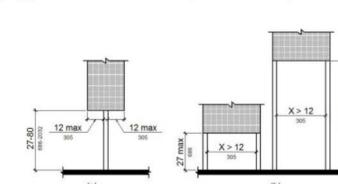


FIGURE 11B-307.2 LIMITS OF PROTRUDING OBJECTS

## 11B-307.3 Post-mounted objects.

Free-standing objects mounted on posts or pylons shall overhang circulation paths 12 inches (305 mm) maximum when located 27 inches (686 mm) minimum and 80 inches (2032 mm) maximum above the finish floor or ground. Where a sign or other obstruction is mounted between posts or pylons and the clear distance between the posts or pylons is greater than 12 inches (305 mm), the lowest edge of such sign or obstruction shall be 27 inches (686 mm) maximum or 80 inches (2032 mm) minimum above the finish floor or ground.

Exception: The sloping portions of handrails serving stairs and ramps shall not be required to comply with Section 11B-307.3.



#### FIGURE 11B-307.3 POST-MOUNTED PROTRUDING OBJECTS

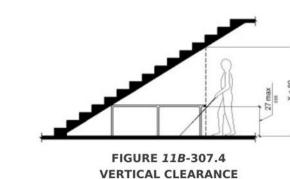
## 11B-307.3.1 Edges and corners.

Where signs or other objects are mounted on posts or pylons, and their bottom edges are less than 80 inches (2032 mm) above the floor or ground surface, the edges of such signs and objects shall be rounded or eased and the corners shall have a minimum radius of  $^{1}/_{8}$  inch (3.2 mm).

## 11B-307.4 Vertical clearance.

Vertical clearance shall be 80 inches 2032 mm) high minimum. Guardrails or other barriers shall be provided where the vertical clearance is less than 80 inches (2032 mm) high. The leading edge of such guardrail or barrier shall be located 27 inches (686 mm) maximum above the finish floor or ground.

Exception: Door closers and door stops shall be permitted to be 78 inches 1981 mm) minimum above the finish floor or ground.



Protruding objects shall not reduce the clear width required for accessible routes.

#### 11B-308 Reach ranges

#### 11B-308.1 General.

Reach ranges shall comply with Section 11B-308.

#### 11B-308.1.1 Electrical switches.

Controls and switches intended to be used by the occupant of a room or area to control lighting and receptacle outlets, appliances or cooling, heating and ventilating equipment, shall comply with Section 11B-308 except the low reach shall be measured to the bottom of the outlet box and the high reach shall be measured to the top of the outlet box.

#### 11B-308.1.2 Electrical receptacle outlets.

Electrical receptacle outlets on branch circuits of 30 amperes or less and communication system receptacles shall comply with Section 11B-308 except the low reach shall be measured to the bottom of the outlet box and the high reach shall be measured to the top of the outlet box.

#### 11B-308.2 Forward reach.

#### 11B-308.2.1 Unobstructed.

Where a forward reach is unobstructed, the high forward reach shall be 48 inches 1219 mm) maximum and the low forward reach shall be 15 inches (381 mm) minimum above the finish floor or ground.

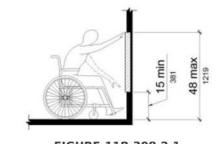
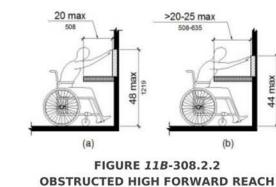


FIGURE 11B-308.2.1 **UNOBSTRUCTED FORWARD REACH** 

#### 11B-308.2.2 Obstructed high reach.

Where a high forward reach is over an obstruction, the clear floor space shall extend beneath the element for a distance not less than the required reach depth over the obstruction. The high forward reach shall be 48 inches (1219 mm) maximum where the reach depth is 20 inches 508 mm) maximum. Where the reach depth exceeds 20 inches (508 mm), the high forward reach shall be 44 inches \$118 mm) maximum and the reach depth shall be 25 inches (635 mm) maximum.



## 11B-308.3 Side reach.

11B-308.3.1 Unobstructed. Where a clear floor or ground space allows a parallel approach to an element and the side reach is

inches (381 mm) minimum above the finish floor or ground.

1. An obstruction shall be permitted between the clear floor or ground space and the element where the depth of the obstruction is 10 inches (254 mm) maximum.

unobstructed, the high side reach shall be 48 inches (1219 mm) maximum and the low side reach shall be 15

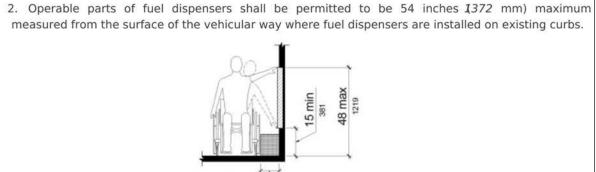


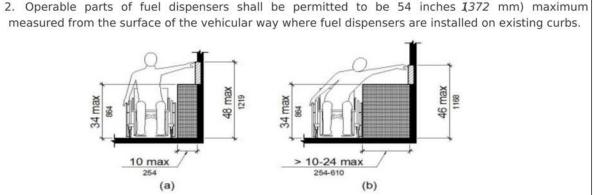
FIGURE 11B-308.3.1 UNOBSTRUCTED SIDE REACH

## 11B-308.3.2 Obstructed high reach.

Where a clear floor or ground space allows a parallel approach to an element and the high side reach is over an obstruction, the height of the obstruction shall be 34 inches (864 mm) maximum and the depth of the obstruction shall be 24 inches (610 mm) maximum. The high side reach shall be 48 inches (1219 mm) maximum for a reach depth of 10 inches (254 mm) maximum. Where the reach depth exceeds 10 inches (254 mm), the high side reach shall be 46 inches (1168 mm) maximum for a reach depth of 24 inches 610 mm) maximum.

## **Exceptions:**

1. The top of washing machines and clothes dryers shall be permitted to be 36 inches 914 mm) maximum above the finish floor.



**OBSTRUCTED HIGH SIDE REACH** 

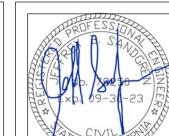
FIGURE 11B-308.3.2

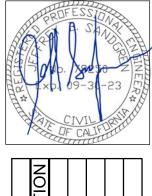
#### 11B-308.4 Suggested reach ranges for children. Where building elements such as coat hooks, lockers or operable parts are designed for use primarily by children,

the suggested dimensions of Table 11B-308.4 shall be permitted. These dimensions apply to either forward or side reaches. TABLE 11B-308.4

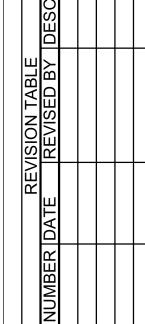
## SUGGESTED DIMENSIONS FOR CHILDREN'S USE

Forward or Side Reach	Ages 3 and 4	Ages 5 through 8	Ages 9 through 12
High (maximum)	36 inches (914 mm)	40 inches (1016 mm)	44 inches (1118 mm
Low (minimum)	20 inches (508 mm)	18 inches (457 mm)	16 inches (406 mm)











DATE:

SCALE:

9/20/2023

SHEET:

11B-402.1 General.

## 11B-402.2 Components.

Accessible routes shall consist of one or more of the following components: walking surfaces with a running slope not steeper than 1:20, doorways, ramps, curb ramps excluding the flared sides, elevators and platform lifts. All components of an accessible route shall comply with the applicable requirements of Division 4.

#### 11B-403 Walking surfaces

#### 11B-403.1 General.

Walking surfaces that are a part of an accessible route shall comply with Section 11B-403.

#### 11B-403.2 Floor or ground surface.

Floor or ground surfaces shall comply with Section 11B-302.

## 11B-403.3 Slope.

The running slope of walking surfaces shall not be steeper than 1:20. The cross slope of walking surfaces shall not be steeper than 1:48.

**Exception:** The running slope of sidewalks shall not exceed the general grade established for the adjacent street or

#### 11B-403.4 Changes in level.

Changes in level shall comply with Section 11B-303.

#### 11B-403.5 Clearances.

Walking surfaces shall provide clearances complying with Section 11B-403.5.

Exception: Within employee work areas, clearances on common use circulation paths shall be permitted to be decreased by work area equipment provided that the decrease is essential to the function of the work being performed.

### 11B-403.5.1 Clear width.

Except as provided in Sections 11B-403.5.2 and 11B-403.5.3, the clear width of walking surfaces shall be 36 inches (914 mm) minimum.

## Exceptions:

- 1. The clear width shall be permitted to be reduced to 32 inches \$13 mm) minimum for a length of 24 inches (610 mm) maximum provided that reduced width segments are separated by segments that are 48 inches (1219 mm) long minimum and 36 inches \$14 mm) wide minimum.
- 2. The clear width for walking surfaces in corridors serving an occupant load of 10 or more shall be 44 inches
- 3. The clear width for sidewalks and walks shall be 48 inches (1219 mm) minimum. When, because of rightof-way restrictions, natural barriers or other existing conditions, the enforcing agency determines that compliance with the 48-inch (1219 mm) clear sidewalk width would create an unreasonable hardship, the
- clear width may be reduced to 36 inches (914 mm). 4. The clear width for aisles shall be 36 inches (914 mm) minimum if serving elements on only one side, and 44 inches (1118 mm) minimum if serving elements on both sides.
- 5. The clear width for accessible routes to accessible toilet compartments shall be 44 inches (1118 mm) except for door-opening widths and door swings.

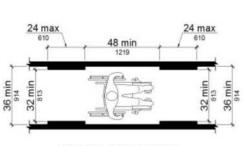


FIGURE 11B-403.5.1 **CLEAR WIDTH OF AN ACCESSIBLE ROUTE** 

### 11B-403.5.2 Clear width at turn.

Where the accessible route makes a 180 degree turn around an element which is less than 48 inches [219 mm] wide, clear width shall be 42 inches (1067 mm) minimum approaching the turn, 48 inches (1219 mm) minimum at the turn and 42 inches (1067 mm) minimum leaving the turn.

Exception: Where the clear width at the turn is 60 inches (1524 mm) minimum compliance with Section 11B-403.5.2 shall not be required.

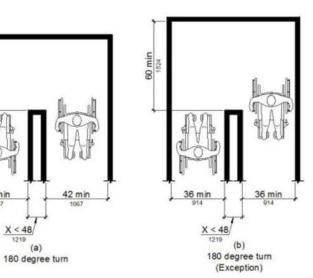


FIGURE 11B-403.5.2 **CLEAR WIDTH AT TURN** 

## 11B-403.5.3 Passing spaces.

An accessible route with a clear width less than 60 inches (£524 mm) shall provide passing spaces at intervals of 200 feet (60,960 mm) maximum. Passing spaces shall be either: a space 60 inches £524 mm) minimum by 60 inches (1524 mm) minimum; or, an intersection of two walking surfaces providing a T-shaped space complying with Section 11B-304.3.2 where the base and arms of the T-shaped space extend 48 inches \$\mathbb{\pm}219\$ mm) minimum beyond the intersection.

## 11B-403.6 Handrails.

Where handrails are provided along walking surfaces with running slopes not steeper than 1:20 they shall comply with Section 11B-505.

## 11B-403.7 Continuous gradient.

All walks with continuous gradients shall have resting areas, 60 inches (1524 mm) in length, at intervals of 400 feet (121,920 mm) maximum. The resting area shall be at least as wide as the walk. The slope of the resting area in all directions shall be 1:48 maximum.

## 11B-404 Doors, doorways and gates

## 11B-404.1 General.

Doors, doorways and gates that are part of an accessible route shall comply with ection 11B-404.

## Exceptions:

1. Doors, doorways and gates designed to be operated only by security personnel shall not be required to comply

with Sections 11B-404.2.7, 11B-404.2.8, 11B-404.2.9, 11B-404.3.2 and 11B-404.3.4 through 11B-404.3.7. A sign visible from the approach side complying with Section 11B-703.5 shall be posted stating "Entry restricted and controlled by security personnel"

2. At detention and correctional facilities, doors, doorways and gates designed to be operated only by security personnel shall not be required to comply with Sections 11B-404.2.7, 11B-404.2.8, 11B-404.2.9, 11B-404.3.2 and 11B-404.3.4 through 11B-404.3.7.

## 11B-404.2 Manual doors, doorways and manual gates.

Manual doors and doorways and manual gates intended for user passage shall comply with Section 11B-404.2.

## 11B-404.2.1 Revolving doors, gates and turnstiles.

Revolving doors, revolving gates and turnstiles shall not be part of an accessible route.

## 11B-404.2.2 Double-leaf doors and gates.

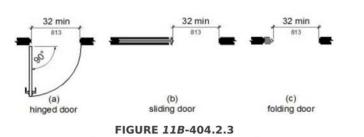
At least one of the active leaves of doorways with two leaves shall comply with 6ections 11B-404.2.3 and 11B-404.2.4.

#### 11B-404.2.3 Clear width.

Door openings shall provide a clear width of 32 inches (\$13 mm) minimum. Clear openings of doorways with swinging doors shall be measured between the face of the door and the stop, with the door open 90 degrees. Openings more than 24 inches (610 mm) deep shall provide a clear opening of 36 inches (914 mm) minimum. There shall be no projections into the required clear opening width lower than 34 inches (864 mm) above the finish floor or ground. Projections into the clear opening width between 34 inches (864 mm) and 80 inches (2032 mm) above the finish floor or ground shall not exceed 4 inches (102 mm).

### **Exceptions:**

- 1. In alterations, a projection of 5/8 inch (15.9 mm) maximum into the required clear width shall be permitted for the latch side stop.
- 2. Door closers and door stops shall be permitted to be 78 inches 1981 mm) minimum above the finish floor or ground.



#### 11B-404.2.4 Maneuvering clearances.

Minimum maneuvering clearances at doors and gates shall comply with Section 11B-404.2.4. Maneuvering clearances shall extend the full width of the doorway and the required latch side or hinge side clearance.

CLEAR WIDTH OF DOORWAYS

## Exception: Reserved.

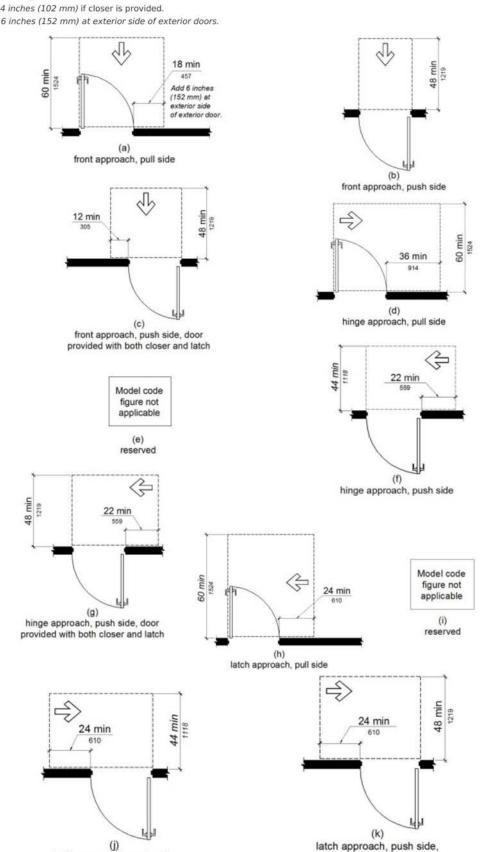
11B-404.2.4.1 Swinging doors and gates. Swinging doors and gates shall have maneuvering clearances complying with Table 11B-404.2.4.1.

#### TABLE 11B-404.2.4.1 MANEUVERING CLEARANCES AT MANUAL SWINGING DOORS AND GATES

TYPE OF USE		MINIMUM MANEUVERING CLEARANCE		
Approach direction	Door or gate side	Perpendicular to doorway	Parallel to doorway (beyond latch side unless noted	
From front	Pull	60 inches (1524 mm)	18 inches (457 mm) <sup>5</sup>	
From front	Push	48 inches (1219 mm)	0 inches (0 mm) <sup>1</sup>	
From hinge side	Pull	60 inches (1524 mm)	36 inches (914 mm)	
From hinge side	Push	44 inches (1118 mm) <sup>2</sup>	22 inches (559 mm) <sup>3</sup>	
From latch side	Pull	60 inches (1524 mm)	24 inches (610 mm)	
From latch side	Push	44 inches (1118 mm) <sup>4</sup>	24 inches (610 mm)	

1. Add 12 inches (305 mm) if closer and latch are provided.

- 2. Add 4 inches (102 mm) if closer and latch are provided.
- 3. Beyond hinge side. 4. Add 4 inches (102 mm) if closer is provided.
- 5. Add 6 inches (152 mm) at exterior side of exterior doors



#### FIGURE 11B-404.2.4.1 MANEUVERING CLEARANCES AT MANUAL SWINGING DOORS AND GATES

door provided with closer

## 11B-404.2.5 Thresholds.

Thresholds, if provided at doorways, shall be  $\frac{1}{2}$  inch (12.7 mm) high maximum. Raised thresholds and changes in level at doorways shall comply with Sections 11B-302 and 11B-303.

## 11B-404.2.7 Door and gate hardware.

Handles, pulls, latches, locks and other operable parts on doors and gates shall comply with Section 11B-309.4.

Operable parts of such hardware shall be 34 inches (864 mm) minimum and 44 inches (1118 mm) maximum above the finish floor or ground. Where sliding doors are in the fully open position, operating hardware shall be exposed and

## **Exceptions:**

- 1. Existing locks shall be permitted in any location at existing glazed doors without stiles, existing overhead rolling doors or grilles and similar existing doors or grilles that are designed with locks that are activated only at the top or bottom rail.
- 2. Access gates in barrier walls and fences protecting pools, spas and hot tubs shall be permitted to have operable parts of the release of latch on self-latching devices at 54 inches (1372 mm) maximum above the finish floor or ground provided the self-latching devices are not also self-locking devices and operated by means of a key, electronic opener or integral combination lock.

## 11B-404.2.8 Closing speed.

Door and gate closing speed shall comply with Section 11B-404.2.8.

latch approach, push side

## 11B-404.2.8.1 Door closers and gate closers.

Door closers and gate closers shall be adjusted so that from an open position of 90 degrees, the time required to move the door to a position of 12 degrees from the latch is 5 seconds minimum.

## 11B-404.2.8.2 Spring hinges.

Door and gate spring hinges shall be adjusted so that from the open position of 70 degrees, the door or gate shall move to the closed position in 1.5 seconds minimum.

## 11B-404.2.9 Door and gate opening force.

1. Interior hinged doors and gates: 5 pounds (22.2 N) maximum

The force for pushing or pulling open a door or gate shall be as follows:

- 2. Sliding or folding doors: 5 pounds (22.2 N) maximum.
- 3. Required fire doors: the minimum opening force allowable by the appropriate administrative authority, not to exceed 15 pounds (66.7 N).
- 4. Exterior hinged doors: 5 pounds (22.2 N) maximum.
- These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door

or gate in a closed position. Exception: When, at a single location, one of every eight exterior door leafs, or fraction of eight, is a powered door, other exterior doors at the same location, serving the same interior space, may have a maximum opening

force of 8.5 pounds (37.8 N). The powered leaf(s) shall be located closest to the accessible route. a. Powered doors shall comply with Section 11B-404.3. Powered doors shall be fully automatic doors

complying with Builders Hardware Manufacturers' Association (BHMA) A156.10 or low energy operated doors

complying with BHMA A156.19. b. Powered doors serving a building or facility with an occupancy of 150 or more shall be provided with a back-up battery or back-up generator. The back-up power source shall be able to cycle the door a minimum of

push plates, vertical actuation bars or other similar operating devices complying with Section 11B-309.

- c. Powered doors shall be controlled on both the interior and exterior sides of the doors by sensing devices,
- At each location where push plates are provided there shall be two push plates; the centerline of one push plate shall be 7 inches (178 mm) minimum and 8 inches (203 mm) maximum above the floor or ground surface and the centerline of the second push plate shall be 30 inches (762 mm) minimum and 44 inches (1118 mm) maximum above the floor or ground surface. Each push plate shall be a minimum of 4 inches (102 mm) diameter or a minimum of 4 inches by 4 inches (102 mm by 102 mm) square and shall display the International Symbol of Accessibility complying with Section 11B-703.7.
- At each location where vertical actuation bars are provided the operable portion shall be located so the bottom is 5 inches (127 mm) maximum above the floor or ground surface and the top is 35 inches (889 mm) minimum above the floor or ground surface. The operable portion of each vertical actuation bar shall be a minimum of 2 inches (51 mm) wide and shall display the International Symbol of Accessibility complying with Section 11B-703.7.
- Where push plates, vertical actuation bars or other similar operating devices are provided, they shall be placed in a conspicuous location. A level and clear floor or ground space for forward or parallel approach complying with Section 11B-305 shall be provided, centered on the operating device. Doors shall not swing into the required clear floor or ground space.
- d. Signs identifying the accessible entrance required by Section 11B-216.6 shall be placed on, or immediately adjacent to, each powered door. Signs shall be provided in compliance with BHMA A156.10 or BHMA A156.19,
- e. In addition to the requirements of Item d, where a powered door is provided in buildings or facilities containing assembly occupancies of 300 or more, a sign displaying the International Symbol of Accessibility measuring 6 inches by 6 inches (152 mm by 152 mm), complying with Section 11B-703.7, shall be provided above the door on both the interior and exterior sides of each powered door.

#### 11B-404.2.10 Door and gate surfaces.

Swinging door and gate surfaces within 10 inches Q54 mm) of the finish floor or ground measured vertically shall have a smooth surface on the push side extending the full width of the door or gate. Parts creating horizontal or vertical joints in these surfaces shall be within  $\frac{1}{16}$  inch (1.6 mm) of the same plane as the other and be free of sharp or abrasive edges. Cavities created by added kick plates shall be capped.

#### Exceptions:

- 1. Sliding doors shall not be required to comply with Section 11B-404.2.10.
- 2. Tempered glass doors without stiles and having a bottom rail or shoe with the top leading edge tapered at 60 degrees minimum from the horizontal shall not be required to meet the 10 inch (254 mm) bottom smooth surface height requirement.
- 3. Doors and gates that do not extend to within 10 inches £54 mm) of the finish floor or ground shall not be required to comply with Section 11B-404.2.10.
- 4. Reserved.

#### 11B-404.2.11 Vision lights. Doors, gates and side lights adjacent to doors or gates, containing one or more glazing panels that permit viewing

through the panels shall have the bottom of at least one glazed panel located 43 inches (1092 mm) maximum above the finish floor.

Exception: Glazing panels with the lowest part more than 66 inches (1676 mm) from the finish floor or ground shall not be required to comply with Section 11B-404.2.11.

## 11B-603 Toilet and bathing rooms

## Toilet and bathing rooms shall comply with Section 11B-603.

11B-603.1 General.

11B-603.2 Clearances. Clearances shall comply with Section 11B-603.2.

#### 11B-603.2.1 Turning space. Turning space complying with Section 11B-304 shall be provided within the room.

11B-603.2.2 Overlap.

## Required clear floor spaces, clearance at fixtures and turning space shall be permitted to overlap.

11B-603.2.3 Door swing. Doors shall not swing into the clear floor space or clearance required for any fixture Doors to accessible water closet compartments shall be permitted to encroach into the turning space without limitation. Other than doors

to accessible water closet compartments, a door, in any position, shall be permitted to encroach into the

#### turning space by 12 inches (305 mm) maximum. **Exceptions:**

- Reserved. 2. Where the toilet room or bathing room is for individual use and a clear floor space complying with Section 11B-305.3 is provided within the room beyond the arc of the door swing, doors shall be permitted to swing into the clear floor space or clearance required for any fixture.
- 3. In residential dwelling units complying with Section 11B-233.3.1.1, doors shall be permitted to swing over the turning space without limitation.

## 11B-603.3 Mirrors.

Mirrors located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 40 inches (1016 mm) maximum above the finish floor or ground. Mirrors not located above lavatories or countertops shall be installed with the bottom edge of the reflecting surface 35 inches (889 mm) maximum above the finish floor

## 11B-603.4 Coat hooks, shelves and medicine cabinets.

Coat hooks shall be located within one of the reach ranges specified in Section 11B-308. Shelves shall be located 40 inches (1016 mm) minimum and 48 inches (1219 mm) maximum above the finish floor. Medicine cabinets shall be located with a usable shelf no higher than 44 inches (1118 mm) maximum above the finish floor.

## 11B-603.5 Accessories.

Where towel or sanitary napkin dispensers, waste receptacles or other accessories are provided in toilet facilities, at least one of each type shall be located on an accessible route. All operable parts, including coin slots, shall be 40

## inches (1016 mm) maximum above the finish floor.

11B-603.6 Guest room toilet and bathing rooms. Toilet and bathing rooms within guest rooms that are not required to provide mobility features complying with Section 11B-806.2 shall provide all toilet and bathing fixtures in a location that allows a person using a wheelchair measuring 30 inches by 48 inches (762 mm by 1219 mm) to touch the wheelchair to any lavatory, urinal, water closet, tub, sauna, shower stall and any other similar sanitary installation, if provided.

Exception: Baby diaper changing stations are not required to comply with Section 11B-603.5.

## 11B-604 Water closets and toilet compartments

## 11B-604.1 General.

Water closets and toilet compartments shall comply with Sections 11B-604.2 through 11B-604.8.

**Exception:** Water closets and toilet compartments for children's use shall be permitted to comply with Section 11B-604.9.

### 11B-604.2 Location.

The water closet shall be positioned with a wall or partition to the rear and to one side. The center-line of the water closet shall be 17 inches (432 mm) minimum to 18 inches (457 mm) maximum from the side wall or partition, except that the water closet shall be 17 inches (432 mm) minimum and 19 inches (483 mm) maximum from the side wall or partition in the ambulatory accessible toilet compartment specified in Section 11B-604.8.2. Water closets shall be arranged for a left-hand or right-hand approach.

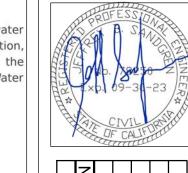




FIGURE 11B-604.2 WATER CLOSET LOCATION

accessible

water closets

#### 11B-604.3 Clearance.

Clearances around water closets and in toilet compartments shall comply with Section 11B-604.3.

#### 11B-604.3.1 Size.

Clearance around a water closet shall be 60 inches (£524 mm) minimum measured perpendicular from the side wall and 56 inches (1422 mm) minimum measured perpendicular from the rear wall.A minimum 60 inches (1524 mm) wide and 48 inches (1219 mm) deep maneuvering space shall be provided in front of the water closet.

Exception: In residential dwelling units complying with Section 11B-233.3.1.1, maneuvering space in front of the water closet shall be a minimum 60 inches (1524 mm) wide and 36 inches (914 mm) deep.

accessible water

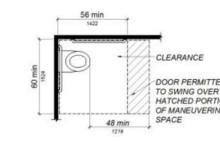
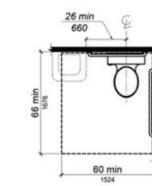


FIGURE 11B-604.3.1 SIZE OF CLEARANCE AT WATER CLOSETS

### 11B-604.3.2 Overlap.

The required clearance around the water closet shall be permitted to overlap the water closet, associated grab bars, dispensers, sanitary napkin disposal units, coat hooks, shelves, accessible routes, clear floor space and clearances required at other fixtures and the turning space. No other fixtures or obstructions shall be located within the required water closet clearance.

Exception: In residential dwelling units, a lavatory complying with Section 11B-606 shall be permitted on the rear wall 26 inches (660 mm) minimum from the water closet centerline to allow for the installation of a grab bar where the clearance at the water closet is 66 inches \$\mathbb{4676}\$ mm) minimum measured perpendicular from the rear wall.



#### FIGURE 11B-604.3.2 (EXCEPTION) OVERLAP OF WATER CLOSET CLEARANCE IN RESIDENTIAL DWELLING UNITS

## 11B-604.4 Seats.

The seat height of a water closet above the finish floor shall be 17 inches \$\\$32 mm) minimum and 19 inches \$\\$483 mm) maximum measured to the top of the seat. Seats shall not be sprung to return to a lifted position. Seats shall be 2 inches (51 mm) high maximum.

## **Exceptions:**

## Reserved.

- 2. In residential dwelling units, the height of water closets shall be permitted to be 15 inches 381 mm) minimum and 19 inches (483 mm) maximum above the finish floor measured to the top of the seat.
- 3. A 3-inch (76 mm) high seat shall be permitted only in alterations where the existing fixture is less than 15 inches (381 mm) high.

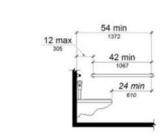
## 11B-604.5 Grab bars.

Grab bars for water closets shall comply with Section 11B-609. Grab bars shall be provided on the side wall closest to the water closet and on the rear wall. Where separate grab bars are required on adjacent walls at a common mounting height, an L-shaped grab bar meeting the dimensional requirements of Sections 11B-604.5.1 and 11B-604.5.2 shall be permitted.

## Exceptions:

- 1. Reserved. 2. In residential dwelling units, grab bars shall not be required to be installed in toilet or bathrooms provided that reinforcement has been installed in walls and located so as to permit the installation of grab
- bars complying with Section 11B-604.5. 3. In detention or correction facilities, grab bars shall not be required to be installed in housing or holding cells that are specially designed without protrusions for purposes of suicide prevention.

The side wall grab bar shall be 42 inches ⊈067 mm) long minimum, located 12 inches (305 mm) maximum from the rear wall and extending 54 inches (1372 mm) minimum from the rear wall with the front end positioned 24 inches (610 mm) minimum in front of the water closet.



#### FIGURE 11B-604.5.1 SIDE WALL GRAB BAR AT WATER CLOSETS

## 11B-604.5.2 Rear wall.

**Exceptions:** 

The rear wall grab bar shall be 36 inches 914 mm) long minimum and extend from the centerline of the water closet 12 inches (305 mm) minimum on one side and 24 inches (610 mm) minimum on the other side.

water closet, where wall space does not permit a length of 36 inches (914 mm) minimum due to the location of a recessed fixture adjacent to the water closet. 2. Where an administrative authority requires flush controls for flush valves to be located in a position that conflicts with the location of the rear grab bar, then the rear grab bar shall be permitted to be split

1. The rear grab bar shall be permitted to be 24 inches (610 mm) long minimum, centered on the

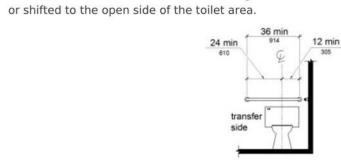


FIGURE 11B-604.5.2 **REAR WALL GRAB BAR AT WATER CLOSETS** 







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#### 11B-604.7 Dispensers and disposal units.

Toilet paper dispensers and sanitary napkin disposal units shall comply with Section 11B-604.7. Combination accessory units are not permitted to encroach into the space required by Section 11B-609.3.

#### 11B-604.7.1 Dispensers.

Toilet paper dispensers shall comply with Section 11B-309.4 and shall be 7 inches (178 mm) minimum and 9 inches (229 mm) maximum in front of the water closet measured to the centerline of the dispenser. The outlet of the dispenser shall be below the grab bar, 19 inches (483 mm) minimum above the finish floor and shall not be located behind grab bars. Dispensers shall not be of a type that controls delivery or that does not allow continuous paper flow.

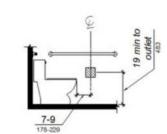
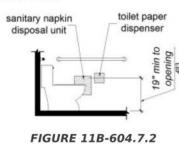


FIGURE 11B-604.7.1

#### DISPENSER OUTLET LOCATION

#### 11B-604.7.2 Disposal units.

Sanitary napkin disposal units, if provided, shall comply withSection 11B-309.4 and shall be wall mounted and located on the sidewall between the rear wall of the toilet and the toilet paper dispenser, adjacent to the toilet paper dispenser. The disposal unit shall be located below the grab bar with the opening of the disposal unit 19 inches minimum (483 mm) above the finish floor.



**DISPOSAL UNIT LOCATION** 

## 11B-604.8 Toilet compartments.

Wheelchair accessible toilet compartments shall meet the requirements of Sections 11B-604.8.1 and 11B-604.8.3. Compartments containing more than one plumbing fixture shall comply with Section 11B-603. Ambulatory accessible compartments shall comply with Sections 11B-604.8.2 and 11B-604.8.3.

## 11B-604.8.1 Wheelchair accessible compartments.

Wheelchair accessible compartments shall comply with Section 11B-604.8.1.

#### 11B-604.8.1.1 Size.

Wheelchair accessible compartments shall be 60 inches (1524 mm) wide minimum measured perpendicular to the side wall, and 56 inches (1422 mm) deep minimum for wall hung water closets and 59 inches (1499 mm) deep minimum for floor mounted water closets measured perpendicular to the rear wall. Wheelchair accessible compartments shall additionally provide maneuvering space complying with Section 11B-604.8.1.1.1, 11B-604.8.1.1.2 or 11B-604.8.1.1.3, as applicable. Wheelchair accessible compartments for children's use shall be 60 inches (1524 mm) wide minimum measured perpendicular to the side wall, and 59 inches (1499 mm) deep minimum for wall hung and floor mounted water closets measured perpendicular to the rear wall.

## 11B-604.8.1.1.1 Maneuvering space with in-swinging door.

In a wheelchair accessible compartment with an in-swinging door, a minimum 60 inches (1524 mm) wide by 36 inches (914 mm) deep maneuvering space shall be provided in front of the clearance required in Section 11B-604.8.1.1. See Figures 11B-604.8.1.1.2 (b) and 11B-604.8.1.1.3

## 11B-604.8.1.1.2 Maneuvering space with side-opening door.

In a wheelchair accessible compartment with a door located in the side wall or partition, either inswinging or out-swinging, a minimum 60 inches (1524 mm) wide and 60 inches (1524 mm) deep maneuvering space shall be provided in front of the water closet. See Figure 11B-604.8.1.1.2.

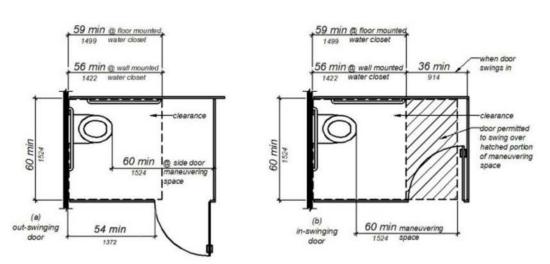


FIGURE 11B-604.8.1.1.2 MANEUVERING SPACE WITH SIDE-OPENING DOOR

## 11B-604.8.1.1.3 Maneuvering space with end-opening door.

In a wheelchair accessible compartment with a door located in the front wall or partition (facing the water closet), either in-swinging or out-swinging, a minimum 60 inches (1524 mm) wide and 48 inches (1219 mm) deep maneuvering space shall be provided in front of the water closet. See Figure 11B-604.8.1.1.3.

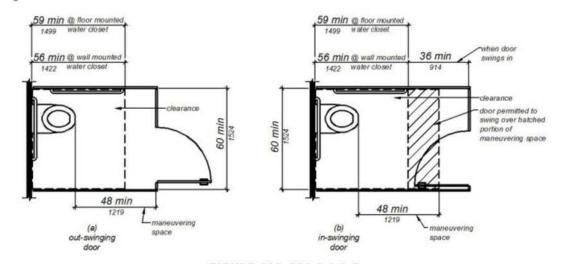


FIGURE 11B-604.8.1.1.3 MANEUVERING SPACE WITH END-OPENING DOOR

## 11B-604.8.1.2 Doors.

Toilet compartment doors, including door hardware, shall comply with Section 11B-404 except that if the approach is from the push side of the compartment door, clearance between the door side of the compartment and any obstruction shall be 48 inches (1219 mm) minimum measured perpendicular to the compartment door in its closed position. Doors shall be located in the front partition or in the side wall or partition farthest from the water closet. Where located in the front partition, the door opening shall be 4 inches (102 mm) maximum from the side wall or partition farthest from the water closet. Where located in the side wall or partition, the door opening shall be farthest from the water closet and shall be 54 inches (1372 mm) minimum from the rear wall. The door shall be self-closing. A door pull complying with Section 11B-404.2.7 shall be placed on both sides of the door near the latch. Doors shall not swing into the clear floor space or clearance required for any fixture. Doors may swing into that portion of maneuvering space which does not overlap the clearance required at a water closet.

Exception: When located at the side of a toilet compartment, the toilet compartment door opening shall provide a clear width of 34 inches (864 mm) minimum.

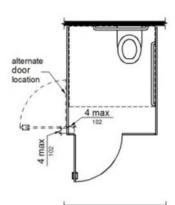


FIGURE 11B-604.8.1.2 WHEELCHAIR ACCESSIBLE TOILET COMPARTMENT DOORS

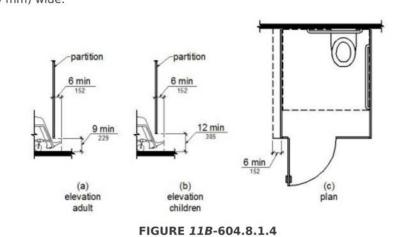
#### 11B-604.8.1.3 Approach.

Compartments shall be arranged for left-hand or right-hand approach to the water closet.

## 11B-604.8.1.4 Toe clearance.

At least one side partition shall provide a toe clearance of 9 inches £29 mm) minimum above the finish floor and 6 inches (152 mm) deep minimum beyond the compartment-side face of the partition, exclusive of partition support members. Partition components at toe clearances shall be smooth without sharp edges or abrasive surfaces. Compartments for children's use shall provide a toe clearance of 12 inches (305 mm) minimum above the finish floor.

Exception: Toe clearance at the side partition is not required in a compartment greater than 66 inches (1676 mm) wide.



WHEELCHAIR ACCESSIBLE TOILET COMPARTMENT TOE CLEARANCE

#### 11B-604.8.1.5 Grab bars.

Grab bars shall comply with Section 11B-609. A side-wall grab bar complying with Section 11B-604.5.1 shall be provided and shall be located on the wall closest to the water closet. In addition, a rear-wall grab bar complying with Section 11B-604.5.2 shall be provided. Where separate grab bars are required on adjacent walls at a common mounting height, an L-shaped grab bar meeting the dimensional requirements of Sections 11B-604.5.1 and 11B-604.5.2 shall be permitted.

#### 11B-606 Lavatories and sinks

#### 11B-606.1 General.

Lavatories and sinks shall comply with Section 11B-606.

#### 11B-606.2 Clear floor space.

A clear floor space complying with Section 11B-305, positioned for a forward approach, and knee and toe clearance complying with Section 11B-306 shall be provided.

- 1. A parallel approach complying with Section 11B-305 shall be permitted to a kitchen sink in a space
  - where a cook top or conventional range is not provided and to wet bars.

  - 3. In residential dwelling units, cabinetry shall be permitted under lavatories and kitchen sinks provided that all of the following conditions are met:
  - (a) the cabinetry can be removed without removal or replacement of the fixture;
  - (b) the finish floor extends under the cabinetry; and
  - (c) the walls behind and surrounding the cabinetry are finished.
  - 4. A knee clearance of 24 inches (610 mm) minimum above the finish floor or ground shall be permitted at lavatories and sinks used primarily by children 6 through 12 years where the rim or counter surface is 31 inches (787 mm) maximum above the finish floor or ground.
  - 5. A parallel approach complying with Section 11B-305 shall be permitted to lavatories and sinks used primarily by children 5 years and younger.
  - 6. The dip of the overflow shall not be considered in determining knee and toe clearances.
  - 7. No more than one bowl of a multibowl sink shall be required to provide knee and toe clearance complying with Section 11B-306.

## 11B-606.3 Height.

Lavatories and sinks shall be installed with the front of the higher of the rim or counter surface 34 inches&64 mm) maximum above the finish floor or ground.

## Exceptions:

## Reserved.

2. In residential dwelling unit kitchens, sinks that are adjustable to variable heights, 29 inches \$\mathcal{X}37\$ mm) minimum and 36 inches (914 mm) maximum, shall be permitted where rough-in plumbing permits connections of supply and drain pipes for sinks mounted at the height of 29 inches (737 mm).

## 11B-606.4 Faucets.

Controls for faucets shall comply with Section 11B-309. Hand-operated metering faucets shall remain open for 10 seconds minimum.

## 11B-606.5 Exposed pipes and surfaces.

Water supply and drain pipes under lavatories and sinks shall be insulated or otherwise configured to protect against contact. There shall be no sharp or abrasive surfaces under lavatories and sinks.

## 11B-606.6 Adjacent side wall or partition.

Lavatories, when located adjacent to a side wall or partition, shall be a minimum of 18 inches (457 mm) to the centerline of the fixture.

## 11B-606.7 Sink depth.

Where a forward approach is required at a sink, knee and toe clearance shall be provided in compliance with Section 11B-306.

## 11B-608 Shower compartments

## 11B-608.1 General.

Shower compartments shall comply with Section 11B-608.

## 11B-608.2 Size and clearances for shower compartments.

Shower compartments shall have sizes and clearances complying with Section 11B-608.2.

## 11B-608.2.1 Transfer type shower compartments.

Transfer type shower compartments shall be 36 inches (914 mm) by 36 inches (914 mm) clear inside dimensions measured at the center points of opposing sides and shall have a 36-inch (914 mm) wide minimum entry on the face of the shower compartment. Clearance of 36 inches (914 mm) wide minimum by 48 inches (1219 mm) long minimum measured from the control wall shall be provided. Transfer type shower compartments shall be permitted in transient lodging guest rooms, multibedroom housing units in undergraduate student housing and residential dwelling units; and shall not be permitted at other locations to meet the requirements of Section 11B-213.3.6.

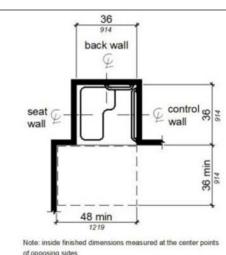


FIGURE 11B-608.2.1 TRANSFER TYPE SHOWER COMPARTMENT SIZE AND CLEARANCE

## 11B-608.2.2 Standard roll-in type shower compartments.

Standard roll-in type shower compartments shall be 30 inches (762 mm) wide minimum by 60 inches (7.524 mm) deep minimum clear inside dimensions measured at center points of opposing sides with a full opening width on the long side.

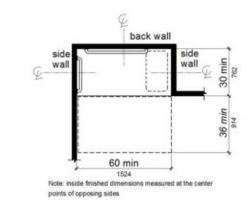


FIGURE 11B-608.2.2 STANDARD ROLL-IN TYPE SHOWER COMPARTMENT SIZE AND CLEARANCE

### 11B-608.2.2.1 Clearance.

A 36 inch (914 mm) wide minimum by 60 inch (1524 mm) long minimum clearance shall be provided adjacent to the open face of the shower compartment.

## Exception: Reserved.

## 11B-608.2.3 Alternate roll-in type shower compartments.

Alternate roll-in type shower compartments shall be 36 inches @14 mm) wide and 60 inches (1524 mm) deep minimum clear inside dimensions measured at center points of opposing sides. A 36 inch (914 mm) wide minimum entry shall be provided at one end of the long side of the compartment.

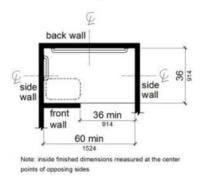


FIGURE 11B-608.2.3 ALTERNATE ROLL-IN TYPE SHOWER COMPARTMENT SIZE AND CLEARANCE

### 11B-608.3 Grab bars.

Grab bars shall comply with Section 11B-609 and shall be provided in accordance with Section 11B-608.3. Where multiple grab bars are used, required horizontal grab bars shall be installed at the same height above the finish floor. Where separate grab bars are required on adjacent walls at a common mounting height, an L-shaped or Ushaped grab bar meeting the dimensional requirements of Section 11B-608.3.2 or 11B-608.3.3 shall be permitted.

- Reserved.
- 2. In residential dwelling units, grab bars shall not be required to be installed in showers located in bathing facilities provided that reinforcement has been installed in walls and located so as to permit the installation of grab bars complying with Section 11B-608.3.

## 11B-608.3.1 Transfer type shower compartments.

In transfer type compartments, grab bars shall be provided across the control wall and back wall to a point 18

## inches (457 mm) from the control wall.

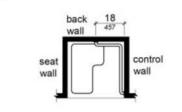


FIGURE 11B-608.3. **GRAB BARS FOR TRANSFER TYPE SHOWERS** 

## 11B-608.3.2 Standard roll-in type shower compartments.

Grab bars shall be provided on the back wall and the side wall opposite the seat. Grab bars shall not be provided above the seat. Grab bars shall be installed 6 inches (152 mm) maximum from adjacent walls.

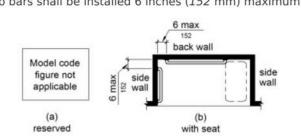


FIGURE 11B-608.3.2 GRAB BARS FOR STANDARD ROLL-IN TYPE SHOWER

## 11B-608.3.3 Alternate roll-in type shower compartments.

In alternate roll-in type shower compartments, grab bars shall be provided on the back wall and the side wall farthest from the compartment entry. Grab bars shall not be provided above the seat. Grab bars shall be installed 6 inches (152 mm) maximum from adjacent walls.

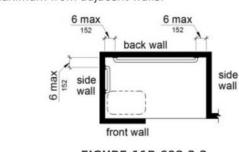


FIGURE 11B-608.3.3 **GRAB BARS FOR ALTERNATE ROLL-IN TYPE SHOWERS** 

## 11B-608.4 Seats.

A folding seat shall be provided in roll-in type showers and transfer type shower compartments. Seats shall comply

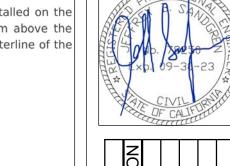
Exception: In residential dwelling units, seats shall not be required in shower compartments provided that reinforcement has been installed in walls so as to permit the installation of seats complying with Section 11B-

## 11B-608.5 Controls.

Controls, faucets and shower spray units shall comply with Section 11B-309.4. Controls and faucets shall allow the user to close and open the water supply.

#### 11B-608.5.1 Transfer type shower compartments.

In transfer type shower compartments, the controls, faucets and shower spray unit shall be installed on the side wall opposite the seat 38 inches (965 mm) minimum and 48 inches (1219 mm) maximum above the shower floor and shall be located on the control wall 15 inches (380 mm) maximum from the centerline of the seat toward the shower opening.



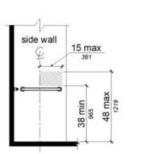


FIGURE 11B-608.5.1 TRANSFER TYPE SHOWER COMPARTMENT CONTROL LOCATION

#### 11B-608.5.2 Standard roll-in type shower compartments.

In standard roll-in type shower compartments, the controls, faucets and the shower spray unit shall be located on the back wall of the compartment adjacent to the seat wall 16 inches (406 mm) minimum and 27 inches (686 mm) maximum from the seat wall; and shall be located above the grab bar, but no higher than 48 inches (1219 mm) above the shower floor.

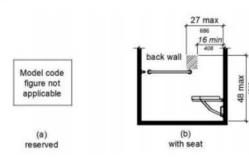
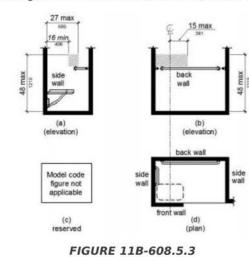


FIGURE 11B-608.5.2 STANDARD ROLL-IN TYPE SHOWER COMPARTMENT CONTROL LOCATION

## 11B-608.5.3 Alternate roll-in type shower compartments.

In alternate roll-in type shower compartments, the controls, faucets and shower spray unit shall be located on the side wall of the compartment adjacent to the seat wall 16 inches (406 mm) minimum and 27 inches (686 mm) maximum from the seat wall or shall be located on the back wall opposite the seat 15 inches (381 mm) maximum, left or right of the centerline of the seat. The controls, faucets and shower spray units shall be located above the grab bar, but no higher than 48 inches (1219 mm) above the shower floor.



ALTERNATE ROLL-IN TYPE SHOWER COMPARTMENT CONTROL LOCATION

## 11B-608.6 Shower spray unit and water.

A shower spray unit with a hose 59 inches (1499 mm) long minimum that can be used both as a fixed-position shower head and as a hand-held shower shall be provided. The shower spray unit shall have an on/off control with a non-positive shut-off. If an adjustable-height shower head on a vertical bar is used, the bar shall be installed so as

## not to obstruct the use of grab bars. Shower spray units shall deliver water that is 120°F (49°C) maximum.

**Exception:** Where subject to excessive vandalism, two fixed shower heads shall be permitted instead of a hand-held spray unit in facilities that are not medical care facilities, long-term care facilities, transient lodging guest rooms or residential dwelling units. Each shower head shall be installed so it can be operated independently of the other and shall have swivel angle adjustments, both vertically and horizontally. One shower head shall be located at a height of 48 inches (1219 mm) maximum above the shower finish floor.

## 11B-608.7 Thresholds.

Thresholds in roll-in type shower compartments shall be  $^{1}/_{2}$  inch (12.7 mm) high maximum in accordance with Section 11B-303. In transfer type shower compartments, thresholds 1/2 inch (12.7 mm) high maximum shall be beveled, rounded or vertical.

Exception: A threshold 2 inches (51 mm) high maximum shall be permitted in transfer type shower compartments in existing facilities where provision of a 1/2 inch (12.7 mm) high threshold would disturb the structural reinforcement of the floor slab.

## 11B-608.8 Shower enclosures.

Enclosures for shower compartments shall not obstruct controls, faucets and shower spray units or obstruct transfer from wheelchairs onto shower seats.

## 11B-608.9 Shower floor or ground surface.

Floor or ground surfaces of showers shall comply with Section 11B-302.1 and shall be sloped 1:48 maximum in any direction. Where drains are provided, grate openings shall be  $^{1}/_{4}$  inch (6.4 mm) maximum and flush with the floor surface.

## 11B-608.10 Soap dish.

Where a soap dish is provided, it shall be located on the control wall at 40 inches (1016 mm) maximum above the shower floor, and within the reach limits from the seat.

## 11B-609 Grab bars

11B-609.1 General.

Grab bars in toilet facilities and bathing facilities shall comply with Section 11B-609. 11B-609.2 Cross section.

Grab bars shall have a cross section complying with Section 11B-609.2.1 or 11B-609.2.2.

## 11B-609.2.1 Circular cross section.

11B-609.2.2 Non-circular cross section.

Grab bars with circular cross sections shall have an outside diameter of 1/4 inches (32 mm) minimum and 2 inches (51 mm) maximum.

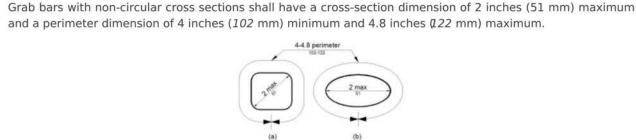
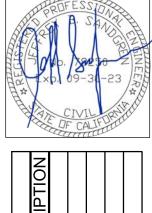


FIGURE 11B-609.2.2 **GRAB BAR NON-CIRCULAR CROSS SECTION** 

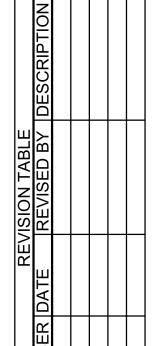
## 11B-609.3 Spacing.

The space between the wall and the grab bar shall be 1/2 inches (38 mm). The space between the grab bar and projecting objects below and at the ends shall be  $1^{1}/_{2}$  inches (38 mm) minimum. The space between the grab bar

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#### and projecting objects above shall be 12 inches (305 mm) minimum.

#### Exceptions:

- 1. The space between the grab bars and shower controls, shower fittings, and other grab bars above shall be permitted to be  $1^{1}/_{2}$  inches (38 mm) minimum.
- 2. For L-shaped or U-shaped grab bars complying with Section 11B-609.9 the space between the walls and the grab bar shall be  $1^1/2$  inches (38 mm) minimum for a distance of 6 inches on either side of the inside corner between two adjacent wall surfaces.

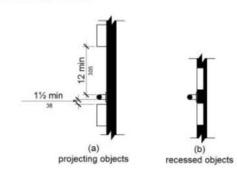


FIGURE 11B-609.3 SPACING OF GRAB BARS

#### 11B-609.4 Position of grab bars.

Grab bars shall be installed in a horizontal position, 33 inches *§38* mm) minimum and 36 inches *§914* mm) maximum above the finish floor measured to the top of the gripping surface, except that at water closets for children's use complying with *Section 11B*-604.9, grab bars shall be installed in a horizontal position 18 inches *§57* mm) minimum and 27 inches (*686* mm) maximum above the finish floor measured to the top of the gripping surface. The height of the lower grab bar on the back wall of a bathtub shall comply with *Section 11B*-607.4.1.1 or *11B*-607.4.2.1.

## 11B-609.5 Surface hazards.

Grab bars and any wall or other surfaces adjacent to grab bars shall be free of sharp or abrasive elements and shall have rounded edges.

#### 11B-609.6 Fittings.

Grab bars shall not rotate within their fittings.

#### 11B-609.7 Installation.

Grab bars shall be installed in any manner that provides a gripping surface at the specified locations and that does not obstruct the required clear floor space.

#### 11B-609.8 Structural strength.

Allowable stresses shall not be exceeded for materials used when a vertical or horizontal force of 250 pounds (1112 N) is applied at any point on the grab bar, fastener, mounting device or supporting structure.

## 11B-609.9 Alternate configuration.

L-shaped or U-shaped grab bars shall be permitted.

#### 11B-610 Seats

#### 11B-610.1 General.

Seats in bathtubs and shower compartments shall comply with Section 11B-610.

#### 11B-610.2 Bathtub seats.

The top of bathtub seats shall be 17 inches \$32 mm) minimum and 19 inches \$483 mm) maximum above the bathroom finish floor. The depth of a removable in-tub seat shall be 15 inches (381 mm) minimum and 16 inches (406 mm) maximum. The seat shall be capable of secure placement. Permanent seats at the head end of the bathtub shall be 15 inches (381 mm) deep minimum and shall extend from the back wall to or beyond the outer

## edge of the bathtub.

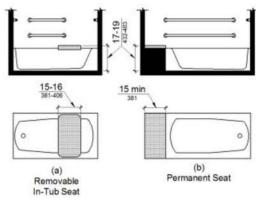


FIGURE 11B-610.2 BATHTUB SEATS

## 11B-610.3 Shower compartment seats.

A seat in a standard roll-in shower compartment shall be a folding type, shall be installed on the side wall adjacent to the controls, and shall extend from the back wall to a point within 3 inches (76 mm) of the compartment entry. A seat in an alternate roll-in type shower compartment shall be a folding type, shall be installed on the front wall opposite the back wall, and shall extend from the adjacent side wall to a point within 3 inches (76 mm) of the compartment entry. In transfer type showers, the seat shall extend from the back wall to a point within 3 inches (76 mm) of the compartment entry. The top of the seat shall extend from the back wall to a point within 3 inches (483 mm) maximum above the bathroom finish floor. When folded, the seat shall extend 6 inches (152 mm) maximum from the mounting wall. Seats shall comply with Section 11B-610.3.1 or 11B-610.3.2.

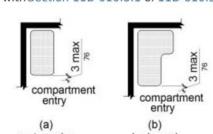


FIGURE 11B-610.3 EXTENT OF SEAT

## 11B-610.3.1 Rectangular seats.

The rear edge of a rectangular seat shall be 2/2 inches (64 mm) maximum and the front edge 15 inches 881 mm) minimum and 16 inches (406 mm) maximum from the seat wall. The side edge of the seat shall be 1/2 inches (38 mm) maximum from the adjacent wall.

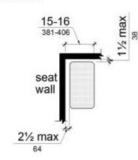


FIGURE 11B-610.3.1
RECTANGULAR SHOWER SEAT

## 11B-610.3.2 L-shaped seats.

The rear edge of an L-shaped seat shall be 2/2 inches (64 mm) maximum and the front edge 15 inches 881 mm) minimum and 16 inches (406 mm) maximum from the seat wall. The rear edge of the "L" portion of the

seat shall be  $1^1/2$  inches (38 mm) maximum from the wall and the front edge shall be 14 inches 356 mm) minimum and 15 inches (381 mm) maximum from the wall. The end of the "L" shall be 22 inches 559 mm) minimum and 23 inches (584 mm) maximum from the main seat wall.

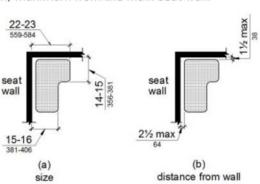


FIGURE 11B-610.3.2 L-SHAPED SHOWER SEAT

#### 11B-610.4 Structural strength.

Allowable stresses shall not be exceeded for materials used when a vertical or horizontal force of 250 pounds (1112 N) is applied at any point on the seat, fastener, mounting device or supporting structure.

## 11B-611 Washing machines and clothes dryers

#### 11B-611.1 General.

Washing machines and clothes dryers shall comply with Section 11B-611.

#### 11B-611.2 Clear floor space.

A clear floor or ground space complying with *Section 11B*-305 positioned for parallel approach shall be provided. The clear floor or ground space shall be centered on the appliance.

## 11B-611.3 Operable parts.

Operable parts, including doors, lint screens and detergent and bleach compartments shall comply with *ection* 11B-309.

#### 11B-611.4 Height.

Top loading machines shall have the door to the laundry compartment located 36 inches  $\theta$ 14 mm) maximum above the finish floor. Front loading machines shall have the bottom of the opening to the laundry compartment located 15 inches (381 mm) minimum and 36 inches (914 mm) maximum above the finish floor.

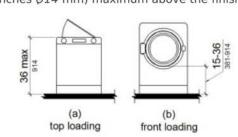
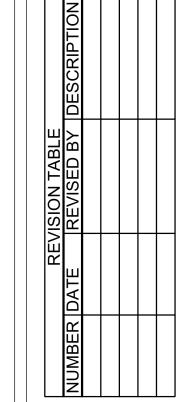


FIGURE 11B-611.4
HEIGHT OF LAUNDRY COMPARTMENT OPENING





ACCESSIBILITY DETAILS

ENCLOSURE FOR: RIVERDALE RESORT

NDGREN ENGINEERIN
ON AUBURN STREET SUITE 200
GRASS VALLEY, CA 95945
PHONE: 530-788-8794

DATE:

9/20/2023

SCALE:

SHEET:

**A**-9

760 Gray Ave., Suite #C

Yuba City, CA. 95991

Office - 530-868-4850

#### FIXTURE SCHEDULE WASTE COLD HOT WATER SYMBOL MFR/MODEL REMARKS OUTLET OUTLET OUTLET LAVATORY - KINGSTON KOHLER MODEL K2005WHT 1/2" | 1/2" | ACCESSIBLE APPROVED 1 1/2" DELTA MODEL: DEL22C151 FAUCET COMMODE - KINGSTON KOHLER 1.28 GAL. FLUSH VALVE 4" 1 1/4" ACCESSIBLE APPROVED MODEL WM FV BOWL SLOAN REGAL FLUSH VALVE - SLN111XL ADA COMPLIANT FLORESTONE MSR-24243 / FLORESTONE 1/2" APPROVED FAUCET WITH VACUUM BREAK 1/2" 897-RCF APPROVED FAUCET INSTALLED PER MANUFACTURERS AND CODE REQUIREMENTS. WATER HEATER 80 GAL., ELEC. 12.2 KW, 277V STATE EDT 8020RT CIRCULATION PUMP INSTALLED PER MANUFACTURERS AND CODE REQUIREMENTS. GRUNDOS UPS 15-55 SFC 115V / 0.75 AMPS MAX. WATER EXPANSION TANK INSTALLED PER MANUFACTURERS AND CODE REQUIREMENTS. WATTS PLT-5-M1 FLOOR SINK 11/2" 1/2" WATTS FS-7-32-22 FLOOR DRAIN WITH CHROME FLANGE COVER $\sim$ ZURN MODEL: ZURZN415PB52NH FLOOR CLEANOUT WITH CHROME FLANGE COVER ZURN MODEL: ZURCO2500NH4 SHOWER TRIM KIT ACCESSIBLE APPROVED DELTA MODEL: DELT13220 W/ DELTA VALVE BODY MODEL: DELR10000UNWS HOSE BIBB - MIFAB ~ MHY-1500 SIOUX CHIEF MANUFACTURING WATER CONTROL OUTLET BOX - WASHER 2" 2" 1/2" MODEL - 696-62313MF PROVIDE TRAP PRIMER IN ACCORDANCE W/ CODE RQMTS. 1/2" SIOUX CHIEF - 833-22DSR FLOOR SHALL SLOPE TO DRAIN AT 1% SEE MANUFACTURER DETAIL/CUT SHEET FOR 2' - 4" INLINE FLOOR DRAIN TRAP SEALER THE SURESEAL TRAP SEALER SPECIFICATION IS UNDER AN ALTERNATE MATERIALS & METHODS FOR COMPLIANCE WITH CPC 1007.0.

ALL PLUMBING FIXTURES SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S PRINTED INSTRUCTIONS. PROVIDE AND INSTALL ANY ACCESSORIES AS REQUIRED FOR A COMPLETE AND PROPERLY

OPERATIONAL SYSTEM.

ALL FAUCETS SHALL BE PROVIDED AND INSTALLED WITH THERMOSTATIC MIXING DEVICES THAT CONFORM WITH CODE REQUIREMENTS. LIMITATION OF HOT WATER TEMPERATURE FOR PUBLIC LAVATORIES: HOT WATER DELIVERED FROM PUBLIC-USE LAVATORIES SHALL BE LIMITED TO A MAXIMUM TEMPERATURE OF 120 DEGREES F. BY A DEVICE THAT IS IN ACCORDANCE WITH ASSE 10709 OR CSA BI25.3. THE WATER HEATER THERMOSTAT SHALL NOT BE CONSIDERED A CONTROL FOR MEETING THIS PROVISION. (PER CBC)

# PLUMBING LEGEND

PROPOSED SANITARY SEWER LINE - SCHEDULE 40 PVC MAINTAIN A MIN. 2% SLOPE FOR ALL HORIZONTAL LINES.

---- WASTE VENT LINE - SCHEDULE 40 PVC

----V----- WASTE VENT LINE - SCHEDULE 40 PVC (UNDERGROUND)

0 VTR VENT THRU ROOF

WATER

---- NEW HOT WATER - TYPE M COPPER INSULATED PER TITLE 24

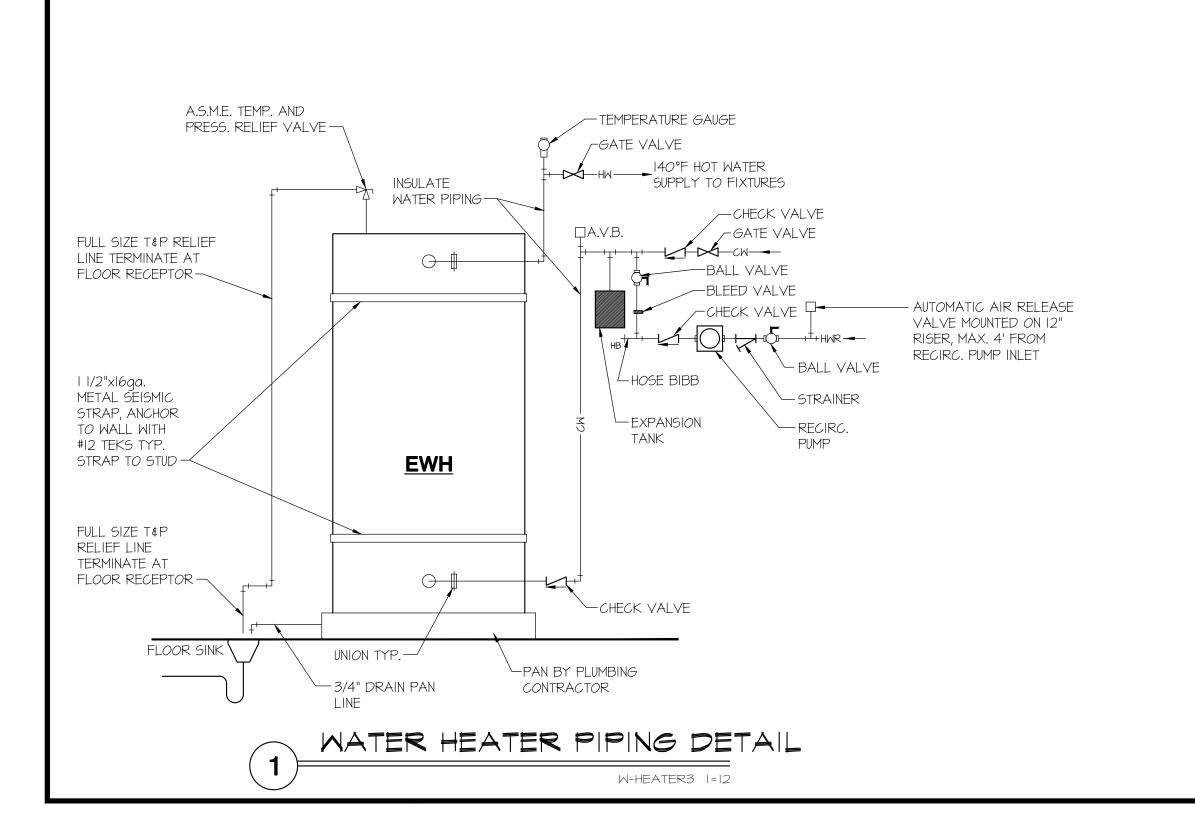
## GENERAL NOTES

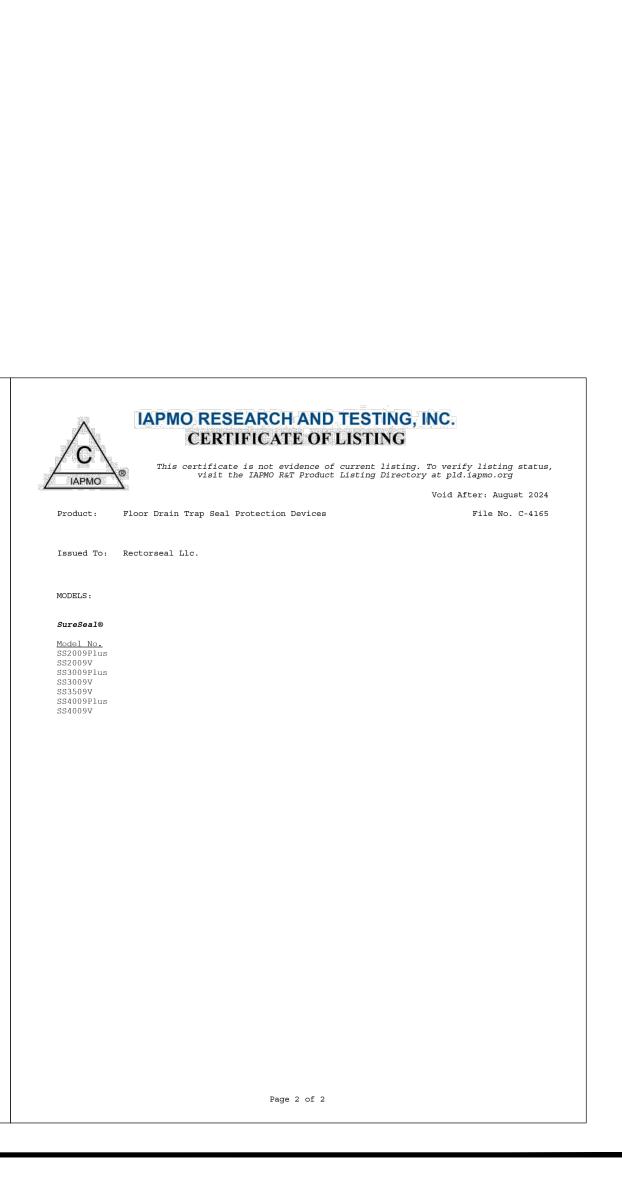
- 1. ALL PLUMBING INSTALLATIONS SHALL CONFORM WITH THE 2022 CALIFORNIA BUILDING CODE, 2022 CALIFORNIA PLUMBING CODE AND THE 2022 CA. RETAIL FOOD CODE, AND OTHER, GOVERNING CODES.
- 2. THE CONTRACTOR WILL FIELD LOCATE EXISTING PIPING MAINS AND POINTS OF CONNECTION BEFORE STARTING THE WORK.
- 3. ALL PLUMBING DRAWINGS ARE SCHEMATIC. THE APPROXIMATE SIZE AND LOCATION OF EQUIPMENT IS SHOWN TO SCALE WHERE POSSIBLE.
- 4. WHERE APPLICABLE PROVIDE AND INSTALL APPROVED FIRE CAULK/SEALS AROUND ALL PIPES AND ETC. PENETRATING FIRE RATED WALLS AND PARTITIONS.
- 5. RESERVED
- 7. ALL PIPING AND ETC SHALL BE SUPPORTED AND BRACED IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE REQUIREMENTS.
- 8 ALL WASTE AND VENT PIPING SHALL BE SCHEDULE 40 PVC OR OTHER CODE APPROVED PIPING.
- 9 . RESERVED
- 10 ALL ABOVE GROUND WATER PIPING SHALL BE TYPE M COPPER.
- 11 PLUMBING VENTS SHALL TERMINATE NOT LESS THAN 10 FEET FROM ANY OPENABLE WINDOW, DOOR, OPENING, AIR INTAKE, OR VENT SHAFT.

## SHEET INDEX

- PO PLUMBING FIXTURE SCHEDULE AND NOTES
- PI WASTE AND VENTING PLUMBING PLAN
- P2 WATER PIPING PLAN
- 12 RESERVED
- 13 CLEAN OUTS SHALL BE THE FULL SIZE OF THE PIPE BUT NO LARGER THAN 4" DIAMETER.
- 14 ANGLE STOPS SHALL BE PLUMBING CODE APPROVED.
- 15 ALL TRAPS SHALL BE SCHEDULE 40 PVC TRAPS COMPLETE WITH ALL ACCESSORIES INCLUDING TRAP TO WALL CONNECTION AND ESCUTCHEON
- 16 MOUNTING HEIGHT OF FIXTURES AND ACCESSORIES SHALL BE IN ACCORDANCE WITH ALL ACCESSIBILITY REQUIREMENTS.
- 17 WATER HAMMER ARRESTERS SHALL BE INSTALLED AT FIXTURES.







REVISIONS

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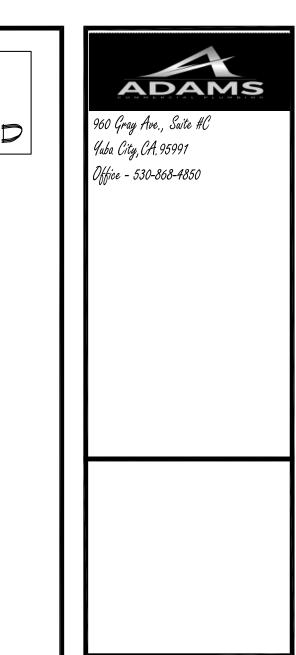
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SEE SHEET PO FOR FIXTURE SCHEDULE, PLUMBING NOTES AND LEGEND



INES LIPER OF 3W FROM TRISH CLOSS

COMMISCI 10' SEARCH LIPE

SHE C

MAINTAIN A MIN. 2% SLOPE FOR FOR ALL HORIZONTAL SEWER LINES.

WASTE AND VENT PIPING PLAN

1/4" = 1'-0"

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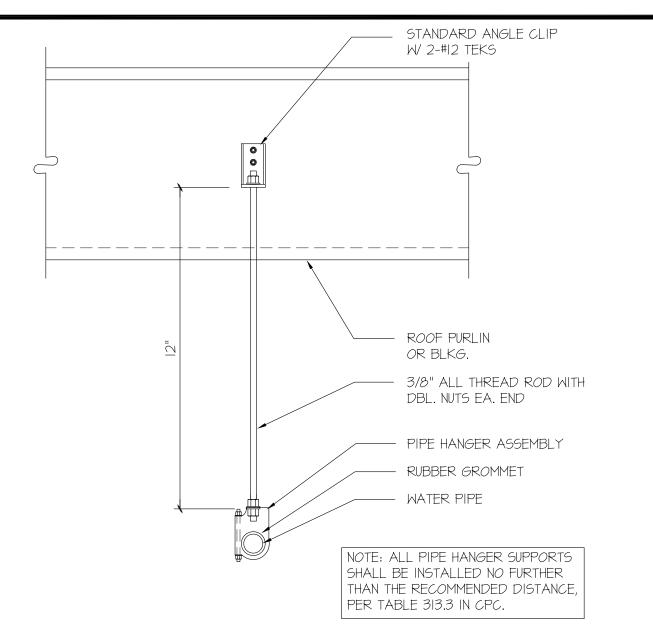
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1/4" = 1'-0"

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SEE SHEET PO FOR FIXTURE SCHEDULE, PLUMBING NOTES AND LEGEND

# WATER PIPING KEYNOTES

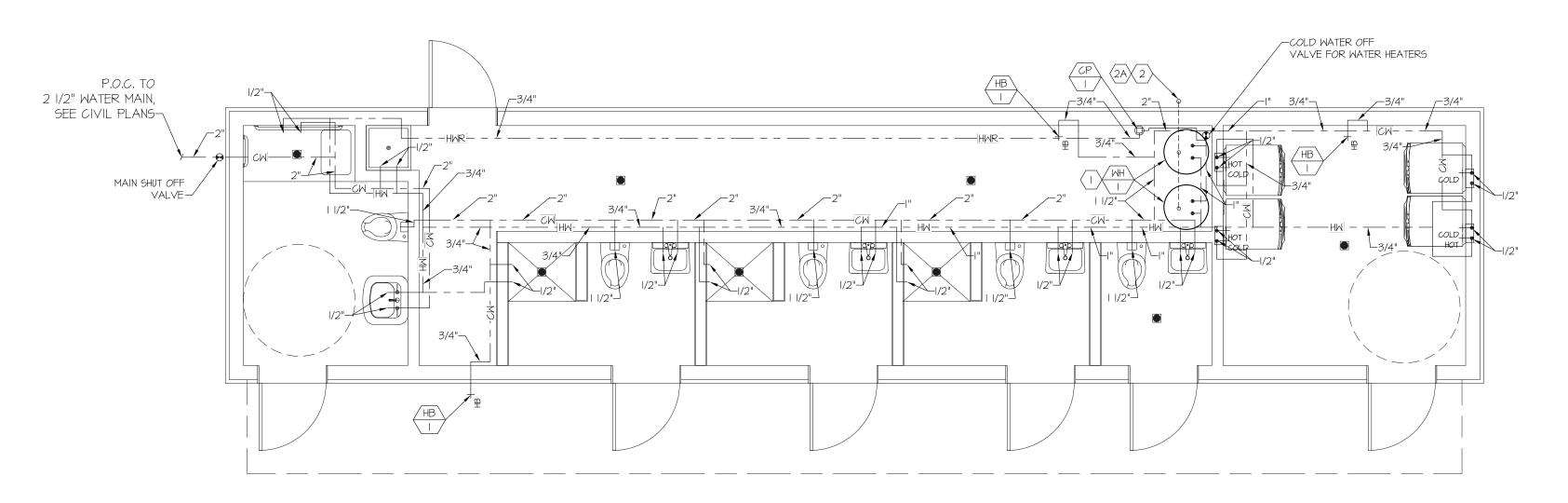
# DESIGNATES TYPICAL KEYNOTE SYMBOLS.

- 1 TYPICAL WATER HEATER ANCHORAGE REQUIREMENTS SEE DETAIL PO
- PROVIDE/INSTALL WATER HEATER PRESSURE RELIEF VALVE (MAX PRESSURE SETTING 150 PSI): PROVIDE/INSTALL AN APPROVED, LISTED, ADEQUATELY SIZED COMBINATION PRESSURE AND TEMPERATURE RELIEF VALVE IN ACCORDANCE WITH ITS LISTING AND THE MANUFACTURER'S INSTRUCTIONS. THE PRESSURE RELIEF VALVE SHALL BE CONNECTED TO A DRAIN. NO SHUTOFF VALVE SHALL BE INSTALLED BETWEEN THE RELIEF VALVE AND THE SYSTEM OR IN THE DRAIN LINE.
- PRESSURE RELIEF VALVES LOCATED INSIDE A BUILDING SHALL BE PROVIDED WITH A DRAIN, NOT SMALLER THAN THE RELIEF VALVE OUTLET. THE DRAIN SHALL BE OF GALVANINZED STEEL, HARD DRAWN COPPER PIPING AND FITTINGS, CPVC, PB, OR LISTED RELIEF VALVE DRAIN TUBE WITH FITTINGS WHICH WILL NOT REDUCE THE INTERNAL BORE OF THE PIPE OR TUBING (STRAIGHT LENGTHS AS OPPOSED TO COILS) AND SHALL EXTEND FROM THE VALVE TO THE OUTSIDE OF THE BUILDING WITH THE END OF THE PIPE NOT MORE THAN TWO (2') FEET NOR LESS THAN 6 INCHES ABOVE THE GROUND AND POINTING DOWNWARD. SUCH DRAINS MAY TERMINATE AT OTHER APPROVED LOCATIONS. NO PART OF THE DRAIN PIPE SHALL BE TRAPPED AND THE TERMINAL END OF THE DRAIN PIPE SHALL NOT BE THREADED.

960 Gray Ave., Suite #C
Yuba City, CA. 95991
Office - 530-868-4850

TYPIAL PIPE HANGER

SHEL-DT7 1=4



WATER PIPING PLAN

|/4" = |'-0"

ATER PIPING PLAN

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## MECHANICAL NOTES

- 1. THE MECHANICAL CONTRACTOR SHALL SUPPLY AND INSTALL COMPLETE AND PROPERLY FUNCTIONING EXHAUST FAN SYSTEMS COMPLETE. USE SPECIFIED ROOF PENETRATIONS FOR ALL PROPOSED ROOF PENETRATIONS, ETC. PROVIDE AND INSTALL ALL FLASHINGS, ROOF JACKS, WALL FLASHINGS, GALVANIZED METAL RAKE FLASHINGS, GUTTERS, DOWNSPOUTS/RELATED ASSESSORIES, ETC. COMPLETE. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS TRANSPORTATION, MISCELLANEOUS ITEMS, EQUIPMENT AND ETC. AS REQUIRED TO ACCOMPLISH THIS INTENT. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY ACCESSORIES WHICH MAY BE REASONABLY CONSTRUED AS A NECESSARY PART OF THE INSTALLATION WHETHER THE ACCESSORIES ARE SHOWN NOTED OR NOT.
- 2. ALL WORK SHALL CONFORM WITH THE REQUIREMENTS OF THE LATEST ADOPTED CODES AND ORDINANCES. NOTHING IN THESE PLANS SHALL BE CONSTRUED AS TO PERMIT WORK THAT IS NOT IN CONFORMANCE WITH THESE CODES OR OTHER GOVERNING CODES:
- \* 2022 CALIF. MECHANICAL CODE / UNIFORM MECHANICAL CODE (UMC) \* 2022 CALIF. BUILDING CODE / UNIFORM BUILDING CODE (UBC) 2022 CALIF. PLUMBING CODE / PLUMBING MECHANICAL CODE (UMC) 2022 CALIF. ELECTRICAL CODE / NATIONAL ELECTRICAL CODE (NEC)
- \* NATIONAL FIRE PROTECTION ASSOCIATION \* STATE TITLE 24 ENERGY CONSERVATION REQUIREMENTS \* SHEET METAL & AIR CONDITIONING CONTRACTORS NAT. ASSOC.
- 3. THE DRAWINGS ARE SCHEMATIC ONLY. FIELD ADJUSTMENTS MAY BE REQUIRED TO ACCOMMODATE OBSTRUCTIONS.
- 4. ALL MECHANICAL EQUIPMENT SHALL BE MOUNTED AND ANCHORED IN ACCORDANCE WITH CALIF. BUILDING CODE REQUIREMENTS. THE MECHANICAL CONTRACTOR IS RESPONSIBLE FOR MECHANICAL EQUIPMENT ANCHORAGE DESIGN AND INSTALLATION.
- 5. THE PLUMBING CONTRACTOR SHALL PROVIDE AND INSTALL ALL CONDENSATE PIPING TO PER CODE REQUIREMENTS.
- 6. ALL EQUIPMENT SHALL BE INSTALLED IN STRICT ACCORDANCE WITH THE CODE AND MANUFACTURER'S REQUIREMENTS.
- 7. COORDINATE ALL HYAC INSTALLATIONS WITH OTHER TRADES TO AVOID INTERFERENCES AND CONFLICTS.
- THE MECHANICAL CONTRACTOR SHALL CONTACT THE ENGINEER AND RESOLVE ANY CONFLICTS IN THE CONSTRUCTION DOCUMENTS PRIOR TO ANY FABRICATION AND/OR INSTALLATION OF MATERIALS OR
- 9. ELECTRICAL CONNECTION TO CONTROL EQUIPMENT ALONG WITH ANY APPARATUS SUCH AS SWITCHES, DISCONNECTS AND ETC. TO MAKE THE SYSTEM OPERATIVE ARE A PART OF THE ELECTRICAL CONTRACTOR'S
- 10. A MAINTENANCE LABEL SHALL BE AFFIXED TO THE MECHANICAL EQUIPMENT AND A MAINTENANCE MANUAL SHALL BE PROVIDED FOR THE OWNERS USE. THE LABEL SHALL CLEARLY INDICATE THE ROUTINE MAINTENANCE ACTIONS WHICH MUST BE PERFORMED TO MAINTAIN THE EQUIPMENT IN EFFICIENT OPERATING CONDITION.
- 11. ALL EQUIPMENT SHALL COMPLY WITH THE STATE OF CALIFORNIA ENERGY CONSERVATION STANDARDS. EQUIPMENT MANUFACTURER'S AND SUPPLIERS SHALL PROVIDE ALL NECESSARY DATA FOR COMPLIANCE.

#### CLOTHES DRYER

- 12 MOISTURE EXHAUST DUCTS SHALL TERMINATE ON THE OUTSIDE OF THE BUILDING AND SHALL BE EQUIPPED WITH A BACKDRAFT DAMPER. SCREENS SHALL NOT BE INSTALLED AT THE DUCT TERMINATION. DUCTS FOR EXHAUSTING CLOTHES DRYERS SHALL NOT BE CONNECTED OR INSTALLED WITH SHEETMETAL SCREWS OR OTHER FASTENER THAT WILL OBSTRUCT THE FLOW. CLOTHES DRYERS MOISTURE EXHAUST DUCT SHALL NOT BE CONNECTED TO A GAS VENT CONNECTOR, GAS VENT, OR CHIMNEY AND SHALL SERVE CLOTHES DRYERS. CLOTHES DRYER MOISTURE EXHAUST DUCTS UNDER POSITIVE PRESSURE SHALL NOT EXTEND INTO OR THROUGH DUCTS OR PLENUMS.
- 12.1 DOMESTIC CLOTHES DRYER MOISTURE EXHAUST DUCTS SHALL BE OF METAL AND SHALL HAVE SMOOTH INTERIOR SURFACES. CMC 504.4.2
- 12.2 LISTED CLOTHES DRYER TRANSITION DUCTS NOT MORE THAN 6 FEET IN LENGTH SHALL BE PERMITTED TO BE USED IN CONNECTION WITH DOMESTIC DRYER EXHAUSTS.FLEXIBLE CLOTHES DRYER TRANSITION
- 12.3 UNLESS OTHERWISE PERMITTED OR REQUIRED BY THE DRYER MANUFACTURERS DUCTS SHALL NOT BE CONCEALED WITHIN CONSTRUCTION. CMC 504.4.2.2 INSTRUCTIONS AND APPROVED BY THE AUTHORITY HAVING JURISDICTION, DOMESTIC DRYER MOISTURE EXHAUST DUCTS SHALL NOT EXCEED A TOTAL COMBINED HORIZONTAL AND VERTICAL LENGTH OF 14 FEET, INCLUDING TWO 90 DEGREE ELBOWS. A LENGTH OF 2 FEET SHALL BE DEDUCTED FOR EA. 90 DEGREE ELBOW IN EXCESS OF 2. CMC 504.4.2.1

## MECHANICAL PLAN KEYNOTES

- # DESIGNATES TYPICAL KEYNOTE SYMBOLS.
- ROOF MOUNTED POWERED ATTIC VENTILATORS
  MI PROVIDE AND INSTALL BROAN MODEL 355BK ALONG WITH ALL FLASHING AND RELATED CONNECTIONS FROM THE VENTILATOR FAN THROUGH THE ROOF.

# BROAN

## SPECIFICATION SHEET

# **ROOF MOUNTED POWERED ATTIC VENTILATORS**

Powerful and easy to install, these units supplement or replace air conditioning by removing the blanket of hot, trapped air from attics - automatically.

- **FEATURES** Precision balanced 14" metal blade for maximum air flow
- minimum sound level PVC plastic dome provides ultraviolet protection and superior durability (Models 350BK\*, 350BR\*, 355BK, 355BR, 356BK\*,
- .050 aluminum dome (Model 358)
- 23 gage metal flashing allows for nailing and hot tar application Mesh bird screen
- Built-in adjustable thermostat for automatic operation at your chosen temperature level
- Thermally protected, permanently lubricated motor Mounts easily between rafters - installation template

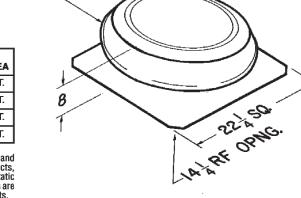
included CONTROLS DESIGNED FOR USE WITH THESE

- PRODUCTS (purchase separately): Model 69W (White) Single-Function Control Model 72W (White) Electronic Variable Speed
- Control- 6 amp (not for use with Model 356\*)

Can be used to ventilate excess heat and humidity from single family, residential garages.

SPECIFICATIONS								
MODEL	VOLTS	AMPS	RPM	CFM	ATTIC MAX. SQ. FT.	MIN. INLET AREA		
350BK*, 350BR*	120	3.6	1000	1050	1500	3.5 SQ. FT.		
355BK, 355BR	120	4.3	1050	1000	1400	4.0 SQ. FT.		
356BK*, 356BR*	120	8.0	1500	1600	2285	5.5 SQ. FT.		
358	120	4.3	1050	1000	1400	4.0 SQ. FT.		

\* HVI-2100 CERTIFIED RATINGS comply with new testing technologies and procedures prescribed by the Home Ventilating Institute, for off-the-shelf products, as they are available to consumers. Product performance is rated at 0.1 in. static pressure, based on tests conducted in a state-of-the-art test laboratory. Sones are a measure of humanly-perceived loudness, based on laboratory measurements.



TYPICAL SPECIFICATION

easily between rafters or wall studs.

to be included.

356BR\*).

Roof Mounted Attic Ventilator shall be Broan Model 350BK\*

Ventilator shall have metal blade and flashing plate. Bird screen

Dome to be ultraviolet resistant plastic. (.050 Approx. 18 gage

aluminum). Motor to be thermally protected and permanently lubricated. RPM not to exceed 1000 (Models 350BK\*, 350BR\*),

1100 (Models 355BK, 355BR, 358), 1500 (Models 356BK\*,

Ventilator shall have a built-in adjustable thermostat and mount

Air delivery shall be no less than 1050 CFM (Models 350BK\*,

(Models 356BK\*, 356BR\*). Units to be U.L. Listed.

350BR\*), 1000 CFM (Models 355BK, 355BR, 358), 1600 CFM

(350BR\*) (355BK) (355BR) (356BK\*) (356BR\*) (358).

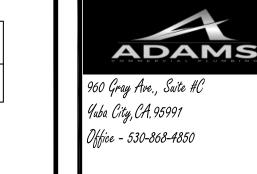
Broan Hartford, Wisconsin www.broan-nutone.com 800-558-1711

REFERENCE	QTY.	REMARKS	Project	
			Location	
			Architect	
			Engineer	
			Contractor	
			Submitted by	Date

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SHEET INDEX

M1 MECHANICAL EXHAUST FAN PLAN



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MECHANICAL PLAN

|/4" = |'-0"

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 by 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, positions and kind of construction, and the specifications will indicate qualities and methods. Any work indicated on the working details mentioned but not 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 between drawings and 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 architect 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 instruction in writing from the owner, then he shall have no valid claim against the owner, 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 owner, 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 be elect to proceed, he is doing so at his own risk.

2. Construction shall conform to all applicable codes and regulations.

3. Shop Drawing Note:

A) Shop drawings shall be submitted in the form of one reproducible and two copies of each sheet. B) The purpose of shop drawing submittals by the Contractor is to demonstrate

which materials he intends to furnish and install, and by detailing the fabrication and installation methods he intends to use. C) Prior to fabrication, shop drawings shall be submitted for review to the Structural Engineer. Shop drawing submittals shall include, but are not

to the Structural Engineer that he understands the design concept by indicating

necessarily limited to structural steel, reinforcing steel, glued laminated beams, and pre-fabricated wood roof framing items such as I-joists and trusses. 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". E) Shop drawing submittals processed by the Structural Engineer are not change

F) Any detail on the shop drawing that deviates from the contract documents

shall clearly be marked with the note "This is a Change". 6) 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 owner and the Structural Engineer 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 forms and shoring required.

5. The Contractor shall notify the Architect and Structural Engineer where a conflict <u>or a discrepancy occurs between the structural drawings and any other portion of</u> 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 architectural and structural drawings 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 Architect and Structural Engineer prior to proceeding. 7. When construction attaches to an existing building, a complete set of drawings of

the existing building shall be kept on the job site. Contractor to obtain these 8. Contractor shall provide an allowance equal to 2% of the bid for structural steel,

misc. iron, light gauge framing, and reinforcing steel to be used at the discretion of the structural engineer. Unused amount to revert to the owner upon completion of 9. Any substitutions 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 quarantee that the substitution

10. Do not scale drawings. Contact the Architect or Structural Engineer for any dimensions not shown.

II. These drawings are not complete until reviewed and accepted by the local building official and signed by the owner and the Structural Engineer 12. All drawinas and written material appearing herein constitutes the original and

unpublished work of the Structural Engineer and the same may not be duplicated, used or disclosed without written consent of the Structural Engineer.

13. The structure shown on these drawings is structurally sound only in its completed form. The stability of this structure depends on the diaphragms and the bracing members shown. The Contractor is to provide for the design and construction of shoring for all earth, forms, concrete, steel, wood, and masonry to resist gravity, earth, wind, seismic, and construction loads. Shoring shall remain in place until all diaphragms and lateral resisting elements are in place in their entirety. Construction materials shall be spread out if placed on framed floors or roofs. Load shall not exceed the design live load per square foot.

## Foundations

I. Foundation design is based on the Geotechnical Investigation report for Riverdale Resort Subdivision, by CTE Cal, Inc., CTE job number 90-14936, dated January 29, 2018, and update letter dated XXXXXXXX, 2020.

2. All building pad preparation and foundation work shall be done in accordance with the requirements of the geotechnical report. Copies of the report may be obtained from the engineer upon request.

3. The Geotechnical Engineer shall observe all footing excavations prior to

placement of reinforcing steel and concrete. 4. Foundation depths indicated on plans are for estimating purposes only. Actual

depths are to be determined by the Geotechnical Engineer on the jobsite. 5. When structural observation is required, structural engineer shall observe footing reinforcing steel prior to concrete placement. Provide 48 hours notice to structural engineer prior to concrete placement.

6. The contractor shall be solely responsible for all excavation procedures including, but no limited to, lagging, shoring and protection of adjacent property, structures, streets, and utilities in accordance with the local building department.

7. Foundation type: <u>conventional spread footings</u> <u>Mat Foundation design values:</u>

Allowable Bearing Pressures 1000 psf DL + LL 1000 psf 1333 psf DL + LL + wind or seismic

<u>Lateral Resistance</u>

150 pcf Passive Pressure Coefficient of friction 0.25

## Structural Steel

I. Fabrication, erection and materials shall conform to the specifications and standards of the AISC, as contained in the "AISC 360-16 Specifications of Structural Steel Buildings" & the "AISC Manual of Steel Construction", 15th edition and California Building Code latest edition.

2. Structural steel shall conform to the following specifications, v.n.o.: <u>Shapes</u> Wide Flanges (W, WT, S, M) ASTM A992 Channels (C), Misc Channels (MC), Angles (L) ASTM A36 ASTM A500, Gr. C Hollow Structural Steel (HSS) ASTM A53, Type E or S, Gr. B Steel Circular Pipes (P) <u>Plates & Bars</u> ASTM A36 Column Base Plates Brace Gusset Plates ASTM A36 ASTM A36 Beam Shear Connection Plates Column Continuity Plates ASTM A572, Gr. 50 Beam Stiffener Plates ASTM A36 ASTM A36 Deck Closure Plates Stainless Steel Plates & Bars ASTM A276 ASTM A36 Other Nuts, Bolts, Rods, & Washers General Bolts ASTM A325-N Slip Critical Bolts (see note #4 below) ASTM A325-SC High Strength Bolts ASTM A325-N or A490 Machine Bolts (general use) ASTM A307 ASTM F1554, Gr. 36, 55, or 105 Bent # Headed Anchor Bolts | Partial & Fully Threaded Anchor Rods ASTM F1554, Gr. 36, 55, or 105 Fully Threaded Rod (general use) ASTM A36 (A307 Gr. A for <sup>3</sup>/8"Φ) ASTM A108, Gr. 1015 thru 1020 Welded Shear Connectors ASTM A108, Gr. 1015 thru 1020 Welded Threaded Studs Nuts for Bolts & Machine Bolts ASTM A563 ASTM F436 Hardened Washers Unhardened Washers ASTM F844 ASTM BI8.22.1 Plain Washers

3. Bolted connections shall consist of unfinished bolts per the table above unless noted otherwise. Anchor bolts cast in concrete or masonry shall be headed bolts with cut thread, full diameter body style conforming to ASTM F1554 u.n.o.. Unless noted otherwise, anchor bolts/rods shall be grade 36 except that welded anchor bolts shall be grade 55 per SI Supplementary requirements. All bolted connections and base plates shall have standard cut washers unless noted otherwise. Washers at base plates shall be placed at top and bottom of plate.

4. "Slip-critical" bolted connections: A) "Slip-critical" connections (A325-SC 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 v.n.o., at all bolts in oversized or slotted holes.

ASTM BI8.23.1

B) The special inspector must be present during installation and tightening operation of "slip-critical" connections.

5. All structural steel shall receive minimum of one shop coat of red primer with a minimum dry film thickness of 2.0 mils. Do not shop prime or paint areas to be field welded, fireproofed, galvanized, to receive slip-critical high strength bolts, or to be embedded in concrete. Prior to priming or painting, clean structural steel in accordance with Steel Structures Painting Council (SSPC) recommendations # as required by the primer # paint manufacturer. 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 arout under all base plates before adding vertical load. See Concrete Notes for non-shrink grout requirements.

8. Structural steel below grade shall have 3" minimum of concrete cover.

9. Provide  $\frac{1}{2}$ " $\theta$  stitch bolts and ring fills, space at not more than 24" cc for all double

10. At wood to steel parallel contact, attach with ½"P welded threaded studs at

maximum 32"cc. # 6" from ends of wood member, typical unless noted otherwise.

II. Holes for unfinished bolts shall be of the same nominal diameter of the bolt plus  $^{\prime\prime}$ 16". Use standard AISC gage and pitch for bolts except as noted otherwise. Ho'les for anchor bolts embedded in concrete shall be of the same nominal bolt diameter plus <sup>3</sup>/16" unless noted otherwise.

12. 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 welding to be done using E70xx electrodes. In addition, welding of ASTM A572 grade 50 steel and ASTM A992 steel shall be done with electrodes capable of depositing weld metal with a maximum diffusible hydrogen content of 16ml/100g (HI6). Weld lengths called for on plans are the net effective lengths required.

13. Minimum fillet welds:

Beveled Washers

3/16" @ t < 1/2" 1/4" @ t < 3/4"

3/6" @ t > 3/4"

14. Welding Procedure Specifications (WPS) for shop and field pre-qualified weld joints and weld joints qualified by test shall be prepared for review prior for fabrication. All welding procedures that meet there requirements of AWS DI.1 Sec. 5.1 shall be considered as pre-qualified. Qualification testing is required when the depth of a partial penetration or complete penetration weld is 2" or greater. 15. Structural steel # fasteners that are permanently exposed to weather shall be

either primed and painted or hot dipped galvanized in accordance with ASTM A123 # A153. Repair galvanizing after welding in accordance with ASTM A780. 16. When structural steel & connections will be exposed to view in the completed building, they shall be fabricated, erected # finished in compliance with Architecturally Exposed Structural Steel (AESS) quidelines & Section 10 of the

AISC 303-10 "Code of Standard Practice for Steel Buildings and Bridges".

## Concrete

1. Structural concrete shall attain 28-day compressive strength as required in note #30. Maximum slump shall not exceed 4".

2. Concrete mix designs shall be prepared by a registered Civil Engineer, reviewed by Owner's testing laboratory and submitted to the Structural Engineer for review. Selection of concrete mix proportions shall be per ACI 318-14 Section 26.4.3. #

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 (15% max v.n.o.) 4. Concrete aggregates shall conform to ASTM C-33 for normal weight concrete and

ASTM C-330 for light weight concrete. 5. Water shall be clean and free from injurious amounts of oils, acids, alkalis, salts, organic materials or other substances deleterious to concrete or reinforcement.

6. Non-shrink grout or drypack shall consist of a premixed nonmetallic formula. See note #27 for additional information. Reinforcing steel shall conform to ASTM A615-grade 60 for #4 and larger, and ASTM A615-grade 40 for #3 and smaller, except reinforcing steel to be welded

shall conform to ASTM A706. Contractor shall submit rebar mill certificates. 8. Welded Wire fabric shall conform to ASTM A-1064. 9. All preheating and welding of reinforcing bars shall be done in accordance with

AWS DI.4 latest edition and shall be continuously inspected by a qualified laboratory. Contractor shall furnish WPS for all rebar welding to the laboratory. 10. Reinforcing steel shall be fabricated according to "Manual of Standard Practice"

for Reinforced Concrete Construction". II. 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 follows, v.n.o.:

Cast against earth (except slabs) Cast in forms and exposed to earth or weather #6 & larger #5 & smaller Beams & columns (ties) Beams & columns (main reinf) Cast-in-place walls (exterior face \$ soil side) see above Cast-in-place walls 3/4" (interior face - #11 & smaller) Tilt-up walls see details Slabs (on forms)

Slabs (on around) 2" clr from top v.n.o. 12. Splices in continuous reinforcement shall be lapped u.n.o., lap bars 48 bar diameters v.n.o. 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 v.n.o.: top bars at centerline of support; bottom bars at mid-span. Splice continuous bars in elevated slabs and beams, etc. as follows u.n.o.: 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 overlap 2 squares minimum.

13. The minimum clear spacing between parallel bars in a layer shall not be less than the larger of bar diameter, I", 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.

14. All hooks shall be standard hooks unless otherwise shown or noted. At walls, provide hooks at ends of all reinforcing ends, corners and intersections, u.n.o. 15. Provide construction/control joints @ all slabs on grade as noted on plan. Proposed joint plan shall be submitted to the Structural Engineering for approval prior to construction. Concrete surface at construction joints shall be thoroughly cleaned and laitance removed. Where indicated on drawings, roughen concrete surface to  $\frac{1}{4}$ " amplitude. Concrete may be roughened by chipping the entire surface, sand blasting, or raking the surface to provide 1/4" deep deformations.

16. Remove all debris from forms before casting any concrete. 17. Reinforcing, dowels, bolts, anchors, sleeves, etc., to be embedded in concrete shall be securely positioned in forms before placing concrete.

18. Pipes and electrical conduits shall not be embedded in structural concrete or concrete fill over metal decking except where specifically approved by the Structural Engineer

19. 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 or Fl554 v.n.o. 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 cast in concrete for column base plate and steel embed applications.

20. Walls shall be cast in horizontal layers of 2'-0" maximum depth. 21. Concrete in walls, piers or columns shall set at least 2 hours before placing

concrete in beams, spandrels, or slabs supported thereon. 22. 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.

23. Drill through steel columns, beams and plates to pass continuous reinforcing, v.n.o. 24. No wood spreaders allowed. No wood stakes allowed in areas to be concreted. 25. Additional reinforcing in precast or tilt-up panels required for lifting stresses shall

be supplied by Contractor. 26. Provide #5x4<sup>T</sup>-O" diagonal reinforcing at mid-depth of slab at all re-entrant corners typical. This applies to slab on grade, concrete over metal deck, and

elevated structural slab conditions. 27. Place non-shrink grout under base plates, sill plates, etc as indicated on the drawings. Non-shrink grout shall be Masterflow 928 Grout by Master Builders Technologies or approved equal with a minimum f'c of 7500 psi @ 28 days.

28. 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. 29. Notify Structural Engineer a minimum of 48 hours before placing any concrete.

30. Concrete strength: (max slump = 4")

Use	f'c @ 28 days	Max Aggregate Size	Density (lbs/ft³)	Max WC Ratio
Foundations	3000 psi	1/2"	145	0.58
Slab-on-grade	3500 psi	/"	145	0.45
Tilt-up walls	4000 psi	/"	145	0.50
Concrete fill o/ metal deck	3500 psi	36"	145	0.52
Exterior flatwork	2500 psi	/"	145	0.60
Conc topping	2500 psi	36"	115	.60

31. Development lengths shall be provided per the table below unless noted otherwise.

Straight Bars			,	WIth Standard	d Hooks
D	F	<i>'</i> C	D	F	'c
Bar	3000 psi	4000 psi	Bar	3000 psi	4000 psi
#3	15"	21"	#3	6"	6"
#4	29"	25"	#4	// "	10"
#5	36"	31"	#5	14"	12"
#6	43"	<i>3</i> 7"	#6	17"	15"
#7	63"	54"	#7	20"	17"
#8	72"	62"	#8	22"	19"
#9	80"	70"	#9	25"	22"
#10	89"	78"	#10	28"	24"
#//	98"	85"	#//	31"	26"

## Test and Inspections

1. Tests and Inspections shall be provided as required below and shall conform to

the requirements of 2019 CBC, Chapter 17. 2. All Test and Inspections shall be performed by a certified special inspector from an established Testing & Inspection Company, unless noted otherwise. Jobsite visits by the Structural Engineer do not constitute inspections and are not a substitute for special inspection.

3. The special inspector shall observe the work indicated for conformance with the

approved construction documents. 4. The special inspector shall furnish inspection reports to the building department, the engineer or architect of record, and other designated persons. All discrepancies shall be brought to the immediate attention of the contractor for correction, then, if uncorrected, to the proper design authority and to the building department.

5. The special inspector shall submit a final signed report stating whether the work requiring special inspection was, to the best of the inspector's knowledge, in conformance with the approved construction documents and the applicable workmanship provisions of the 2019 CBC.

6. It is the contractor's sole responsibility to see that these tests and inspections are performed.

7. Required Tests and Inspections are indicated below with a solid filled rectangle

8. Continuous notation indicates the full-time observation of work requiring special inspection by an approved special inspector who is present at the work area. Periodic notation indicates the intermittent observation of work.

> Tests & Documentation/Certification Required Note: Coordinate with building department Test \$ Inspection form.

A. Compact fill ☐ B. Concrete mix design, cement, aggregates ¢ admixtures C. Concrete strength f'c test ☐ D. Reinforcing steel mill certification ☐ E. Structural steel mill certification  $\square$  F. Structural steel, cold formed steel, and anchor bolt sampling  $\sharp$  testing (if not properly identified) ☐ G. Post installed anchors: Expansion / Epoxy Anchors ☐ H. High strength bolts, nuts and washers ☐ I. End-welded studs ☐ J. Beam to column moment connection K Prefabricated items

	Prefabricated items		
<i>A</i>	<u>Verification and Inspection</u> STEEL	<u>Continuo</u>	<u>Pus</u> <u>Perioa</u>
A.	I. Material verification of high-strength bolts, nuts washers	<b>#</b>	
	2. Inspection of high-strength bolting, bearing \$ typ connections	ical O	
	3. Inspection of Welding Structural Steel: (field/shope Complete & partial penetration groove welds Multi-pass fillet welds Single-pass fillet welds > 5/6" Single-pass fillet welds ≤ 5/6"	9) • •	
	Floor and roof deck welds  4. Inspection of Steel Frame Joint Details for	0	
□ <i>B</i> .	Compliance with Approved Construction Documer 5. Automatic end-weld stud shear connectors CONCRETE	155	
	<ol> <li>Concrete Placement</li> <li>Inspection of reinforcing steel # placement</li> <li>Inspection of anchors cast in concrete</li> <li>WOOD</li> </ol>	0	
	<ol> <li>Verify positive connection of wood members supporting balcony or deck connections to exter</li> </ol>	o oior	
	walls prior to concealment  SOIL (by Geotechnical Engineer)  I. Footing excavation  2. Pile/Pier foundation  3. Material verification below footing  4. Excavation verification to proper depth  5. Placement and compaction of controlled fill  6. Site preparation prior to placement of controlle  POST INSTALLED ANCHORS  I. Expansion anchor installation	o o o ed fill	
	2. Epoxy anchor installation		0

## Design Criteria

. Code: 2019 California Building Code (CBC)

A) Zone I:

B) Zone 2:

C) Zone

2. Design Live Loads: <u>Remarks</u> <u>Live Load</u> A) Flat to < 4:12 Lr = 20 psfReducible per code B) 4:12 to < 12:12 Reducible per code Lr = 12-20 psfReducible per code L = O psf3. Snow Design Parameters: 4. Wind Design Parameters: Ultimate Design Wind Speed (3-sec aust) Vult = 93 mphNominal Design Wind speed (3-sec gust) Vasd = 72 mphRisk Category Exposure Category Internal Pressure Coefficient ±0.18 Directional Procedure Analysis Method Roof Pressures for Components & Cladding: I. Wind Uplift loads (zones defined per ASCE 7-16 fig. 30.3-2 thru 30.3-6):

12 psf

34 psf

50 psf

2. Discontinuity Distance: a = 7.2 ft <u> Wall Pressures for Components & Cladding:</u> Heights: 10'-15' 15'-20' 20'-32.5' Zone 4: xx.xx psf xx.xx psf xx.xx psf xx.xx psf | xx.xx psf xx.xx psf

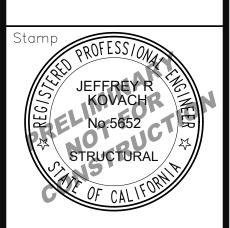
5. Earthquake Design Parameters: Seismic Importance Factor Ie = 1.05.2. Risk Category 5.3. Soil Site Classification 5.4. Seismic Design Category 5.5. Mapped Spectral Response Accel A) Short period  $S_5 = 0.655a$ B) I-sec period SI = 0.289q5.6 Design Spectral Response Accel A) Short Period SDS = 0.607a

B) I-sec period SDI = 0.547q5.7 Seismic Force Resisting System A) Wood Bearing / Shear Walls & Flexible Diaphragm

5.8 Seismic Base Shear V = O kips5.9 Seismic Response Coefficient

Cs = 0.17q5.10 Component Response Modification Factor R = 1.25 (cantilevered cols) 5.11 Analysis Procedure Equivalent Lateral Force **BEVIER** 

2479 Sunrise Blvd. Gold River, CA 95670 Tel: (916) 631-3030 Fax: (916) 631-8996 Web: www.bevier.net Bevier Job No: 20020



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<u>N</u> ENERAL G

Revisions

drawn by checked by xxx

8/21/20

## Mood

- I. All sawn lumber shall be Douglas Fir-Larch as graded by the West Coast Lumber Inspection Bureau (WCLIB) in accordance with Standard Grading Rules No. 17 typical unless noted otherwise. All members shall have a minimum grade of No. I except 2x4 and 2x6 wall studs, plates, and blocking may be No. 2.
- 2. All structural sheathing used for shearwalls and roof sheathing shall conform to the requirements for their type in DOC PSI, DOC PS2 or ANSI/APA PRP 210. Each panel or member shall be identified for grade, bond classification, and performance category by the trademarks of an approved testing and grading
- 3. All foundation plates or sills on concrete slabs which are in direct contact with earth, and plates or sills on concrete or masonry foundations, shall be pressure
- 4. All wood shall have a moisture content of not more than 19% when sheathing is
- 5. 8" minimum clearance shall be maintained at all exterior walls between finish grade
- and bottom of wood walls. 6. Bearing and shearwalls shall have double top plates lapped at wall corners and intersections and plates shall be internailed with 3-16d at such locations. For plate splice details, see drawings.
- 7. Sill plate anchor bolts shall be installed with plate washers 3x3x0.229 between nut
- 8. Provide solid blocking between joists and rafters at all supports.
- 9. Provide blocking at all ceiling levels.
- 10. Joists under and parallel to partitions shall be doubled and nailed together. II. Holes for bolts in wood shall be bored with a bit of the same nominal diameter as
- the bolt plus 16".
- 12. Holes for lag screws shall be bored as follows:
  - a. The clearance hole for the shank shall have the same diameter as the shank, and the same depth of penetration as the length of unthreaded shank. b. The lead hole for the threaded portion shall have a diameter equal to 60% to 75% of the shank diameter and a length equal to at least the length of
- 13. Lag screws and wood screws shall be screwed and not driven into place. Soap may be used to lubricate the screws.
- 14. All bolts and lag screws shall be provided with metal washers under heads and nuts which bear on wood. Applies' also to inserted expanding fasteners, Red Head,

Bolt Diameter	MI Washer	Steel Washer
<sup>5</sup> / <sub>8</sub> "Φ	2¾"Φ×516"	3"x3"x¼"
3/ <sub>4</sub> " <i>Φ</i>	3"\$\psi \chi_6"	3"×3"×5/6"
<sup>7</sup> /ε"Φ	3½"Ф×716"	3½"x3½"x¾"
Ι"Φ	4"\$\sqrt{2}"	3¾"×3¾"×¾"

- 15. All bolts and lag screws shall be tightened at installation and retightened before closing in or at completion of job.
- 16. Lay all structural sheathing on roof and floors with face grain perpendicular to support typical unless noted otherwise. Use ply-clips at unsupported sheathing
- 17. Connector hardware model number are those for Simpson Strong-Tie Company. All joist hangers shall be Simpson U series unless noted otherwise. Equivalent connectors with ICC acceptance may be submitted for review as an alternate. 18. Notify Structural Engineer after wall, floor, and roof sheathing nailing has been
- completed and a minimum of 48 hours prior to concealing sheathing. 19. Fasteners, nuts, and washers in contact with SBX/DOT and zinc borate treated wood in interior dry conditions may be carbon steel. Fasteners in other preservative-treated wood (Anchor bolts, nails, screws) shall be approved silicon bronze or copper, stainless steel or hot-dipped zinc-coated steel per CBC

## Adhesive Anchors-Concrete

2304.10.5.1 v.n.o.

- I. Where "Hilti" or "Simpson" post-installed adhesive anchors in concrete are called out on plan, the following Hilti or Simpson adhesive products shall be used, respectively. Substitutions between or for other products shall be approved by the engineer prior to use:
  - A. Hİlti HIT-HY 200 Epoxy Adhesive as manufactured by Hilti, Inc. ICC Report No. ESR-3187 revised April 2019.
- Simpson "SET-XP" Adhesive Anchors as manufactured by Simpson Strong-Tie, Inc. ICC-ES Report No. ESR-2508 reissued July 2019.
- 2. Installation, inspection # testing of anchors shall be in accordance with the
- manufacturer's recommendations, ICC-ES report and these notes. 3. Threaded rod anchors shall be F1554, Grade 36 u.n.o.
- 4. Continuous special inspection is required in accordance with CBC Section 1701. Special inspector must verify product, expiration date, concrete type and strength, anchor diameter and steel grade, compliance of drill bit, hole diameter and location, cleanliness of hole and anchor, adhesive application, and anchor
- embedment. See "Test and Inspections" section of plans for additional information. 5. Where pull-test loads are designated on plan, each anchor type (loaded in either pullout or shear) shall have 50% of the anchors (alternate in each group arrangement) tested in tension to the tension load shown. If any anchor fails testing, all anchors of the same type not previously tested shall be tested until 20 consecutive anchors pass, then initial testing frequency may be resumed. Where pull-test loads are not shown, pull-testing is not required.
- 6. The testing of the anchors shall be done by the Testing Laboratory and a report of the test results shall be submitted to the Building Dept. and the Architect/Structural Engineer. Testing shall occur after full epoxy cure time has elapsed (24 hours min). Where the number of anchors of a specific size and type exceed 100, the following testing procedure may be used. The first 40 anchors shall be tested as specified in note 5 above, then 10% of the additional anchors shall be tested. Any failure shall be handled in the same manner as specified in note 5 above.
- 7. When installing anchors in existing concrete do not cut or damage existing reinforcing bars. Locate existing reinforcing bars with pachometer or x-ray if

## Nailing Schedule

I. All nails for structural work shall be common wire nails conforming to the following minimum sizes:

8d O.131"Φx2½" O.148"Φx3" 10d

O.148"Φx15%" plus thickness of shtg 10d shorts 16d O.162"Φx3½" 20d O.192"Φx4"

- 2. Provide nails at connections as indicated on the structural drawings. Where nails at connections are not indicated nail per nailing schedule in note 5.
- 3. Nailing not noted in schedule or on plans shall be a minimum of two nails at each contact. 8d nails for I" material and 16d nails for 2" material.
- 4. Holes shall be pre-drilled where necessary to prevent splitting. 5. Nailing schedule:

Connection	Fastening	Location
l. Joist to sill or girder.	3-8d common (2½"x0.l3l") 3-3"x0.l3l" nails	toenail
2. Bridging to joist.	2-8d common (2½"x0.131") 2-3"x0.131" nails	toenail ea end
3. l"x6" subfloor or less	2-8d common (2½"x0.131")	face nail
4. Wider than I"x6" subfloor	3-8d common (2½"x0.131")	face nail
5. 2" subfloor to joist or girder	2-16d common (3½"x0.162")	blind # face nail
6. Sole plate to joist or blocking	16d (3½"x0.135") @ 16"cc 3"x0.131" nails @ 8"cc	typical face nail
Sole plate to joist or blocking at braced wall panel	3-16d (3½"x0.135") @ 16"cc 4-3"x0.131" nails @ 16"cc	braced wall panels
7. Top plate to stud.	2-16d common (3½"x0.162") 3-3"x0.131" nails	end nail
8. Stud to sole plate	4-8d common (2½"x0.131") 4-3"x0.131" nails	toenail
	2-16d common (3½"x0.162") 3-3"x0.131" nails	end nail
9. Double studs.	16d (3½"x0.135") @ 24"cc 3"x0.131" nail @ 8"cc	face nail
IO. Double top plates.	16d (3½"x0.135") @ 16"cc 3"x0.131" nail @ 12"cc	typical face nail
	8-16d common (3½"x0.162")  2-3"x0.131" nails	lap splice
ll. Blocking between joists or rafters to top plate.	3-8d common (2½"x0.131") 3-3"x0.131" nails	toenail
12. Rim joist to top plate	8d (2½"x0.131" @ 6"cc 3"x0.131" nail @ 6"cc	toenail
13. Top plates, laps and intersections.	2-16d common (3½"x0.162") 3-3"x0.131" nails	face nail
14. Cont. header, two pieces.	16d common (3½"x0.162")	16"cc along edge
15. Ceiling joists to plate.	3-8d common (2½"x0.131") 5-3"x0.131" nails	toenail
16. Continuous header to stud.	4-8d common (2½"x0.131")	toenail
17. Ceiling joists, laps over partitions. (Section 2308.10.4.1, Table 2308.10.4.1)	3-16d common (3½"x0.162") min. Table 2308.10.4.1 4-3"x0.131" nails	face nail
18. Ceiling joists to parallel rafters. (Section 2308.10.4.1, Table 2308.10.4.1)	3-16d common (3½"x0.162") min. Table 2308.10.4.1 4-3"x0.131" nails	face nail
19. Rafter to plate. (Section 2308.10.1, Table 2308.10.1)	3-8d common (2½"x0.l3l") 3-3"x0.l3l" nails	toenail
20. I" diagonal brace to stud \$ plate.	2-8d common (2½"x0.131") 2-3"x0.131" nails	face nail
21. 1"x8" ‡ wider sheathing to ea bearing.	3-8d common (2½"x0.131")	face nail
22. Built-up corner studs.	16d (3½"x0.162") @ 24"cc 3"x0.131" nail @ 16"cc	
23. Built-up girder ‡ beams.	20d common (4"x0.192") @ 32"cc 3"x0.131" nail @ 24"cc	face nail at t\$b, staggered on opposite sides
	2-20d common (4"x0.192") 3-3"x0.131" nails	face nail @ ends and @ ea splice

## Expansion Anchors-Concrete: (carbon Steel)

- I. Use Hilti Kwik Bolt-TZ Expansion Anchors as manufactured by Hilti Inc., Tulsa
- Oklahoma. ICC-ES Report No. ESR-1917 reissued May 2019. 2. Installation of anchor's shall be in accordance with the manufacturer's
- recommendations, ICC-ES Report, and these notes. 3. Special inspection is required in accordance with the 2019 CBC Sections 1705A.1.1.3 and 1910A.5. Special inspector must verify product, expiration date, concrete type and strength, anchor diameter and steel grade, compliance of drill bit, hole diameter and location, cleanliness of hole and anchor, and anchor embedment.
- 4. Each anchor type (loaded in either pullout or shear) shall be torque tested in accordance with CBC Section 1910A.5 to the appropriate test load shown in the table. If any anchor fails testing, all anchors of the same type not previously tested shall be tested until 20 consecutive anchors pass, then initial testing
- frequency may be resumed. 5. When installing anchors in existing concrete do not cut or damage existing reinforcing bars. Locate existing reinforcing bars with pachometer or x-ray if
- 6. The testing of the anchors shall be done by the Testing Laboratory and a report of the test results shall be submitted to the Building Dept. and Architect/Structural
- 7. Anchors installed up into the bottom of metal deck with concrete fill shall be installed in the center of the low flute of the decking. The decking shall have a minimum thickness of 20 gauge. The minimum depth of embedment above the top of the deck shall be 1/2". The effective depth of embedment is considered to be one-third of the metal deck height plus the depth of embedment above the top of the deck. There shall be a minimum concrete cover of I" between the top surface of the concrete and the end of the bolt.

Normal Weight Concrete f'c = 3000 psi Hilti Kwik Bolt-TZ Expar		Carbon Steel Anchors
Anchor Diameter	Embed	Installation Torque Torque Test Load (ft-lbs)
3/8"	2"	25
1/2"	314"	40
5/8"	4"	60
3/4"	43/4"	110

horiz ...... Horizontal

int ..... Interior

inv ...... Inverted

'LS .....Lag screw

lt. wt. .....Light weight LL ...... Live Load

i.d. .....Inside diameter

.. Joist

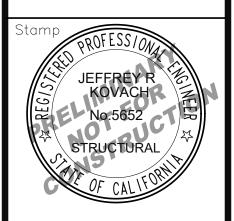
.. Joist hanger

<u>Abbreviations</u>	
addl Additional	LLHLong leg horizontal
alt Alternate	LLVLong leg vertical
AISC American Institute of Steel Construction	LVLLaminated Veneer L
APA American Plywood Association	MBMachine bolt
ASTM American Society for	mfrManufacturer
Testing and Materials	maxMaximum
AWS American Welding Society	mechMechanical
AB Anchor bolt	MIMalleable iron
# And	minMinimum
arch Architect/Architectural	miscMiscellaneous
@ At	mt1Metal
b.o Bottom of	N.I.CNot in contract
bm Beam	(n)New
brgBearing	
btrBetter	ntsNot to scale
btwnBetween	#Number or pounds
blkgBlocking	o/Over
B.S Both sides	ocOn center
bottBottom	ONJOpen web joist
	opngOpening
BN Boundary nail	oppOpposite O.HOpposite Hand
clg Ceiling	O.HOpposite Hand
cc Center to center	o.d
4Center line	PPPartial penetration
clrClear	pcpiece
COI Column	LPlate
CP Complete Penetration	ply, plyndPlynood
conc Concrete	pcfPounds per cubic foc
CMU Concrete masonry unit	psfPounds per square f
conn Connection	psiPounds per square in
CJ Construction Joint	PAFPowder Actuated Faste
cont Continuous	PTDFPressure Treated Doug
cskCountersink CTJControl Joint	r, radRadius
DL Dead Load	RDWDRedwood
det Detail	reinfReinforcing
	req'dRequired
diag Diagonal dia Diameter	rfRoof
doDitto	R.ORough opening ΦRound or diameter
D.F Douglas Fir	schedSchedule
dbl Double	S.A.DSee architectural dr
dn Down	S.E.DSee electrical drawi
dwg Drawing	S.M.DSee mechanical drav
ea Each	SMSSheet Metal Screws
E.FEach Face	SDSSimpson Strong-Drive Sc
embedEmbedment	SDSTSSe'lf drilling self
ENEdge Nail	tapping screw
E.WEach Way	SCshear connector %"\$\theta\$ v.r
elev, elElevatión	shtgSheathing
eqEqual	shtSheet
equipEquipment	SMSSheet metal screw
(e)Existing	simSimilar
EJExpansion Joint	s.o.gSlab on grade
FCFace of Concrete	#square
FBFace of Block	staggStaggered
FMFace of Masonry	stdStandard
FP Face of Plywood/Sheathing	st1Stee1
FS Face of Stud	sstlStainless Steel
finFinish	stfnrStiffener
F.FFinish floor	structStructural
F.GFinish grade	SPstructural plywood
flrFloor	SPstructural plywood SPENstructural plywood
ftgFooting	edge naili'ng
fndFoundation	symmSymmetrical
f.o Face of	TNToe nail
frmgFraming	t\$bTop
galvGalvanized	t.o.cTop of concrete
ga Gauge	t.o.fTop of framing
glbGlved-laminated beam	t.o.l2Top of plate
g.lGrid Line	t.o.sTop of Steel
hgrHanger	t.o.wTop of Wall
hdrHeader	t\$gTongue \$ Groove
ht Height	TSTube Steel
HSBHigh strength bolt	typTypical
HSSHōllow Stēel Section	v.n.oViless noted otherwi
hk Hook	vertVertical

aminated Veneer Lumber 1achine bolt 1anufacturer 1aximum 1echanical 1alleable iron 1inimum 1iscellaneous ot in contract lot to scale lumber or pounds n center pen web joist pening pposite pposite Hand v'tside diameter Partial penetration Plywood Pounds per cubic foot Pounds per square foot Pounds per square inch 'owder 'Actuate'd Fasteners Pressure Treated Douglas Fir Redwood Reinforcing Required Rough opening Round or diameter chedule ee architectural drawings ee electrical drawings õee mechanical drawings Sheet Metal Screws Simpson Strong-Drive Screw belf drilling self appina screw hear connector ¾"Φ v.n.o.) heathing heet Sheet metal screw blab on grade avare taggered tandard Stainless Steel tiffener Structural structural plywood tructural plywood edae nailina ymmetricaī oe nail Top # bottom op of concrete Top of framing op of plate -Top of Steel Top of Wall onque & Groove Tubé Steel Typical nless noted otherwise .Vertical ..Verify in field ..With .Within ..Without ..Wood screw ...Working point ...Welded headed studs MMF .....Melded wire fabric WCLIB ......West Coast Lumber Inspection Bureau



2479 Sunrise Blvd. Gold River, CA 95670 Tel: (916) 631-3030 Fax: (916) 631-8996 Web: www.bevier.net Bevier Job No: 20020



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Sheet name

GENERAL

Revisions

drawn by xxx checked by xxx

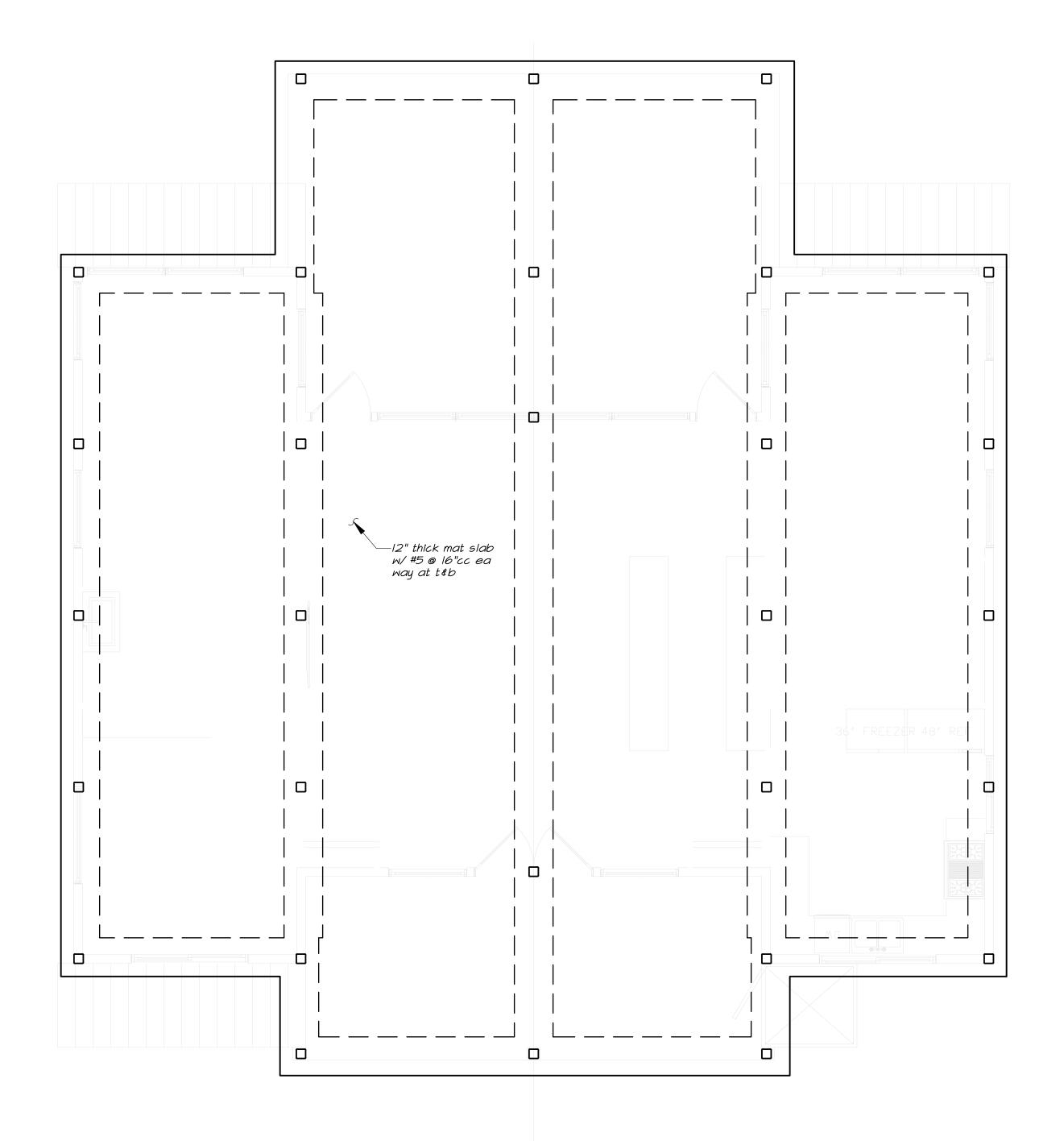
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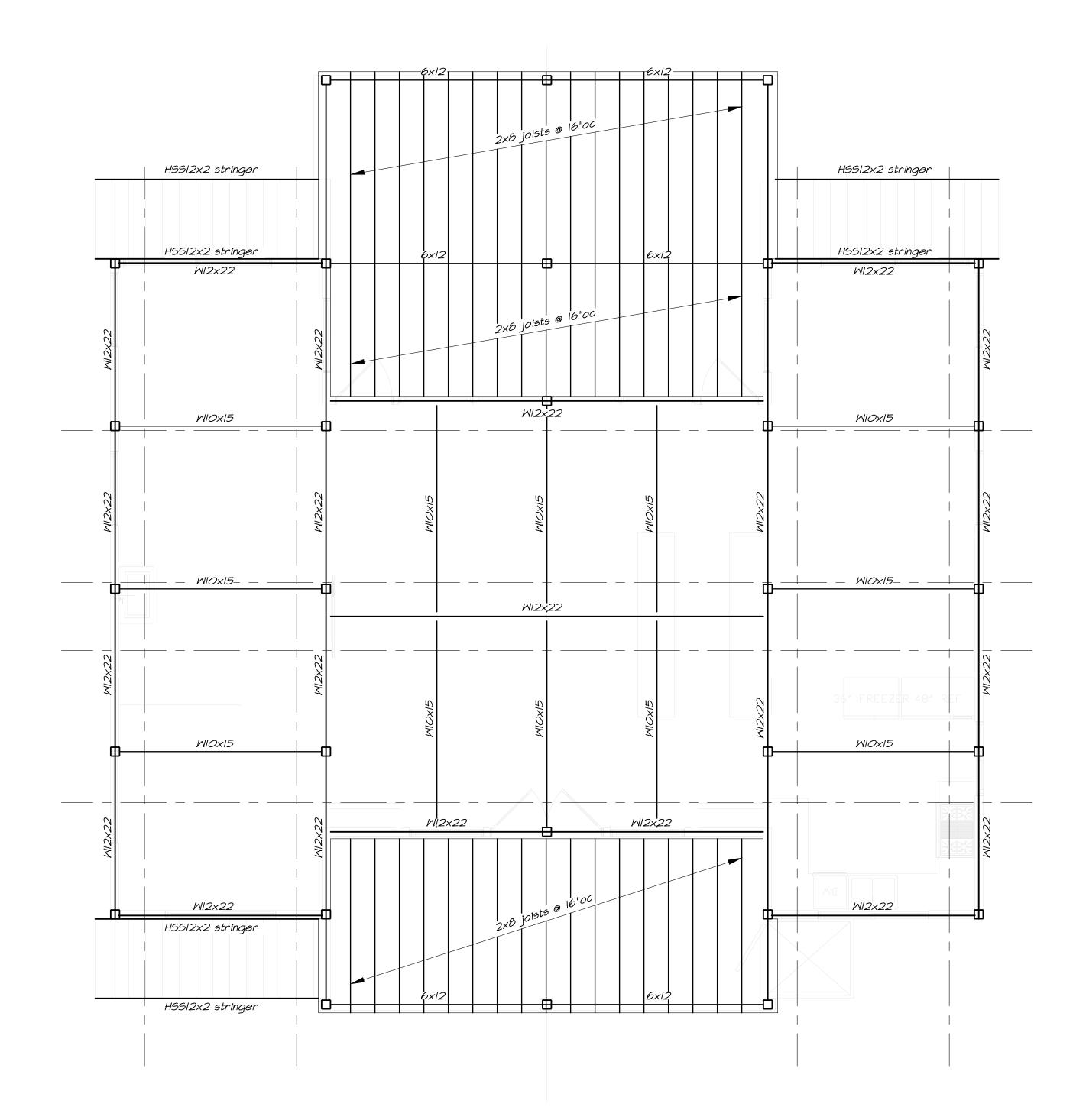
# Foundation Notes

I. See sheet S2.I for foundation notes.

# Framing Notes

I. See sheet S2.I for framing notes.



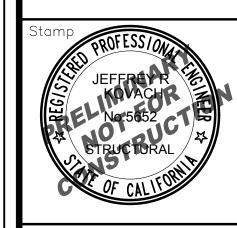








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Project

Riverdale Resort 501 Northgate Blvd Sacramento, CA

Sheet name

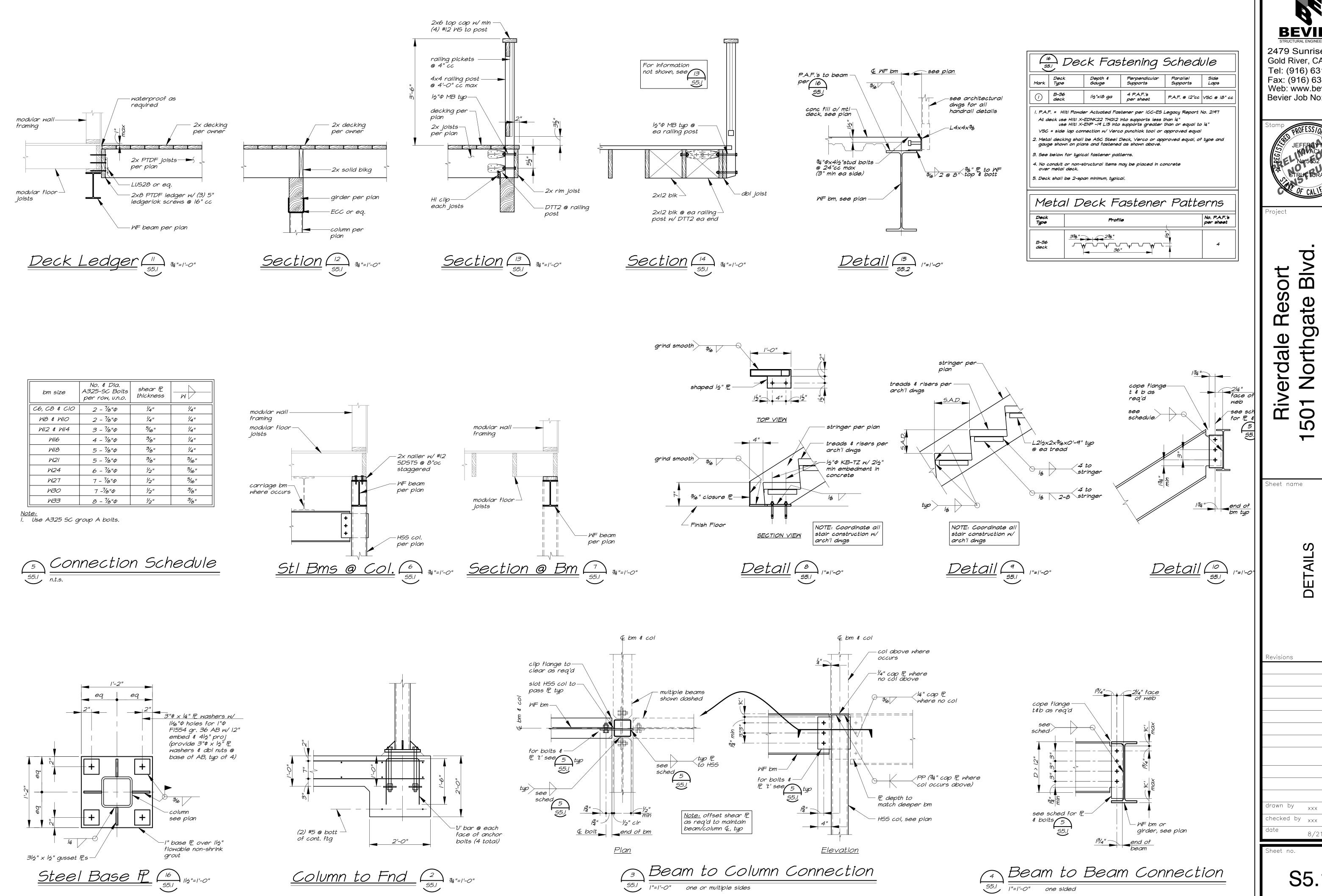
LODGE PLAN

sions

drawn by xxx checked by xxx

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S2.13



**BEVIER** 

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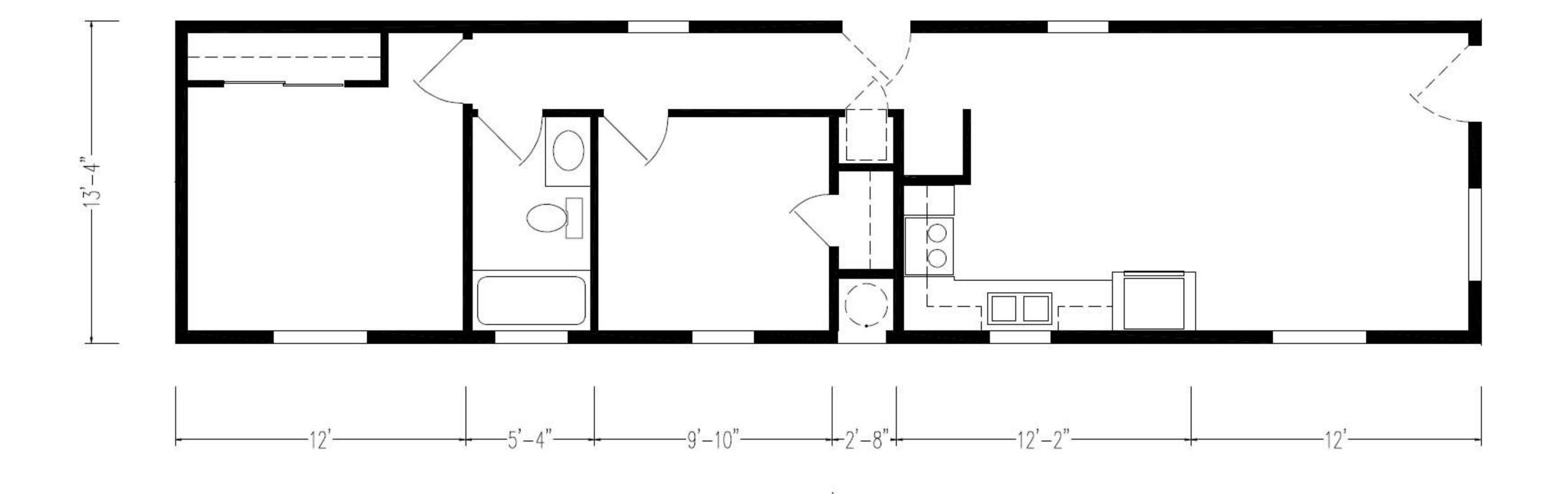
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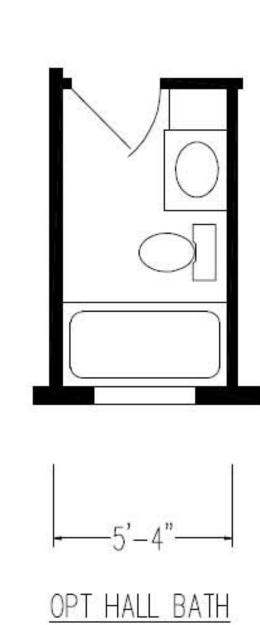
DETAIL

drawn by xxx

8/21/20

S5.1





CHECK-IN OFFICE FLOOR PLAN

	DI	VISIONS					
	231	SUGARCREEK	S			22 W. W.	
	233	ARKANSAS CITY	ON				
	235	SAN JACINTO	REVISION			DRAWN BY: KS	WIND ZONE 15#
X	237	WOODLAND	ΛΞ				A SECTION AND ADDRESS OF THE PROPERTY OF THE P
	239	OCALA	R			DATE: 10/12/2022	ROOF ZONE S,M,N
	241	LEOLA				SHEET	OF
	243	LANCASTER	ВО	X LENGTH	DESCRIPTION	DRAWING NU	MBER
	245	McMINNVILLE		54'	6014 2CV	14 040	264-06Q
		· · · · · · · · · · · · · · · · · · ·		<b>5</b> -1	4015 (14-04264-06Q) 5/22/20	23	104-00V

SITE PLAN

DCJ

07/14/2023

DRAWN BY:

CITY OF SACRAMENTO

DEPARTMENT OF PUBLIC WORKS

C040666

CHECKED BY:

RFE

DESIGNED BY:

1 INCH = 100 FEET

**DESCRIPTION** 

**REVISIONS** 

BENCH MARK ELEV. 25.808

HILTI NAIL ON WEST END OF RETAINING WALL AT NW CORNER OF DEL PASO BLVD. & RAILROAD DR.

DESCRIPTION

CITY BM: 297-FIA

(NAVD 88 DATUM)

DATE BY

FIELD BOOK

SCALE

HORIZ.

# **RIVERDALE** RESORT -AMERICAN RIVER FORCE MAIN **EXTENSION**

## **VICINITY MAP**

## **SHEET INDEX:**

TITLE SHEET

GENERAL NOTES, LEGEND AND ABBREVIATIONS

PLAN AND PROFILE STATION 10+00 - 15+85

PLAN AND PROFILE STATION 15+85 - 20+00 PLAN AND PROFILE STATION 20+00 - 25+00

PLAN AND PROFILE STATION 25+00 - 29+00

PLAN AND PROFILE STATION 29+00 - 33+84

## FLOOD PLAIN:

COMMUNITY PANEL NO.: 06067C0176J

## JURISDICTION:

CITY OF SACRAMENTO

## SITE INFORMATION:

APN: 274-0120-010

THOMPSON CURT A/ETAL P.O. BOX 987 WINTERS, CA 95694 CONTACT: LINDA FRAZIER

## **DEVELOPER**

THOMPSON CURT A/ETAL P.O. BOX 987 WINTERS, CA 95694 CONTACT: LINDA FRAZIER

## PROJECT DESCRIPTION:

RAILROAD DRIVE MANHOLE TO EXISTING SEWER

## UNDERGROUND UTILITY NOTE:

THE UNDERGROUND UTILITIES SHOWN HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND EXISTING DRAWINGS. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE. THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND

SUBMITTED BY:	
ROBERT F. EYNCK	DATE
ACCEPTED BY:	
JENNIFER JOHNSON, RCE 77032	DATE
SUPERVISING ENGINEER,	
DEVELOPMENT ENGINEERING	

DATE

# TOTAL DISTURBED LINEAL FEET: 2,400 FEET

# UTILITY REPRESENTATIVES

UTILITY	COMPANY	CONTACT	PHONE	011
GAS	P.G.& E.	DONNY KENNEDY	(530) 889-5089	
ELECTRIC	S.M.U.D.	BLANDON GRANGER	(916) 732-5016	
TELEPHONE	AT&T	ASTRID WILLARD	(916) 453-6136	Know what's <b>below</b> .
WATER	CITY OF SACRAMENTO	SARAI OCHOA	(916) 808-5426	Call before you d
SEWER	CITY OF SACRAMENTO	SARAI OCHOA	(916) 808-5426	or (800) 642-2444
DRAINAGE	CITY OF SACRAMENTO	SARAI OCHOA	(916) 808-5426	PROFESSIONAL
U.S.A.			1-800-227-2600	No. CO40666
FIRE	CITY OF SACRAMENTO	ROSS WOODMAN	(916) 808-5558	No. C040666 Exp. <u>3−31−25</u>
CAT V	COMCAST	STEVE ABELIA	1-800-266-2278	CIVIL OF
CAT V	AT&T	KERRY WATERS	(916) 648-8379	OF CALIFE

Call before you dig. or (800) 642-2444

2260 Douglas Blvd, Suite 160, Roseville, CA 95661 R.C.E. C040666 DATE 07/14/23 Ph: 916-772-7800 | www.cwecorp.com

UTILITIES DEPARTMENT

OFF-SITE IMPROVEMENT PLANS FOR RIVERDALE RV PARK PUBLIC SS FORCE MAIN EXTENSION 1501 NORTHGATE BOULEVARD SACRAMENTO, CA 95815

TITLE SHEET

## **PROJECT GENERAL NOTES:**

- THE EXISTING BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN ON THESE PLANS IS FROM A SUPPLEMENTAL TOPOGRAPHIC SURVEY BY RFE ENGINEERING, INC. COMPLETED ON (SURVEY NOT YET PERFORMED). RFE ENGINEERING RECOMMENDS THAT CONNECTION POINTS AND POTENTIAL CONFLICT LOCATIONS ARE POTHOLED TO IDENTIFY THE ACTUAL HORIZONTAL AND VERTICAL LOCATION OF SUCH FACILITIES PRIOR TO THE START OF CONSTRUCTION. CONTRACTOR SHALL NOTIFY RFE ENGINEERING, INC. IMMEDIATELY OF ANY DISCREPANCIES OR CONFLICTS DISCOVERED.
- THE CONTRACTOR AGREES THAT, IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES. THE CONTRACTOR WILL BE REQUIRED TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY THIS REQUIREMENT SHALL BE MADE TO APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS. THE CONTRACTOR FURTHER AGREES TO DEFEND, INDEMNIFY AND HOLD OWNER AND ENGINEER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED. IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT. EXEMPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF ENGINEER.
- EXCAVATIONS SHALL BE ADEQUATELY SHORED, BRACED AND SHEETED SO THAT THE EARTH WILL NOT SLIDE OR SETTLE AND SO THAT ALL EXISTING IMPROVEMENTS OF ANY KIND WILL BE FULLY PROTECTED FROM DAMAGE. ANY DAMAGE RESULTING FROM A LACK OF ADEQUATE SHORING, BRACING AND SHEETING, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR AND HE SHALL AFFECT NECESSARY REPAIRS OR RECONSTRUCTION AT HIS OWN EXPENSE. WHERE THE EXCAVATION FOR A CONDUIT TRENCH, AND/OR STRUCTURE IS FIVE FEET OR MORE IN DEPTH, THE CONTRACTOR SHALL PROVIDE ADEQUATE SHEETING, SHORING AND BRACING OR EQUIVALENT METHOD, FOR THE PROTECTION OF LIFE, OR LIMB, WHICH SHALL CONFORM TO THE APPLICABLE CONSTRUCTION SAFETY ORDERS OF THE DIVISION OF INDUSTRIAL SAFETY OF THE SATE OF CALIFORNIA. THE CONTRACTOR SHALL ALWAYS COMPLY WITH OSHA REQUIREMENTS.
- IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN PERMITS NECESSARY TO PERFORM THE WORK SHOWN ON THESE PLANS FROM THE APPROPRIATE AGENCIES.
- THE CONTRACTOR SHALL TAKE EFFECTIVE ACTION TO PREVENT THE FORMATION OF AN AIRBORNE DUST NUISANCE AND SHALL BE RESPONSIBLE FOR ANY DAMAGE RESULTING FROM HIS FAILURE TO DO SO.
- THE CONTRACTOR SHALL PROVIDE FOR INGRESS AND EGRESS FOR PRIVATE PROPERTY ADJACENT TO WORK THROUGHOUT THE PERIOD OF CONSTRUCTION. TRAFFIC MOVEMENT SHALL BE MAINTAINED AT ALL TIMES. IF TRAFFIC CONTROL PROCEDURES ARE DEEMED NECESSARY. THE CONTRACTOR SHALL CONFORM TO THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND THE MOST CURRENT CALTRANS TRAFFIC MANUAL. CITY/COUNTY ENGINEERS APPROVAL IS REQUIRED PRIOR TO ANY DETOURING, DISRUPTION, OR INTERRUPTION OF THE NORMAL TRAFFIC FLOW.
- THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR FURNISHING, INSTALLING. AND MAINTAINING ALL WARNING SIGNS AND DEVICES NECESSARY TO SAFEGUARD THE GENERAL PUBLIC AND THE WORK. AND PROVIDE FOR THE PROPER AND SAFE ROUTING OF ALL VEHICULAR AND PEDESTRIAN TRAFFIC DURING THE PERFORMANCE OF THE WORK. THE REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO THE NORMAL WORKING HOURS.
- THE CONTRACTOR SHALL POST EMERGENCY TELEPHONE NUMBERS FOR POLICE, FIRE, AMBULANCE, AND THOSE AGENCIES RESPONSIBLE FOR MAINTENANCE OF UTILITIES IN THE VICINITY OF THE JOBSITE.
- ANY EXTRA CONSTRUCTION STAKING NECESSITATED SOLELY BY THE CONTRACTOR'S NEGLIGENCE WILL BE CHARGED TO THE CONTRACTOR ON A TIME AND MATERIAL BASIS, AND PAID FOR BY THE CONTRACTOR.
- STATIONING HEREON IS ALONG STREET CENTERLINE UNLESS OTHERWISE SHOWN OR INDICATED.
- 11. ALL RETURN RADII AND CURB DATA ARE TO FACE OF CURB.
- ALL QUANTITIES AND PAY ITEMS ARE AND WILL BE BASED ON HORIZONTAL MEASUREMENTS.
- LENGTHS OF SANITARY SEWERS AND STORM DRAINS ARE HORIZONTAL DISTANCES FROM CENTER TO CENTER OF STRUCTURES, ROUNDED OFF TO THE NEAREST FOOT.
- 14. EXISTING UNDERGROUND UTILITIES AND IMPROVEMENTS ARE SHOWN IN THEIR APPROXIMATE LOCATIONS BASED ON FACILITIES IDENTIFIED BY THE TOPOGRAPHIC SURVEY AND UPON RECORD INFORMATION AVAILABLE TO THE ENGINEER AT THE TIME OF DESIGN AND NO GUARANTEE IS MADE AS TO THE ACCURACY OR COMPLETENESS OF THE INFORMATION SHOWN. THE CONTRACTOR SHALL NOTIFY UTILITY COMPANIES AT LEAST 2 WORKING DAYS IN ADVANCE OF CONSTRUCTION TO FIELD LOCATE UTILITIES. CALL UNDERGROUND SERVICE ALERT (U.S.A.), AT 811. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO DETERMINE THE EXISTENCE AND LOCATION OF THOSE UTILITIES SHOWN ON THESE PLANS OR INDICATED IN THE FIELD BY LOCATING SERVICES. ANY ADDITIONAL COSTS INCURRED AS A RESULT OF CONTRACTOR'S FAILURE TO VERIFY LOCATIONS OF EXISTING UTILITIES PRIOR TO BEGINNING OF CONSTRUCTION IN THEIR VICINITY SHALL BE BORNE BY THE CONTRACTOR AND ASSUMED INCLUDED AND MERGED IN THE CONTRACT
- 15. ALL EXISTING UTILITIES AND IMPROVEMENTS THAT BECOME DAMAGED DURING CONSTRUCTION SHALL BE COMPLETELY RESTORED TO THE SATISFACTION OF THE APPLICABLE AGENCY ENGINEER, AT THE CONTRACTOR'S SOLE EXPENSE.
- ANY RELOCATION OF PUBLIC UTILITIES SHALL BE CONDUCTED IN ACCORDANCE WITH ANY AND ALL REQUIREMENTS OF THE UTILITY COMPANY INCLUDING FEES, BONDS, PERMITS AND WORKING CONDITIONS. ETC. THIS WORK SHALL BE DONE AT NO EXPENSE TO THE UTILITY COMPANY. THE OWNER SHALL PAY THE COST OF ALL SUCH RELOCATION WORK INCLUDING FEES, BONDS, PERMITS, ETC.
- IF ARCHAEOLOGICAL MATERIALS ARE UNCOVERED DURING GRADING, TRENCHING OR OTHER EXCAVATION. EARTHWORK WITHIN 100 FEET OF THESE MATERIALS SHALL BE STOPPED UNTIL A PROFESSIONAL ARCHAEOLOGIST WHO IS CERTIFIED BY THE SOCIETY OF CALIFORNIA ARCHAEOLOGY (SCA) AND/OR THE SOCIETY OF PROFESSIONAL ARCHAEOLOGY (SOPA) HAS HAD AN OPPORTUNITY TO EVALUATE THE SIGNIFICANCE OF THE FIND AND SUGGEST APPROPRIATE MITIGATION MEASURES, IF THEY ARE DEEMED NECESSARY.
- RFE ENGINEERING, INC. DOES NOT SPECIFY NOR RECOMMEND THE USE OR INSTALLATION OF ANY MATERIAL OR EQUIPMENT WHICH IS MADE FROM, OR WHICH CONTAINS ASBESTOS FOR USE IN THE CONSTRUCTION OF THESE IMPROVEMENTS. ANY PARTY INSTALLING OR USING SUCH MATERIAL OR EQUIPMENT SHALL BE SOLELY RESPONSIBLE FOR ALL INJURIES, DAMAGED OR LIABILITIES, OF ANY KIND, CAUSED BY THE USE OF SUCH MATERIALS OR EQUIPMENT. THE PROVISIONS OF THIS NOTE SHALL APPLY UNLESS THEY ARE EXPRESSLY WAIVED IN WRITING BY RFE ENGINEERING, INC.
- SHOULD IT APPEAR THAT THE WORK TO BE DONE OR ANY MATTER RELATIVE THERETO IS NOT SUFFICIENTLY DETAILED OR EXPLAINED ON THESE PLANS. THE CONTRACTOR SHALL CONTACT RFE ENGINEERING, INC., AT (916) 772-7800 FOR SUCH FURTHER EXPLANATIONS AS
- CONTRACTOR SHALL PROVIDE PROTECTIVE FENCING AROUND EXISTING TREES TO REMAIN. SEE OTHER NOTES ON THESE PLANS, PROJECT CONATIONS OF APPROVAL, AND SPECIFIC JURISDICTION REQUIREMENTS FOR SUCH FENCING.
- THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL REGULATIONS, LAWS AND ORDINANCES, INCLUDING ALLOWABLE CONSTRUCTION HOURS, CONSTRUCTION NOISE NEAR RESIDENCES, DUST CONTROL AND EROSION CONTROL.

DATE BY

(NAVD 88 DATUM)

REVISIONS

DESCRIPTION

## PROJECT GENERAL NOTES (CONT):

- 22. THE CONTRACTOR SHALL BE RESPONSIBLE TO REVIEW ALL CONTRACT DOCUMENTS INCLUDING ALL PLANS AND SPECIFICATIONS PREPARED BY OTHER DISCIPLINES FOR THIS PROJECT PRIOR TO THE START OF CONSTRUCTION. SUCH REVIEW SHALL BE CONTINUOUS THROUGHOUT THE CONSTRUCTION PROCESS. ANYTIME THAT A CONFLICT BETWEEN SUCH PLANS AND SPECIFICATIONS IS IDENTIFIED. THE CONTRACTOR SHALL CONTACT RFE ENGINEERING, INC. AND OTHER APPLICABLE DISCIPLINES TO REQUEST A VERIFICATION OF THE DESIGN REQUIREMENTS AND A RESOLUTION TO SUCH CONFLICTS PRIOR TO CONSTRUCTION OF SUCH FACILITIES.
- 23. BEFORE EXECUTION OF ANY WORK, THE CONTRACTOR SHALL EXAMINE ACTUAL JOB CONDITIONS AND REPORT TO RFE ENGINEERING, INC. ANY ERROR, OMISSION, OR DISCREPANCY AFFECTING WORK. UPON COMMENCING CONSTRUCTION THE CONTRACT SHALL BE RESPONSIBLE FOR REPORTING ANY AND ALL CONFLICTS, ERRORS, OMISSIONS, ETC. TO RFE ENGINEERING, INC. IMMEDIATELY UPON DISCOVERY. IF SO DIRECTED BY THE ENGINEER OR CITY/COUNTY ENGINEER. THE CONTRACTOR SHALL STOP WORK UNTIL MITIGATION CAN BE MADE. ANY COST INCURRED RESULTING FROM THE CONTRACTOR'S FAILURE TO STOP WORK AS DIRECTED SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- 24. THE CONTRACTOR SHALL PROVIDE THE CIVIL ENGINEER "AS BUILT" DRAWINGS AT PROJECT COMPLETION. THE CONTRACTOR SHALL PROVIDE ONE COMPLETE ACCURATE SET OF RECORD CHANGES. THE CHANGES SHALL BE PLACED ON A CLEAN SET OF PROJECT DRAWINGS IN RED, AND GIVEN TO THE ENGINEER AT JOB COMPLETION.
- 25. THE ENGINEERS ESTIMATE OF QUANTITIES IS FOR DESIGN REFERENCE ONLY. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING THE QUANTITIES FOR BID AND FIELD INSTALLATION. ALL CALCULATED EARTHWORK QUANTITIES FURNISHED FOR THIS PROJECT ARE APPROXIMATE. THE QUANTITIES HEREIN WERE CALCULATED TO FINISHED ROUGH GRADE AND EXISTING GROUND. THE ACTUAL MATERIALS MOVED ARE VARIABLE DEPENDENT UPON THE CONTRACTOR'S METHOD OF OPERATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE FOR ANY EXCESS OR SHORTAGE OF EARTH MATERIAL FOR THIS PROJECT AND NO ADDITIONAL PAYMENT WILL BE MADE.
- 26. THESE DRAWINGS ARE FOR THIS SPECIFIC PROJECT AND NO OTHER USE IS AUTHORIZED. RFE ENGINEERING. INC. DISCLAIMS ALL RESPONSIBILITY FOR CONSTRUCTION BEYOND WHAT IS SPECIFICALLY DESIGNED OR DETAILED HEREIN.
- 27. THE CONTRACTOR SHALL TAKE CARE TO PROTECT THE EXISTING SITE AND ADJACENT IMPROVEMENTS FROM DAMAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE RESULTING FROM THE CONSTRUCTION AND SHALL REPAIR OR MAKE REPLACEMENT TO CURRENT CITY/COUNTY STANDARDS. ALL SUCH WORK SHALL BE AT THE CONTRACTOR'S OWN EXPENSE. THE CONTRACTOR SHALL PERFORM THESE REPAIRS AND REMOVE ALL TRASH AND CONSTRUCTION DEBRIS AS DIRECTED BY RFE ENGINEERING, INC. OR THE CITY/COUNTY ENGINEER.
- 28. THE AGENCY, CITY/COUNTY ENGINEER OR RFE ENGINEERING, INC. MAY REQUIRE THE CONTRACTOR TO UNCOVER ANY IMPROVEMENTS THAT HAVE BEEN COMPLETED WITHOUT PROPER INSPECTION AND/OR APPROVAL. IF THE INSTALLATION IS FOUND NOT TO MEET APPLICABLE STANDARDS OR PREVIOUSLY APPROVED ALTERNATIVES SHOWN ON THE PLANS, THE CONTRACTOR MAY BE REQUIRED TO REMOVE AND REPLACE SUCH IMPROVEMENTS AT HIS OWN EXPENSE.

## **DUST MITIGATION NOTES:**

- ENCLOSE, COVER OR WATER ALL SOIL PILES TWICE DAILY.
- WATER EXPOSED SOIL WITH ADEQUATE FREQUENCY TO KEEP SOIL MOIST AT ALL TIMES.
- WATER ALL HAUL ROADS TWICE DAILY.
- MAINTAIN AT LEAST TWO (2) FEET OF FREEBOARD ON TRUCKS WHEN HAULING LOADS.
- MAINTAIN CONSTRUCTION EQUIPMENT (STATIONARY AND MOBILE) IN OPTIMUM RUNNING

## **LEGEND**

<u>DESCRIPTION</u>	<b>EXISTING</b>
SEWER FORCE MAIN	
PROPERTY LINE	
RIGHT-OF-WAY	
EASEMENT	
ELECTRICAL (UNDERGROUND)	— — — ELEC— — — ELEC—
GAS LINE (UNDERGROUND)	GASGAS-
FIBER OPTIC LINE (UNDERGROUND)	FO
WATER (UNDERGROUND)	
TELEPHONE MAINTENANCE HOLE	

## **ABBREVIATIONS**:

EC

FINISH FLOOR

FIRE HYDRANT

FLOW LINE

FINISHED GROUND

R.C.E. C040666 DATE 07/14/23

UTILITY MAINTENANCE HOLE

AB AGGREGATE BASE FOC FACE OF CURB ASPHALT CONCRETE FP FINISH PAVEMENT FS FIRE SPRINKLER ARV AIR RELEASE VALVE BEGIN CURVE GRADE BREAK BCR BEGIN CURVE RETURN GR GRATE ELEVATION BLDG BUILDING GV GATE VALVE BOC BACK OF CURB **GVW GROSS VEHICLE WEIGHT** BOW BACK-OF-WALK HC HANDICAP BVC BEGIN VERTICAL CURVE HCR HANDICAP RAMP BW BOTTOM OF WALL HDPE HIGH DENSITY POLYETHYLENE CAB CABINET HP HIGH POINT IRR IRRIGATION CONC CONCRETE C&G CURB & GUTTER INV INVERT CG&S CURB, GUTTER & SIDEWALK JP JOINT POLE CH CHORD LENGTH CENTERLINE LF LINEAL FEET CMP CORRUGATED METAL PIPE LIP OF GUTTER CR CURB RETURN LP LOW POINT CTV CABLE TV LT LEFT TURN OR LEFT DCDA DOUBLE CHECK DETECTOR MAX MAXIMUM **ASSEMBLY** MH MAINTENANCE HOLE DRAIN / DROP INLET MIN MINIMUM DUCTILE IRON PIPE NE NORTHEAST DOWN SPOUT NW NORTHWEST EXISTING OCEW ON CENTER EACH WAY END CURVE OH OVERHEAD ECR END CURB RETURN OHT&E OVERHEAD TELEPHONE & ELECTRIC WV WATER VALVE EDGE OF PAVEMENT OMP OPEN METAL PIPE ETW EDGE OF TRAVELED WAY (P) PROPOSED EVC END OF VERTICAL CURVE PCC PORTLAND CEMENT CONCRETE FDC FIRE DEPARTMENT CONNECTION OR POINT OF COMPOUND CURVE VIF VERIFY-IN-FIELD

PCF POUNDS PER CUBIC FOOT

PIV POST INDICATOR VALVE

PROPERTY LINE

PG PROFILE GRADE

POC POINT OF CONNECTION PRC POINT OF REVERSE CURVE POINT OF TANGENCY PUE PUBLIC UTILITY EASEMENT POINT OF VERTICAL INTERSECTION RELATIVE COMPACTION RCP REINFORCED CONCRETE PIPE ROW RIGHT-OF-WAY RT RIGHT TURN OR RIGHT RPPA REDUCED PRESSURE PRINCIPLE ASSEMBLY RETAINING WALL SDMH STORM DRAIN MANHOLE SD STORM DRAIN SE SOUTHEAST SS SANITARY SEWER SSCO SANITARY SEWER CLEAN OUT SSMH SANITARY SEWER MANHOLE SWCT SAWCUT SW SIDEWALK OR SOUTHWEST STA STATION TOP OF CURB TC TOP OF PAVEMENT TS TOP OF SIDEWALK TWTOP OF WALL

WATER

WM WATER METER

WWF WELDED WIRE FABRIC

VCP VITRIFIED CLAY PIPE

BENCH MARK ELEV. 25.808 FIELD BOOK CITY OF SACRAMENTO **DESCRIPTION** DEPARTMENT OF PUBLIC WORKS CITY BM: 297-FIA SCALE HILTI NAIL ON WEST END OF RETAINING WALL AT NW CORNER OF DEL PASO BLVD. & RAILROAD DR. HORIZ. PRAWN BY: DCJ DESIGNED BY: RFE CHECKED BY: RFE

C040666

07/14/2023



OFF-SITE IMPROVEMENT PLANS FOR RIVERDALE RV PARK PUBLIC SS FORCE MAIN EXTENSION 1501 NORTHGATE BOULEVARD SACRAMENTO, CA 95815

GENERAL NOTES, LEGEND AND ABBREVIATIONS

CPC#21004

## CITY OF SACRAMENTO GENERAL NOTES

- 1. ALL CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CITY OF SACRAMENTO STANDARD SPECIFICATIONS, DATED NOVEMBER 2020 AND ALL APPLICABLE ADDENDA.
- 2. THE CONTRACTOR SHALL BE IN RECEIPT OF CITY ACCEPTED PLANS PRIOR TO BEGINNING CONSTRUCTION WITHIN THE STREET RIGHT-OF-WAY. ACCEPTANCE OF PLANS BY THE CITY OF SACRAMENTO IS BASED ON INFORMATION CONTAINED ON THE PLANS AND SUPPORTING DOCUMENTS, AND DOES NOT SUBROGATE THE DESIGN ENGINEER'S RESPONSIBILITY FOR THIS PROJECT. ANY AND/OR ALL ERRORS AND OMISSIONS ARE THE RESPONSIBILITY OF THE DESIGN ENGINEER.
- 3. CONTACT THE CITY OF SACRAMENTO CONSTRUCTION SECTION AT 808-8300 TWO (2) WORKING DAYS PRIOR TO THE START OF CONSTRUCTION.
- 4. THE CONTRACTOR IS RESPONSIBLE FOR DETERMINING THE EXACT LOCATION OF ALL EXISTING UTILITIES AND FOR THE PROTECTION OF AND REPAIR OF DAMAGE TO THEM. CONTACT UNDERGROUND SERVICE ALERT 1-800-642-2444, 48 HOURS BEFORE WORK IS TO BEGIN.
- 5. RESPONSIBILITY FOR FINAL ACCEPTANCE OF LINE AND GRADE BY THE CITY OF SACRAMENTO WILL BE ASSUMED ONLY IF CONSTRUCTION STAKES ARE SET BY THE CITY SURVEY CREWS OR THEIR DESIGNATED REPRESENTATIVE. CITY WILL SET CONSTRUCTION STAKES ONLY IF SO INDICATED ON THE "NOTICE TO PROCEED" WITH CONSTRUCTION ISSUED FOR THIS PROJECT. CONTACT CITY OF SACRAMENTO CONSTRUCTION SECTION TWO (2) WORKING DAYS IN ADVANCE FOR CONSTRUCTION STAKES WITHIN PUBLIC RIGHT-OF-WAY.
- 6. FOR ALL TRENCH EXCAVATIONS 5 FEET OR MORE IN DEPTH. THE CONTRACTOR SHALL OBTAIN A PERMIT FROM THE DIVISION OF INDUSTRIAL SAFETY (2424 ARDEN WAY, SUITE 165. SACRAMENTO —PHONE 916-263-2800) PRIOR TO BEGINNING ANY EXCAVATION. A COPY OF THIS PERMIT SHALL BE AVAILABLE AT THE CONSTRUCTION SITE AT ALL TIMES.
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND FURNISH. INSTALL. AND MAINTAIN TEMPORARY SIGNS, BRIDGES, BARRICADES, FLAGMEN, AND OTHER FACILITIES TO ADEQUATELY SAFEGUARD THE GENERAL PUBLIC AND WORK, AND TO PROVIDE FOR THE PROPER ROUTING OF VEHICULAR AND PEDESTRIAN TRAFFIC. CONSTRUCTION OPERATIONS SHALL COMPLY WITH THE WORK AREA AND TRAFFIC CONTROL HANDBOOK (WATCH). THE CONTRACTOR SHALL PROVIDE TO THE CITY TRAFFIC ENGINEER FOR REVIEW, A PLAN SHOWING TRAFFIC CONTROL MEASURES AND/OR DETOURS FOR VEHICLES AFFECTED BY THE CONSTRUCTION WORK. THE APPROVED PLAN SHALL BE DELIVERED TO THE CONSTRUCTION INSPECTOR PRIOR TO THE IMPLEMENTATION OF TRAFFIC CONTROL MEASURES.
- 8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING RECORD DRAWINGS FOR ALL WORK THROUGHOUT THE COURSE OF CONSTRUCTION. SUCH DRAWINGS SHALL RECORD THE LOCATION AND GRADE (CITY DATUM) OF ALL UNDERGROUND IMPROVEMENTS CONSTRUCTED AND SHALL BE DELIVERED TO THE CONSTRUCTION INSPECTOR PRIOR TO, AND IN CONSIDERATION, OF THE CITY'S ACCEPTANCE OF WORK.
- 9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SURVEY MONUMENTS OR MARKERS DURING CONSTRUCTION.
- 10. THE CONTRACTOR SHALL MAINTAIN ALL EXISTING DRAINAGE AND SEWER FACILITIES WITHIN THE CONSTRUCTION AREA UNTIL NEW DRAINAGE AND SEWER IMPROVEMENTS ARE IN PLACE AND FUNCTIONING.
- 11. IF UNUSUAL AMOUNTS OF BONE, STONE OR ARTIFACTS ARE UNCOVERED, WORK WITHIN 50 METERS OF THE AREA SHALL CEASE IMMEDIATELY AND A QUALIFIED ARCHAEOLOGIST SHALL BE CONSULTED TO DEVELOP, IF NECESSARY, MITIGATION MEASURES TO REDUCE ANY ARCHAEOLOGICAL IMPACT TO A LESS THAN SIGNIFICANT EFFECT BEFORE CONSTRUCTION RESUMES IN THE AREA.
- 12. COST TO REMOVE AND REPLACE EXISTING PAVEMENT OVER UTILITY LINE TRENCHES SHALL BE INCLUDED IN THE BID PRICE. TRENCHES SHALL BE BACKFILLED AND PAVEMENT SHALL BE REPLACED PER CITY DETAIL T-80. PAVEMENT SHALL BE REPLACED IN KIND (MINIMUM OF 4"AC ON 12"AB) AS DETERMINED IN THE FIELD BY THE CITY INSPECTOR. ALL STRIPING AND PAVEMENT MARKINGS SHALL BE RESTORED (IN THERMOPLASTIC).
- 13. PAVEMENT REPAIR NECESSARY DUE TO SUBSIDENCE RESULTING FROM TRENCH FAILURE OR OTHER DEFECTS IN WORKMANSHIP SHALL CONSIST OF KEY CUTTING AND OVERLAYING BETWEEN THE TWO NEAREST INTERSECTIONS. AS DETERMINED BY THE CITY INSPECTOR.
- 14. SIDEWALK RAMPS SHALL BE CONSTRUCTED AT THE CENTER OF ALL ROUND CORNERS UNLESS OTHERWISE SHOWN. RAMPS SHALL COMPLY WITH THE MOST RECENT CITY STANDARD RAMP DETAILS, WHICH ARE AVAILABLE FROM THE CITY INSPECTOR.
- 15. PIPE AND MANHOLE DIMENSIONS ARE TO THE CENTERLINE, UNLESS OTHERWISE NOTED.
- 16. ALL TAPS 24 INCHES AND SMALLER INTO SEWER & DRAIN MANHOLES SHALL BE CORE BORED WITH KOR-N-SEAL TAPS OR APPROVED EQUAL.
- 17. ANY WATER ENTERING THE SANITARY SEWER SYSTEM TO BE CONSTRUCTED UNDER THESE PLANS SHALL NOT BE DISCHARGED TO THE EXISTING SYSTEM. PLUGS MUST BE INSTALLED IN EXISTING MANHOLES AS NECESSARY TO PERMIT PUMPING THE NEW SYSTEM CLEAR OF WATER AND DEBRIS PRIOR TO ACCEPTANCE. CARE SHALL BE EXERCISED IN LOCATING PLUGS TO AVOID INTERRUPTING SERVICES TO EXISTING CONNECTIONS. MORTAR OR BRICK PLUGS MUST BE USED, INFLATABLE DEVICES ARE NOT SATISFACTORY.
- 18. UNLESS OTHERWISE APPROVED, DRAIN PIPE MATERIAL SHALL BE EITHER REINFORCED CONCRETE PIPE CONFROMING TO ASTM, DESIGNATION C76 Class III, IV, V OR PVC SDR-35 OR AS SPECIFIED ON PLANS. USE RCP CLASS III OR PVC SDR-35 WITH 18" OR MORE MINIMUM COVER, RCP CLASS IV WITH 12" - 18" MINIMUM COVER, RCP CLASS IV ENCASED IN CDF WITH 6" - 12" MINIMUM COVER, AND CLASS 150 CEMENT MORTAR LINED DUCTILE IRON PIPE CONFORMING TO AWWA C151 ENCASED IN CDF WITH 0" - 6" MINIMUM COVER. IN ALL CASES, PROVIDE RUBBER GASKETED JOINTS. (NOTE: MINIMUM COVER IS FROM TOP OF AB TO TOP OUTISDE DIAMETER OF DRAIN PIPE)
- 19. DI INLET LEADS SHALL BE RCP CLASS III OR PVC SDR-35 WITH 18" OR MORE MINIMUM COVER, PVC C-900 CLASS 150 OR RCP CLASS IV WITH 12" - 18" MINIMUM COVER, RCP CLASS IV OR PVC C-900 BOTH ENCASED IN CDF WITH 6" - 12" MINIMUM COVER, OR DUCTILE IRON PIPE ENCASED IN CDF WITH 0" - 6" MINIMUM COVER. IN ALL CASES, PROVIDE RUBBER GASKETED JOINTS. (NOTE: MINIMUM COVER IS FROM TOP OF AB TO TOP OUTSIDE DIAMETER OF DRAIN
- 20. SANITARY SEWER PIPE MAINS SHALL BE CONSTRUCTED OF V.C.P., A.B.S. OR PVC UNLESS OTHERWISE SPECIFIED ON THE PLANS.
- 21. ALL SEWER SERVICES SHALL BE CONSTRUCTED OF A.B.S. PIPE PER CITY STANDARD DRAWINGS S-260 AND S-265, UNLESS OTHERWISE NOTED ON THE PLANS.

DATE BY

REVISIONS

DESCRIPTION

BENCH MARK ELEV. 25.808

HILTI NAIL ON WEST END OF RETAINING WALL AT NW CORNER OF DEL PASO BLVD. & RAILROAD DR.

**DESCRIPTION** 

CITY BM: 297-FIA

(NAVD 88 DATUM)

- 22. ALL SEWER SERVICES SHALL BE 4" DIAMETER UNLESS OTHERWISE NOTED.
- 23. AGGREGATE SUBBASE SHALL CONFORM TO CALTRANS SPECIFICATIONS DATED: 2010,
- 24. THE CONTRACTOR SHALL VIDEO RECORD ALL DRAIN AND SEWER PIPES PER CITY STANDARD SPECIFICATIONS.
- 25. UNLESS OTHERWISE APPROVED, THE CONTRACTOR SHALL BALL AND FLUSH ALL SEWER AND DRAIN SYSTEMS PRIOR TO VIDEO RECORDING. THESE SYSTEMS SHALL BE FREE OF DEBRIS PRIOR TO ACCEPTANCE OF WORK
- 26. A STORM WATER PERMIT MUST BE OBTAINED WHEN CONSTRUCTION ACTIVITY RESULTS IN SOIL DISTURBANCE OF ONE (1) OR MORE ACRES. THE STATE WATER RESOURCES CONTROL BOARD, DIVISION OF WATER QUALITY, STORM WATER PERMIT UNIT, P.O. BOX 1977, SACRAMENTO, CA 95812-1977, SHALL BE CONTACTED TO OBTAIN THE PERMIT PRIOR TO BEGINNING CONSTRUCTION.
- 27. IF WORK SHOWN ON THESE PLANS HAS NOT COMMENCED WITHIN TWO YEARS FROM THE DATE OF THE CITY'S ACCEPTANCE OF THE PLANS, A SUBSEQUENT PLAN REVIEW AT THE CITY'S DISCRETION AND THE DEVELOPER'S EXPENSE MAY BE NECESSARY.
- 28. CONTRACTOR SHALL COMPLY WITH THE CITY OF SACRAMENTO ADMINISTRATIVE AND TECHNICAL PROCEDURES MANUAL FOR GRADING/EROSION AND SEDIMENT CONTROL.
- 29. CONSTRUCT SURVEY MONUMENT WELL PER STD. DWG. T-350 AT LOCATIONS INDICATED ON THE FINAL MAP.
- 30. CONCRETE RESTORATION: COLOR OF NEW CONCRETE SHALL MATCH ADJACENT EXISTING CONCRETE BY ADDING LAMP BLACK.
- 31. THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE FOR, OR LIABLE FOR. UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS.
- 32. THE EXACT WIDTH OF EXISTING PAVEMENT TO BE SALVAGED SHALL BE DETERMINED IN THE FIELD BY THE CONSTRUCTION SECTION.
- 33. EXISTING ASPHALT PAVEMENT SHALL BE CUT TO A NEAT STRAIGHT LINE. THE EXPOSED EDGE SHALL BE TACKED WITH EMULSION PRIOR TO PAVING.
- 34. THE EXACT LIMITS OF PAVEMENT OVERLAY SHALL BE DETERMINED IN THE FIELD BY THE CONSTRUCTION SECTION.
- 35. EXACT LIMITS OF CURB AND GUTTER, SIDEWALK, DRIVEWAY, AND PAVEMENT REMOVAL AND RECONSTRUCTION SHALL BE DETERMINED IN THE FIELD BY THE CONSTRUCTION
- 36. COMPACTION OF TRENCH BACKFILL BY MEANS OF JETTING IS NOT PERMITTED.
- 37. GUTTER SLOPES FROM FLOWLINE TO LIP SHALL BE FIVE (5) PERCENT BETWEEN ROUND CORNER CURB RETURNS. THE FIVE (5) PERCENT SLOPE SHALL BE TRANSITIONED TO THE STANDARD GUTTER SLOPE OVER A DISTANCE OF THREE (3) TO FIVE (5) FEET, AS DIRECTED IN THE FIELD BY RESIDENT ENGINEER. THE GUTTER SLOPE ADJACENT TO HANDICAP RAMPS SHALL IN NO CASE BE GREATER THAN FIVE (5) PERCENT.
- 38. USE THE FOLLOWING NOTE FOR LOCAL AND MINOR COLLECTOR STREETS ONLY: TOP (FINAL) LIFT OF AC SHALL BE 1/2-INCH MIX

## CITY OF SACRAMENTO GRADING NOTES:

- 1. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH CITY STANDARDS.
- 2. CONSTRUCTION MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE CITY OF SACRAMENTO STANDARD SPECIFICATIONS DATED: NOVEMBER 2020 AND ALL APPLICABLE ADDENDA.
- 3. ALL GRADING SHALL COMPLY WITH THE RECOMMENDATIONS OF THE SOIL AND GEOLOGICAL INVESTIGATION PREPARED BY (NAME OF FIRM AND DATE OF REPORT).
- 4. ALL SLOPE BANKS ARE 2:1 MAXIMUM UNLESS OTHERWISE NOTED.
- 5. MAXIMUM TOLERANCE FROM PAD ELEVATIONS SHALL BE +/- 0.2'.

FIELD BOOK

**SCALE** 

IORIZ.

- 6. ANY GRADING OPERATIONS OUTSIDE OF SUBDIVISION BOUNDARY SHALL REQUIRE A
- 7. ALL GRADING SHALL BE IN CONFORMANCE WITH THE CITY OF SACRAMENTO GRADING, EROSION, AND SEDIMENT CONTROL ORDINANCE (ORD.NO.93-068).
- 8. NO GRADING, TRENCHING, CUTTING AND/OR FILLING WITHIN THE DRIP LINE OF THOSE TREES. DESIGNATED ON THE SITE PLAN FOR PRESERVATION, SHALL OCCUR. NO ACTIONS SHALL BE TAKEN THAT WILL HARM THE HEALTH, VITALITY OR LONGEVITY OF THOSE TREES IDENTIFIED ON THE SITE PLAN FOR PRESERVATION.

DCJ

07/14/2023

DRAWN BY:

CITY OF SACRAMENTO

DEPARTMENT OF PUBLIC WORKS

RFE

C040666

CHECKED BY:

DESIGNED BY:

## REQUIRED TREE PRESERVATION MEASURES FOR CITY AND PRIVATE PROTECTED TREES

1. ANY REGULATED WORK WITHIN THE TREE PROTECTION ZONE OF A CITY OR PRIVATE PROTECTED TREES TREE SHALL BE SEPARATELY PERMITTED PRIOR TO THE START OF CONSTRUCTION AND SUPERVISED BY A QUALIFIED ARBORIST WHO SHALL MAKE RECOMMENDATIONS TO MINIMIZE THE IMPACT OF APPROVED WORK ON THE TREES. SUBMIT A TREE PERMIT APPLICATION AND A TREE PROTECTION PLAN CREATED BY A QUALIFIED ARBORIST TO URBANFORESTRY@CITYOFSACRAMENTO.ORG. AND REFER TO THE PLANNING PROJECT NUMBER OR OFF-SITE PROJECT NUMBER.

2. TREES TO BE PRESERVED WITHIN OR ADJACENT TO THE CONSTRUCTION AREA SHALL BE PROTECTED FROM DISTURBANCE PRIOR TO AND THROUGHOUT CONSTRUCTION BY THE FOLLOWING METHODS OR AS APPROVED BY THE CITY OR PRIVATE PROTECTED TREES ARBORIST:

- A. PLACE A 6-FT HIGH CHAIN LINK FENCE AT THE EDGE OF THE TPZ.
- B. ENCLOSE THE FULL TPZ OR THE ENTIRE RIGHT-OF-WAY PLANTER WITH CHAIN LINK FENCING. WHEN THE FULL TPZ CANNOT BE ENCLOSED BY CHAIN LINK FENCING. THE APPLICANT SHALL PROVIDE PROTECTION FOR THE TRUNK AND THE SOIL WITHIN THE ROOT ZONE AS APPROVED BY THE CITY OR PRIVATE PROTECTED TREES ARBORIST. ACCEPTED PRACTICES ARE:
- I. ADD 4-6" OF WOOD CHIP MULCH COVERED BY TRENCH PLATES OR ¾ INCH PLYWOOD ON THE GROUND WITHIN THE TPZ
- II. RETAIN ALL EXISTING SIDEWALK, DRIVEWAY OR OTHER CONCRETE THAT COVERS ROOTS OF EXISTING TREES UNTIL CONSTRUCTION IS COMPLETE.
- III. WRAP FOAM OR STRAW WATTLES AROUND THE TRUNK AND SECURE 2X4S VERTICALLY AROUND THE TREE.
- 3. PROTECTION MEASURES SHALL REMAIN IN PLACE THROUGHOUT THE DURATION OF THE PROJECT, INCLUDING LANDSCAPE INSTALLATION.
- 4. EXCAVATION. GRADING OR TRENCHING WITHIN THE TPZ TREE SHALL EMPLOY ONE OF THE FOLLOWING METHODS: HYDRO-EXCAVATION, PNEUMATIC EXCAVATION OR HAND DIGGING.
- 5. ALL STREET TREES AND PRIVATE PROTECTED TREES SHALL BE WATERED REGULARLY THROUGHOUT THE CONSTRUCTION PROCESS PER PROJECT ARBORIST'S RECOMMENDATIONS.
- 6. THE CONTRACTOR SHALL BE FINANCIALLY RESPONSIBLE FOR ANY DAMAGE TO THE CITY OR PRIVATE PROTECTED TREES ASSOCIATED WITH THE PROJECT. ACCIDENTAL OR NEGLIGENT ACTIONS THAT DAMAGE CITY OR PRIVATE PROTECTED TREES MAY RESULT IN A PENALTY. THE MONETARY VALUE OF ANY SUCH DAMAGES WILL BE APPRAISED BY THE CITY URBAN FORESTER OR HIS AUTHORIZED REPRESENTATIVE AND SHALL BE EXPRESSED AS THE MONETARY EQUIVALENT OF ALL LABOR AND MATERIALS REQUIRED TO BRING THE TREE IN QUESTION

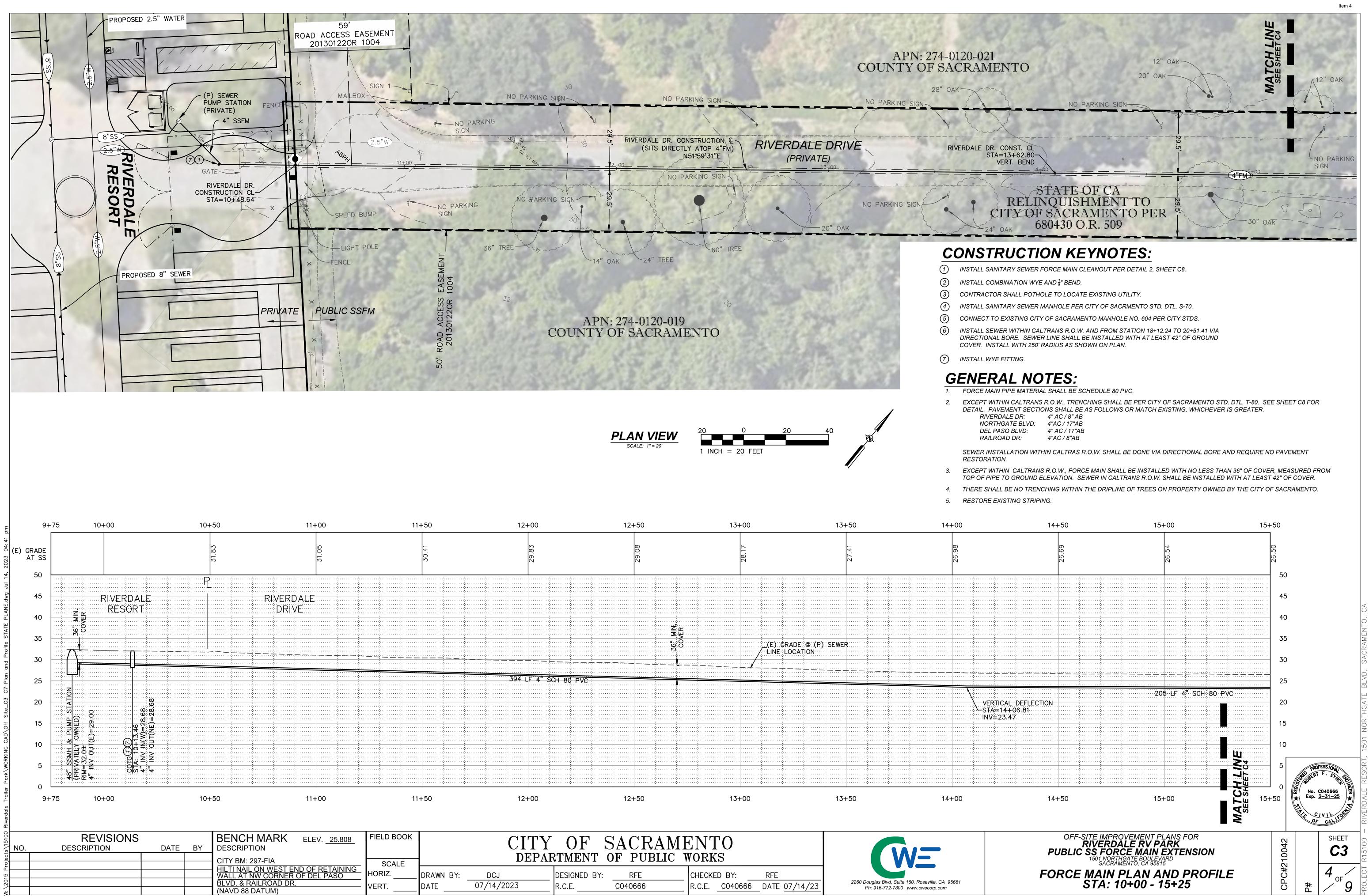
2260 Douglas Blvd, Suite 160, Roseville. CA 95661 Ph: 916-772-7800 | www.cwecorp.com

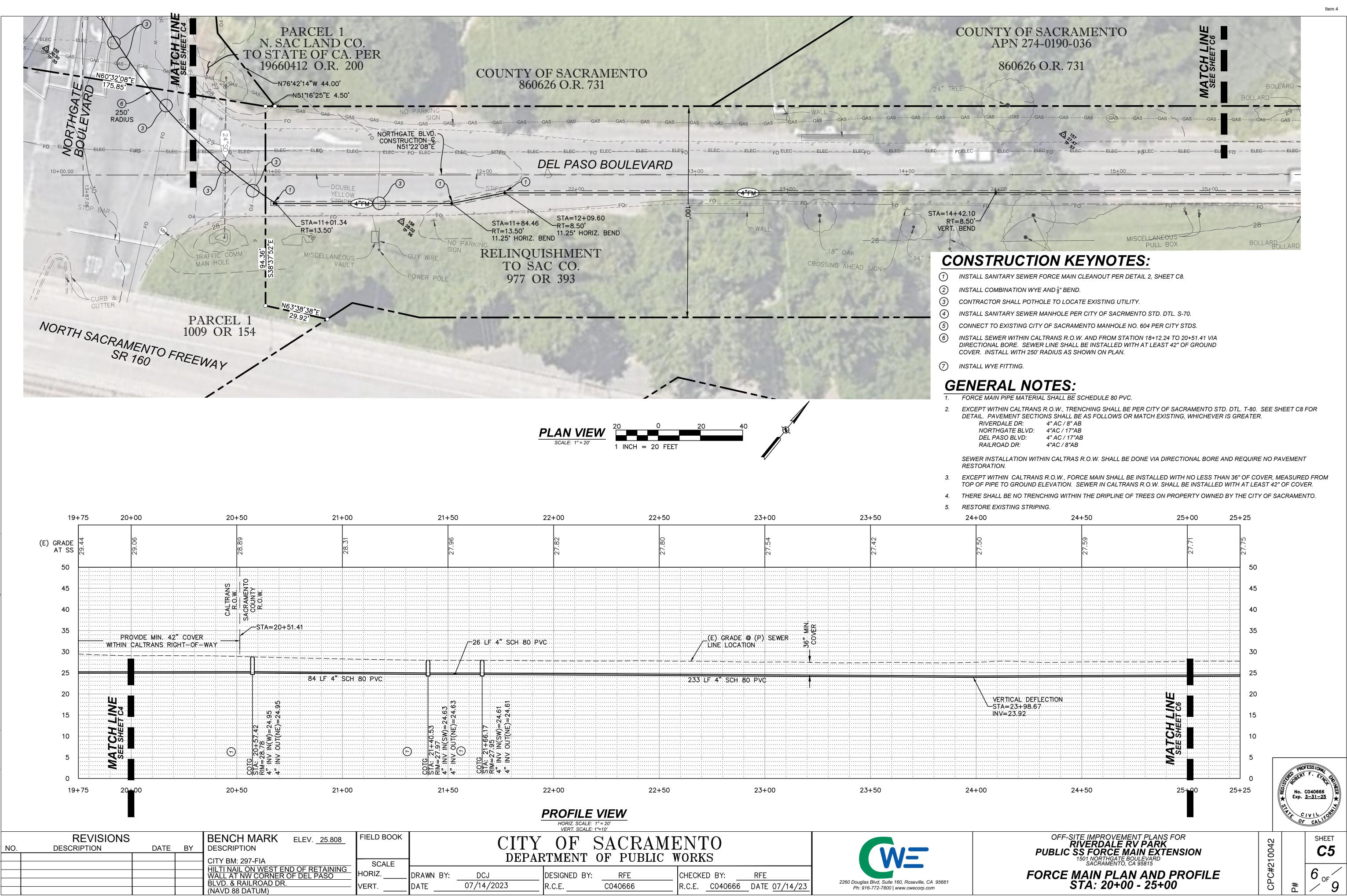
OFF-SITE IMPROVEMENT PLANS FOR RIVERDALE RV PARK PUBLIC SS FORCE MAIN EXTENSION

CPC#210042

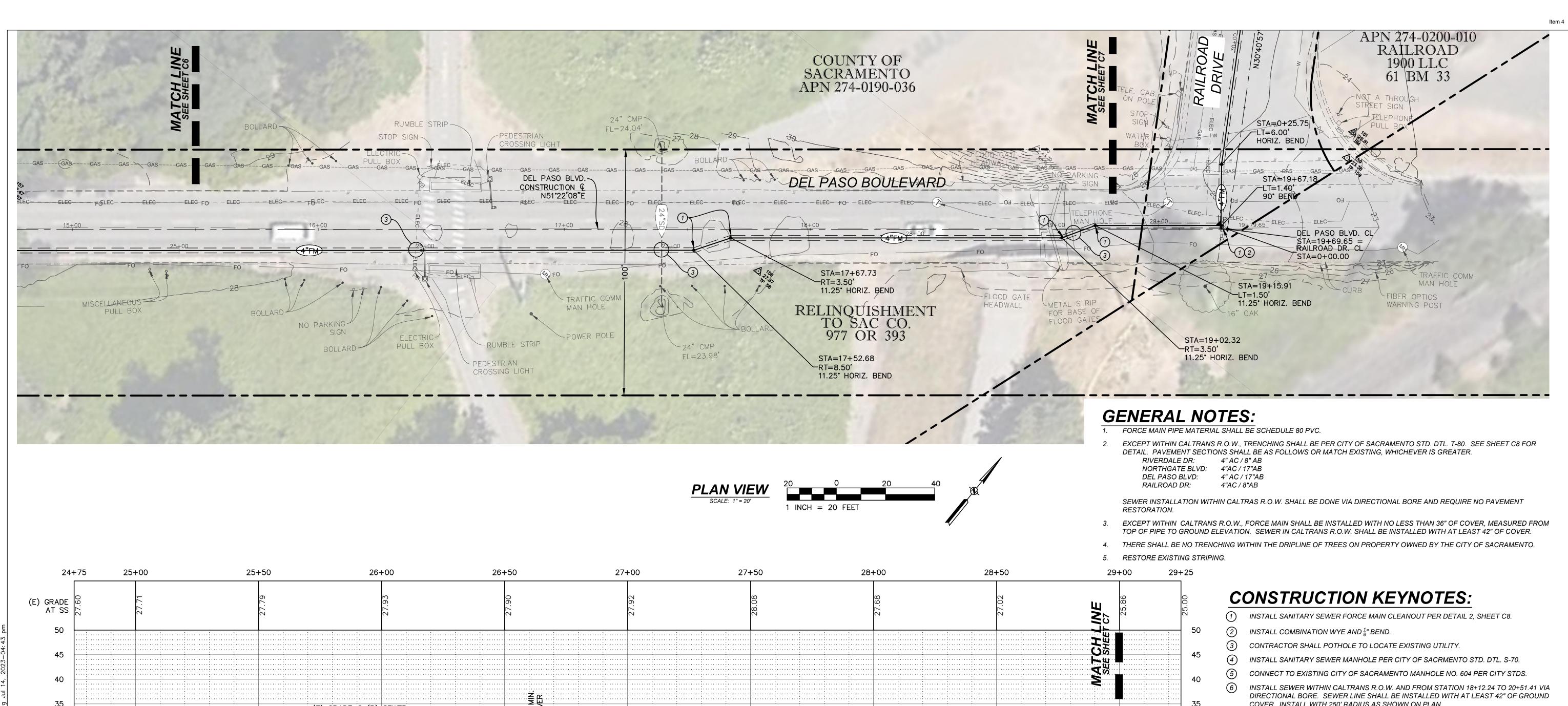
RFE R.C.E. C040666 DATE 07/14/23

AGENCY NOTES

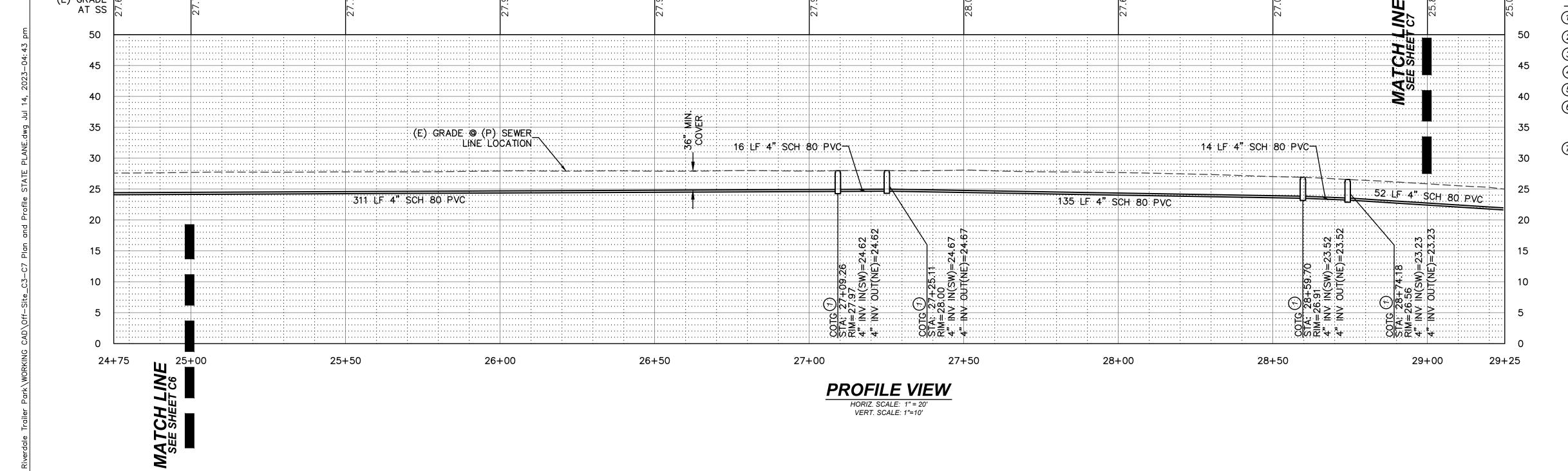


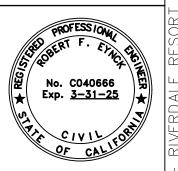


Page 55



- COVER. INSTALL WITH 250' RADIUS AS SHOWN ON PLAN.
- INSTALL WYE FITTING.





**REVISIONS** BENCH MARK ELEV. 25.808 FIELD BOOK CITY OF SACRAMENTO DEPARTMENT OF PUBLIC WORKS DATE BY **DESCRIPTION** DESCRIPTION CITY BM: 297-FIA SCALE HILTI NAIL ON WEST END OF RETAINING WALL AT NW CORNER OF DEL PASO BLVD. & RAILROAD DR. (NAVD 88 DATUM) HORIZ. DESIGNED BY: CHECKED BY: DCJ RFE DRAWN BY: 07/14/2023 C040666 R.C.E. <u>C040666</u> DATE <u>07/14/23</u> VERT.

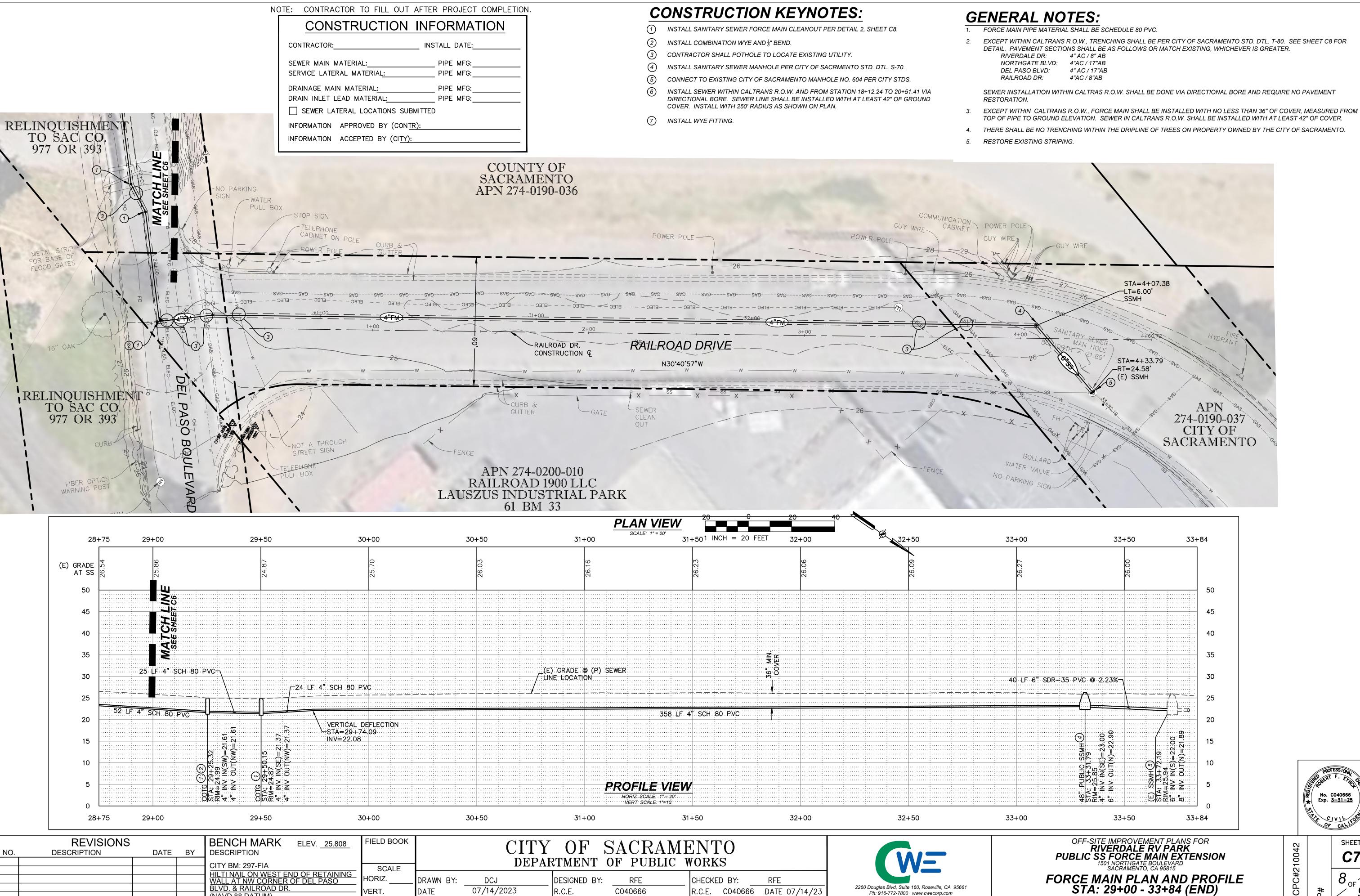


OFF-SITE IMPROVEMENT PLANS FOR RIVERDALE RV PARK PUBLIC SS FORCE MAIN EXTENSION 1501 NORTHGATE BOULEVARD SACRAMENTO, CA 95815

FORCEMAIN PLAN AND PROFILE STA: 25+00 - 29+00

SHEET

**C6** 



C040666

07/14/2023

(NAVD 88 DATUM)

2260 Douglas Blvd, Suite 160, Roseville, CA 95661

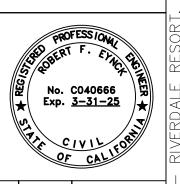
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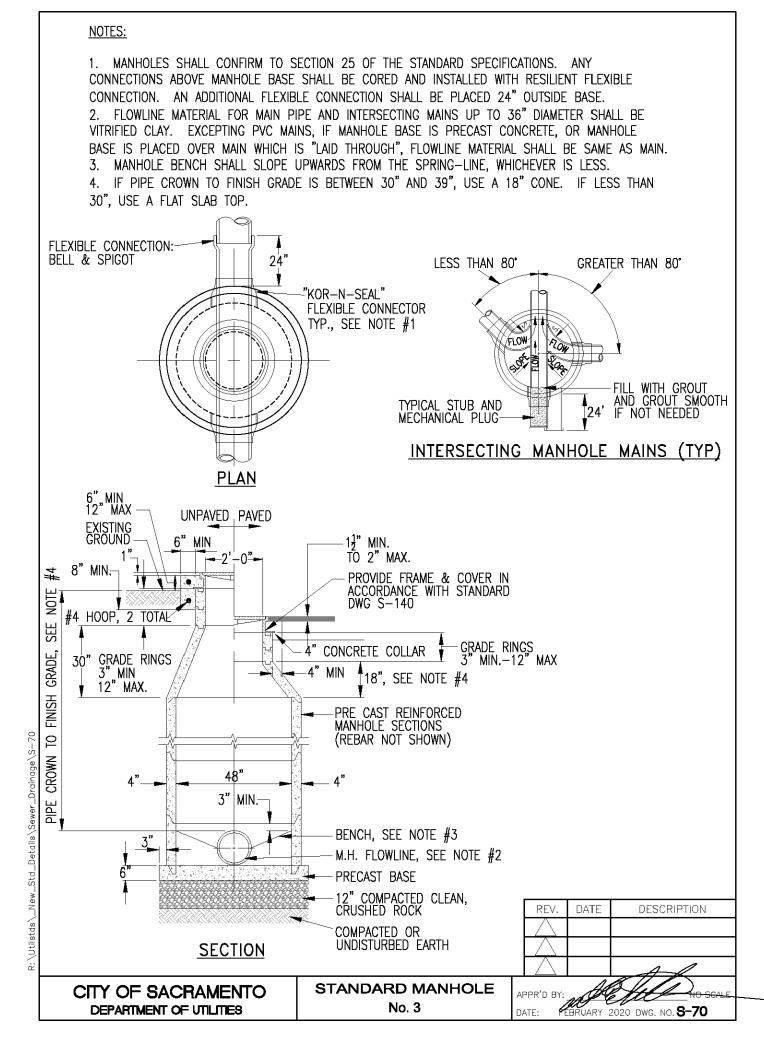
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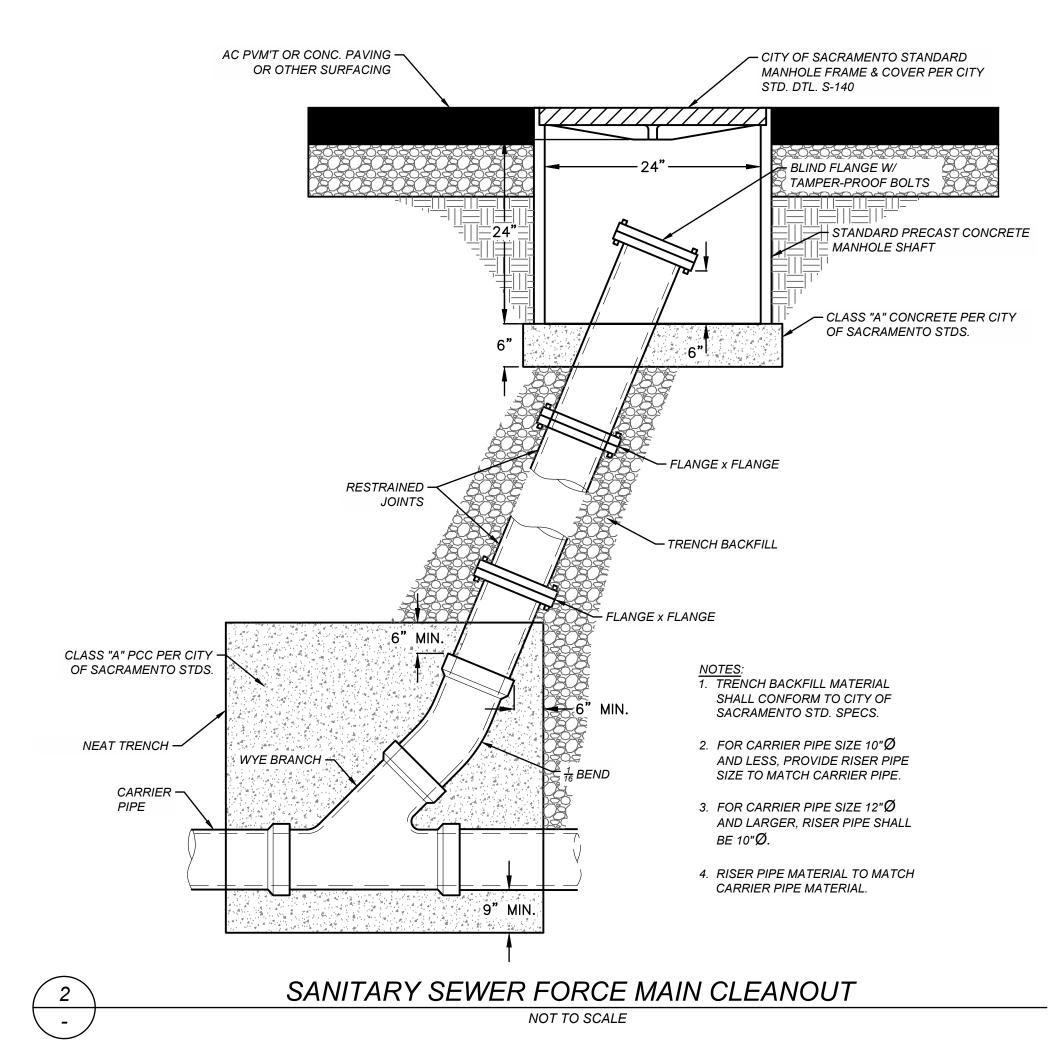
EXCEPT WITHIN CALTRANS R.O.W., TRENCHING SHALL BE PER CITY OF SACRAMENTO STD. DTL. T-80. SEE SHEET C8 FOR

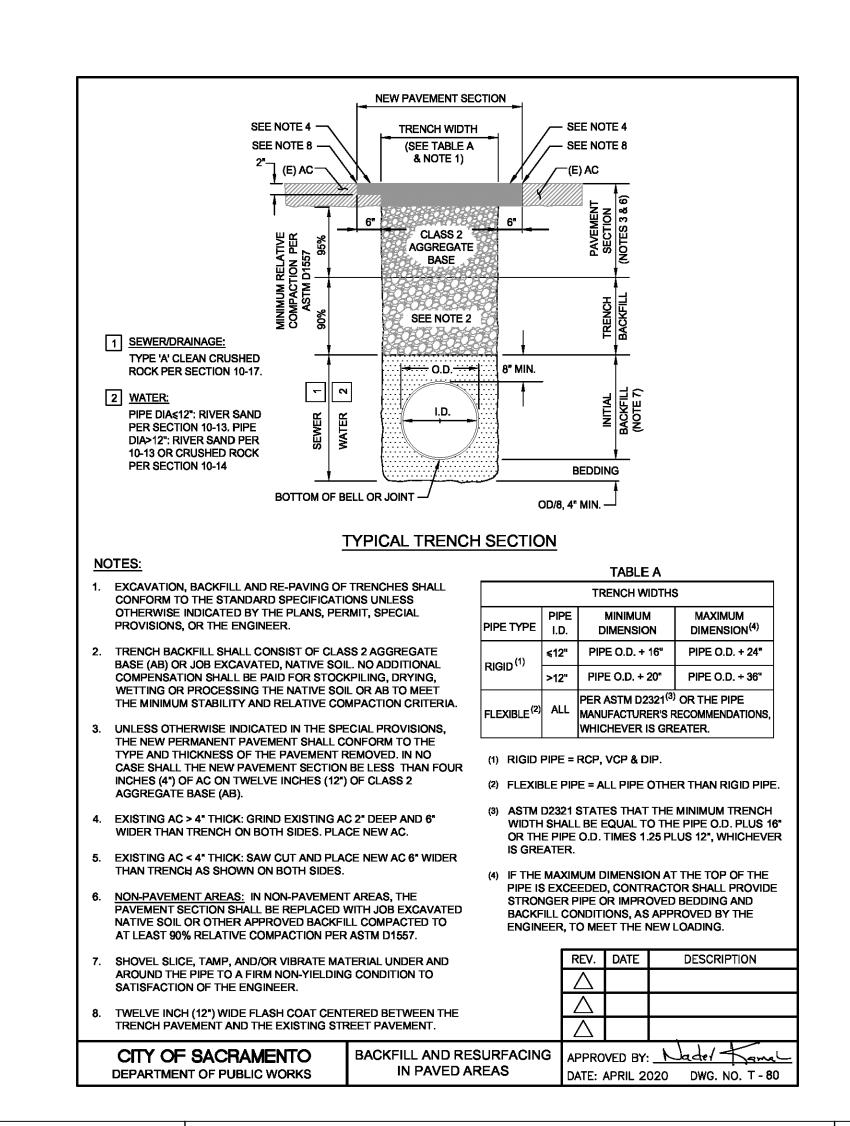
SEWER INSTALLATION WITHIN CALTRAS R.O.W. SHALL BE DONE VIA DIRECTIONAL BORE AND REQUIRE NO PAVEMENT

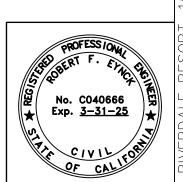
- TOP OF PIPE TO GROUND ELEVATION. SEWER IN CALTRANS R.O.W. SHALL BE INSTALLED WITH AT LEAST 42" OF COVER.
- 4. THERE SHALL BE NO TRENCHING WITHIN THE DRIPLINE OF TREES ON PROPERTY OWNED BY THE CITY OF SACRAMENTO.









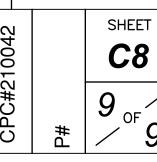


NO.	REVISIONS DESCRIPTION	DATE	BY	BENCH MARK DESCRIPTION	ELEV. <u>25.808</u>	FIELD BOOK		CITY	OF S		ENTO	
Project				- CITY BM: 297-FIA - HILTI NAIL ON WEST E	ND OF RETAINING	SCALE		DEPAI	RTMENT (	OF PUBLIC V	VORKS	
N: \2015				WALL AT NW CORNER BLVD. & RAILROAD DR (NAVD 88 DATUM)	OF DEL PASO	HORIZ VERT	DRAWN BY: _ DATE	DCJ 07/14/2023	DESIGNED BY:		CHECKED BY: R.C.E. <u>C040666</u>	RFE _ DATE <u>07/14/23</u>



OFF-SITE IMPROVEMENT PLANS FOR RIVERDALE RV PARK PUBLIC SS FORCE MAIN EXTENSION 1501 NORTHGATE BOULEVARD SACRAMENTO, CA 95815

**DETAILS** 





## **FOR**

#### Riverdale Resort

1501 Northgate Boulevard Sacramento, CA 95815 APN: 274-0120-010

Date: September 27, 2023 Updated: January 09, 2024





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#### 1. PURPOSE OF MEMO

The purpose of this memo is to present the proposed project and its anticipated impact to the American River and American River Floodway (Floodway). This report is being prepared per the request of the Central Valley Flood Protection Board (CVFPB) so that they can review the anticipated impacts to the Floodway. It is understood that the Army Corps of Engineering (Corps) will also be reviewing the report for compliance with Corps requirements. It is our understanding that the CVFPB and Corps each have their own requirements regarding development in the Floodway and the purpose of this report is to demonstrate project compliance with those requirements.

#### 2. PROJECT LOCATION

The main project site is located at 1501 Northgate Boulevard in Sacramento, Ca 95815. It is situated on the northeast side of the American River, almost two-miles upstream of the confluence of the American River and Sacramento River. The site is bounded to the southeast by Highway 160 and to the northeast, by Northgate Boulevard. It is located within a FEMA Zone AE Floodway per FEMA FIRM 06067C0176J, Dated June 16, 2015. Refer to the FIRM in Attachment F of this report. The main project site is located between cross-sections I and J of the FIRM and has a Base Flood Elevation (BFE) of approximately 37 – 38 feet (NAVD88).

Although the main project site is located at 1501 Northgate Blvd., an additional part of this project will involve offsite underground sewer construction. This will take place in Northgate Blvd., Del Paso Blvd. and Railroad Dr. With the exception of the construction within Railroad Dr., all of the area of roadway impacted by this development also is within Zone AE. Railroad Dr. is on the other side of a levee, putting it in a dotted Zone X, or an area protected by levees from 1% annual chance flood.

#### 3. EXISTING SITE CONDITIONS

The existing project site is currently vacant. It is the location of the Riverdale Mobile Home Park (Park) and has fluctuated with the number of mobile homes over the years. The Park operates under the State of California Department of Housing and Community Development (HCD) permit number 34-0054-MP, which is a current permit, and allows for up to 80 sites on the property. See Attachment D for a copy of the permit. The property owners have been gradually reducing the number of mobile homes over the last 20 years or so and clearing out the property in preparation for a complete update and redevelopment, which is why the site is currently vacant with no permanent structures or mobile homes. Paved access roadways and mobile home unit pads still exist on the property. The main portion of the site is pretty flat, at an elevation of about 32 feet (NAVD88). The site slopes down, toward the river along the southwest side of the property until reaching the river bottom of about 6 feet (based on USGS Lidar). Extending northeasterly away from the project site, toward Northgate Blvd. and beyond, the existing terrain appears to dip lower than the elevation of the project site. The north-adjacent open space are between the project site



and Northgate Blvd. appears to dip up to two feet lower than the site, but north of Northgate Blvd., there appears to be a regional basin which appears to get as low as 12 feet, again based on available LIDAR data. North of the basin is the American River Bike Trail which increases in elevation, up to around 25 feet. North of the bike trail is another depressed area, potentially a wetlands which dips down to around 15 feet, and finally, north of the wetlands, is the main American River levee which looks have a top elevation of about 42 feet. Please see Attachment A for an exhibit showing the topography within the area.

#### 4. PROJECT DESCRIPTION

The proposed project includes the redevelopment of Riverdale into an upscale RV park with 72 dedicated RV spaces. In addition to the RV spaces, the development will also include a new restroom and shower building as well as three trash enclosures, a check-in office, and a community building. The check-in office will be a mobile home unit. The community building will be three mobile home units placed together to function as one unit and will be placed on an elevated structure to be above the BFE. The restroom & shower building and the three trash enclosures are the only proposed permanent structures. The project will also install new asphalt and concrete pavement for circulation throughout the site. Fencing will be installed around the perimeter of the project site and will consist of either chainlink or wrought iron.

The other portion of this project includes the installation of about 2,300 lineal feet of public sewer forcemain from the project site to Railroad Dr. No nearby public sewer is available to serve the site and all sewering up to this point has been done with onsite septic. The nearest available public sewer is located in Railroad Dr., about 2,300 feet from the site. This new sewer line will be a force main and installed beneath existing roadway. A portion of the new sewer main will be installed in Del Paso Blvd. and there is a spot in Del Paso Blvd. that cuts through the previously mentioned levee. Seep image below for this section.









The sewer is proposed to cross the levee in this roadway. No portion of the levee will be affected by the installation of the new sewer line.

#### 5. FLOODWAY BLOCKAGE ANALYSIS

This project has undergone extensive coordination with the CVFPB to determine what the project can and cannot do and what requirements CVFPB will be looking for on their review. Originally, the project site was going to be developed with mobile homes. This concept was presented to the CVFPB and was met with strong opposition due to concerns about floodway blockage and having homes placed within the floodway. The site was reevaluated and changed to develop as an RV park instead of mobile homes. The thought being that RVs could be moved in preparation of large-scale storms and flooding which would mitigate floodway blockage and get the residents and their belongings out of the floodway before inundation occurs.

Although the project switched form mobile homes to RVs, the CVFPB still has requirements for the development that need to be met. Based on our communication with Staff, as long as a development does not impede floodway blockage by more than 1%, it does not need a in-depth hydraulic analysis of floodway and said blockage. The blockage calculation is based on the 200-year water surface elevation which is 37.3 feet (NAVD88) at our project site. Another elevation to consider, as explained by the CVFPB, was the design water surface elevation of 1957 which is 36.3 feet NAVD88. This is likely the elevation that the Corps is most concerned with since it is what the levee was apparently originally designed for. Based on these data, we first went about evaluating the project to see if our development would, in both cases, fall below the 1% blockage threshold, thereby avoiding a requirement for the in-depth hydraulic analysis of the floodway.

In order to come up with floodway cross-sections for the blockage calculations, we downloaded Lidar data from the USGS website and converted into useable data compatible with AutoCAD Civil 3d. We then overlayed the proposed project site as well as aerial imagery to cut a cross section of the American River Floodway through our project site. The resulting flow areas for each of the two conditions previous mentioned were as follows:

- Floodway Cross-sectional area at 37.3 feet WSL = 38,644 square feet
  - Flow depth of approx. 5.5 6.0' across project site
  - o 1% flow blockage = 386 square feet
- Floodway Cross-sectional area at 36.3 feet WSL = 36,293 square feet
  - Flow depth of approx. 4.5 5.0' across project site
  - 1% flow blockage = 363 square feet

Based on these findings, any evaluation of the floodway that resulted in a blockage of 386 square feet would require hydraulic analysis per CVFPB requirements or above 363 square feet would require hydraulic analysis per Corp requirements.



The critical sections to evaluate for blockage were across the restroom building, check-in building, community building, and the trash enclosures. The following areas are calculated perpendicular to flow of the river. Please refer to Attachment C for floodway sections at each of these points of interest:

#### 1. Restroom Building

- a. Dimensions: 56' wide x 13.8' tall = 165 square feet
- b. Foundation: Set at finished grade

The restroom building is located near the main entrance to the site. It is oriented such that the long side of the building (56-ft) is perpendicular to the flow of the river. The estimated cross-sectional flow blockage areas are as follows:

200-year BFE WSL (37.3 ft): 297 sq. ft (0.77% blockage) 1957 Design WSL (36.3 ft): 240 sq. ft (0.66% blockage)

#### 2. North Trash Enclosure

- a. Dimension: 11.8' wide x 10' tall 118 square feet
- b. Foundation: Set at finished grade

There is one trash enclosure near the restroom building and two additional trash enclosures at the southeast end of the site. The estimated cross-sectional flow blockage areas are as follows:

200-year BFE WSL (37.3 ft): 60 sq. ft. (0.16% blockage) 1957 Design WSL (36.3 ft): 50 sq. ft (0.14% blockage)

#### 3. Check In Building (repurposed mobile home)

- a. Dimensions: 56' wide x 12.5' tall = 700 square feet
- b. Foundation: Elevated 3' above finished grade About 35 feet floor elevation

The check-in building will be made from a prefabricated mobile home and set 36" above grade. It will be located at the entrance of the site to allow for new RV dwellers to check into the park. It will also serve as added security with a person stationed in the unit. The unit will be elevated above the ground by three feet, so it wouldn't block any flow until an elevation of about 35 feet. (Finished grade level will be at about 32 feet). Since the evaluation of flow is being considered at 37.3 feet msl and 36.3 feet msl, this would mean that the blockage in each case is only 2.3 feet and 1.3 feet respectively. Considering this, the estimated cross-sectional flow blockage areas are as follows:

200-year BFE WSL (37.3 ft): 115 sq. ft (0.3% blockage) 1957 Design WSL (36.3 ft): 60 sq. ft. (0.17% blockage)



#### 4. Community Building

- a. Dimensions: 36' wide x 12.5' tall = 450 square feet
- b. Foundation: Set 24" above 200 Yr WSL About 39.3 feet floor elevation

The community building will be completely elevated about the BFE / 200 Yr WSL of 37.3 feet by 2-feet, thereby not creating any blockage within the flow areas. The platform upon which the building sits will be a pier-type structure to allow for water pass-thru. The only blockage would be from the columns upon which the elevated platform will be constructed. The estimate cross-sectional flow blockage areas are as follows:

200-year BFE WSL (37.3 ft): 10.5 sq. ft (<0.1% blockage) 1957 Design WSL (36.3 ft): 8 sq. ft (<0.1% blockage)

#### 5. South Trash Enclosures

- a. Dimension: 38' wide x 10' tall 380 square feet
- b. Foundation: Set at finished grade

There are two trash enclosures side by side at the south end of the site. The estimated cross-sectional flow blockage areas are as follows:

200-year BFE WSL (37.3 ft): 200 sq. ft (0.52% blockage) 1957 Design WSL (36.3 ft) 162 sq. ft (0.45% blockage)

Please reference Attachments B and C for exhibits showing the overall Floodway Cross-Section as well as exhibits of the above blockages in relation to the evaluated floodway.

#### 5. CONCLUSIONS

Based on the evaluation of the existing American River Floodway cross-section at the proposed project location using LIDAR, we were able to quantify the approximate area floodway at both the 200Yr BFE (37.3 feet) and at the 1957 WSL (36.3 feet).

- 200 Yr BFE (37.3 feet NAVD88) cross-section floodway area = 38,644 square feet
   1% flow blockage = 386 square feet
- 1957 WSD (36.3 feet NAVD88) cross-section floodway area = 36,293 square feet
  - 1% flow blockage = 363 square feet

Since RV's are not considered blockages to the floodway because they can be moved in the event of a flood, the only proposed permanent structures considered as being blockages to the floodway, and thus evaluated, were the Restroom Building, trash enclosures, Check-In building, and Community Building. The cross-sectional blockage flow of all of these structures is less than 1% of both the BFE flow area and the 1957 WSL flow area at each respective cross-section. It





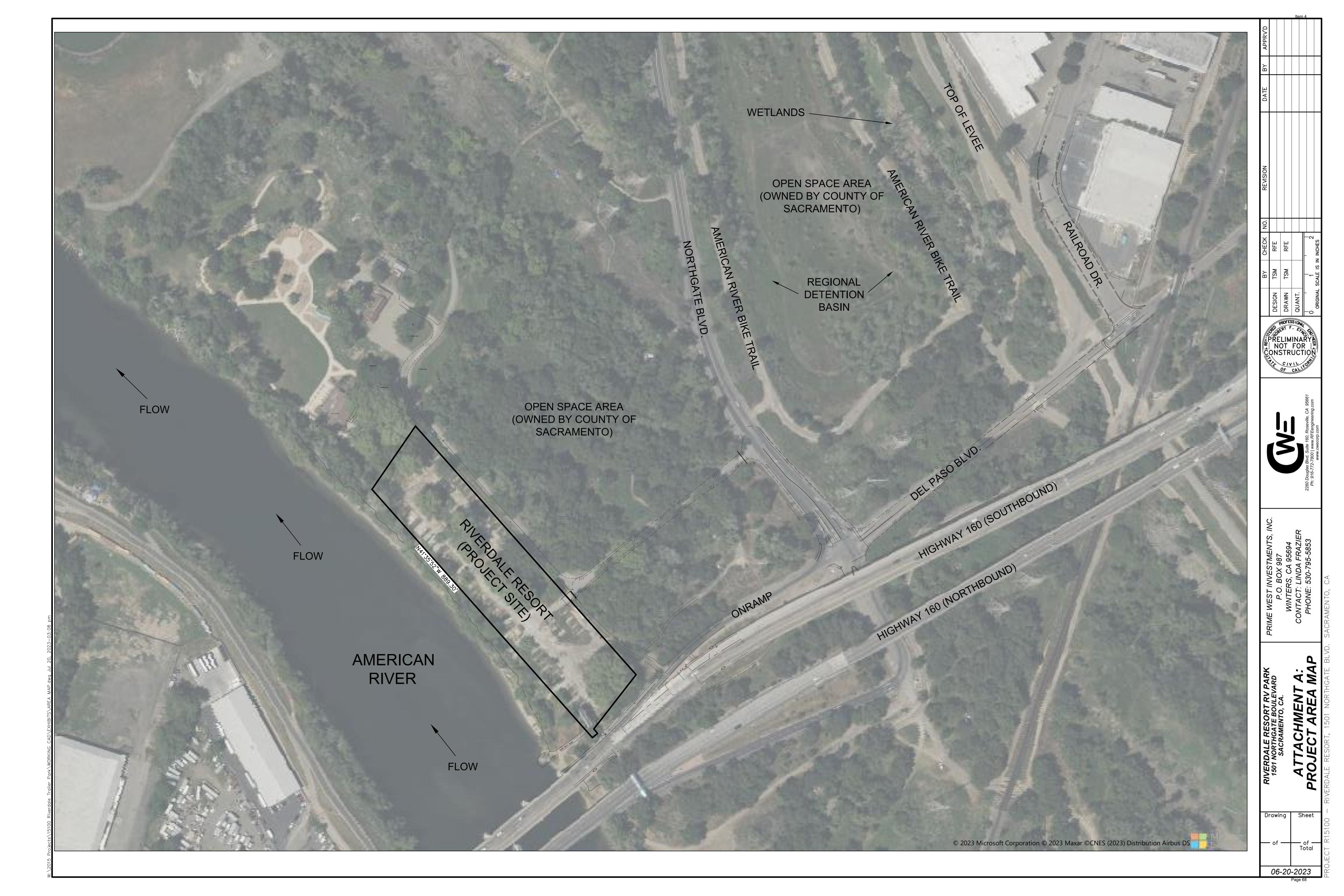
follows that based on prior communication with the CVFPB, an in-depth hydraulic analysis will not be required for this project.

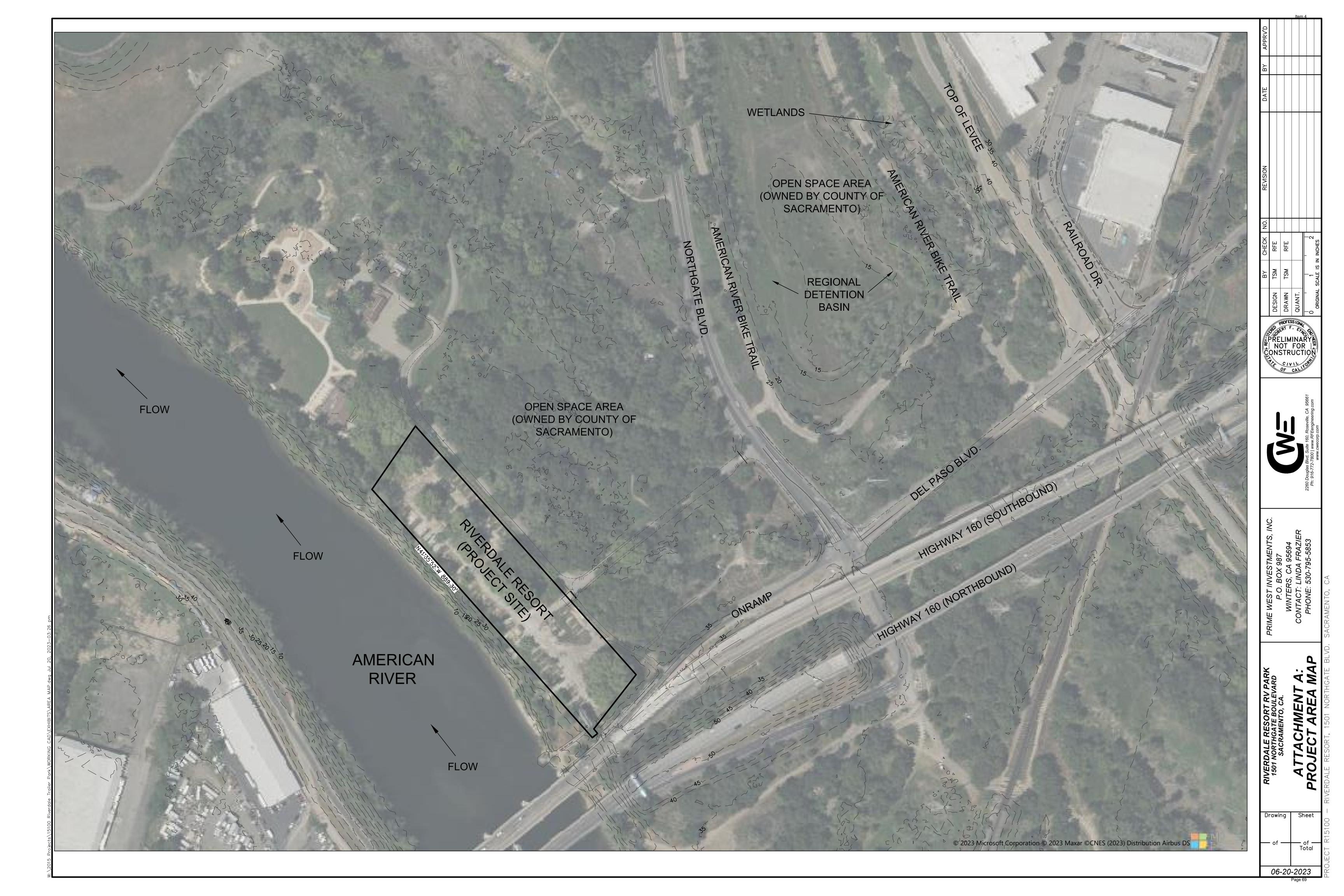
#### **6. ATTACHMENTS**

ATTACHMENT A AREA MAP
ATTACHMENT B EXISTING FLOODWAY CROSS SECTION
ATTACHMENT CFLOW BLOCKAGE CROSS SECTIONS (TWO SHEETS)
ATTACHMENT DHCD OPERATING PERMIT
ATTACHMENT E SACRAMENTO EAST USGS QUAD MAP
ATTACHMENT F FEMA FIRM
ATTACHMENT G CORRESPONDANCE WITH CVFPB
ATTACHMENT HCORRESPONDANE WITH HCD
ATTACHMENT I EMERGENCY PREPAREDNESS AND RESPONSE PLAN



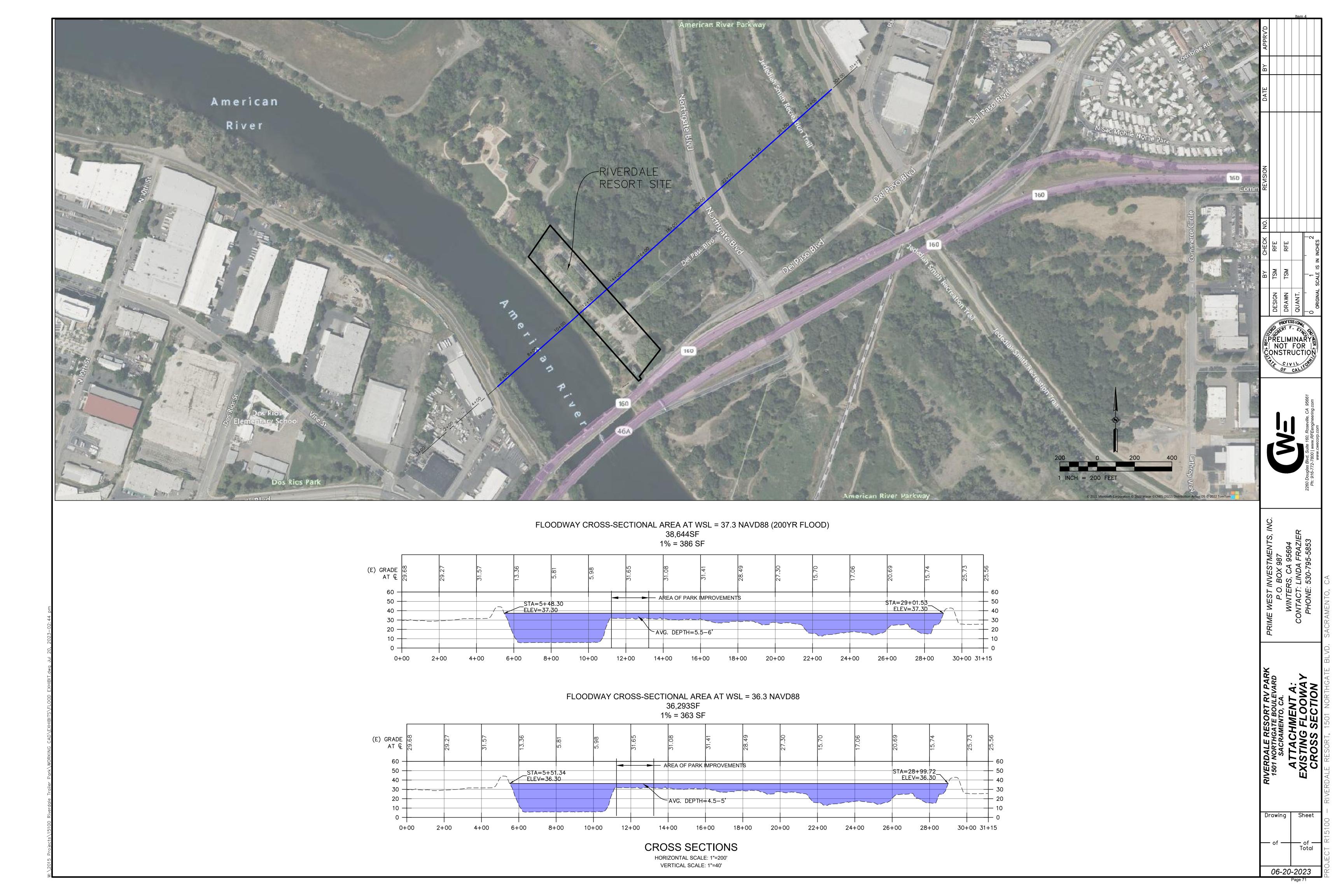
## **ATTACHMENT A - AREA MAP**





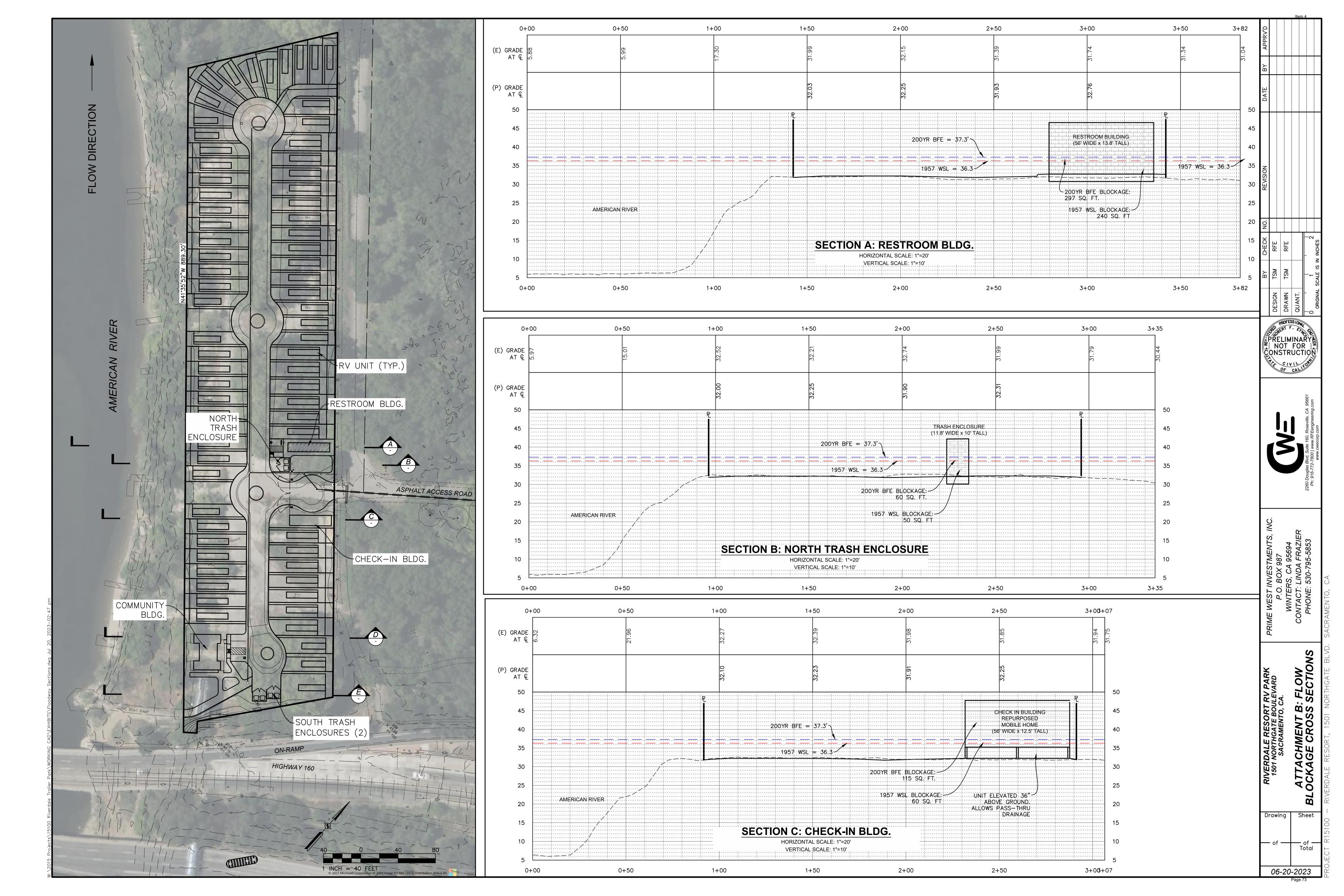


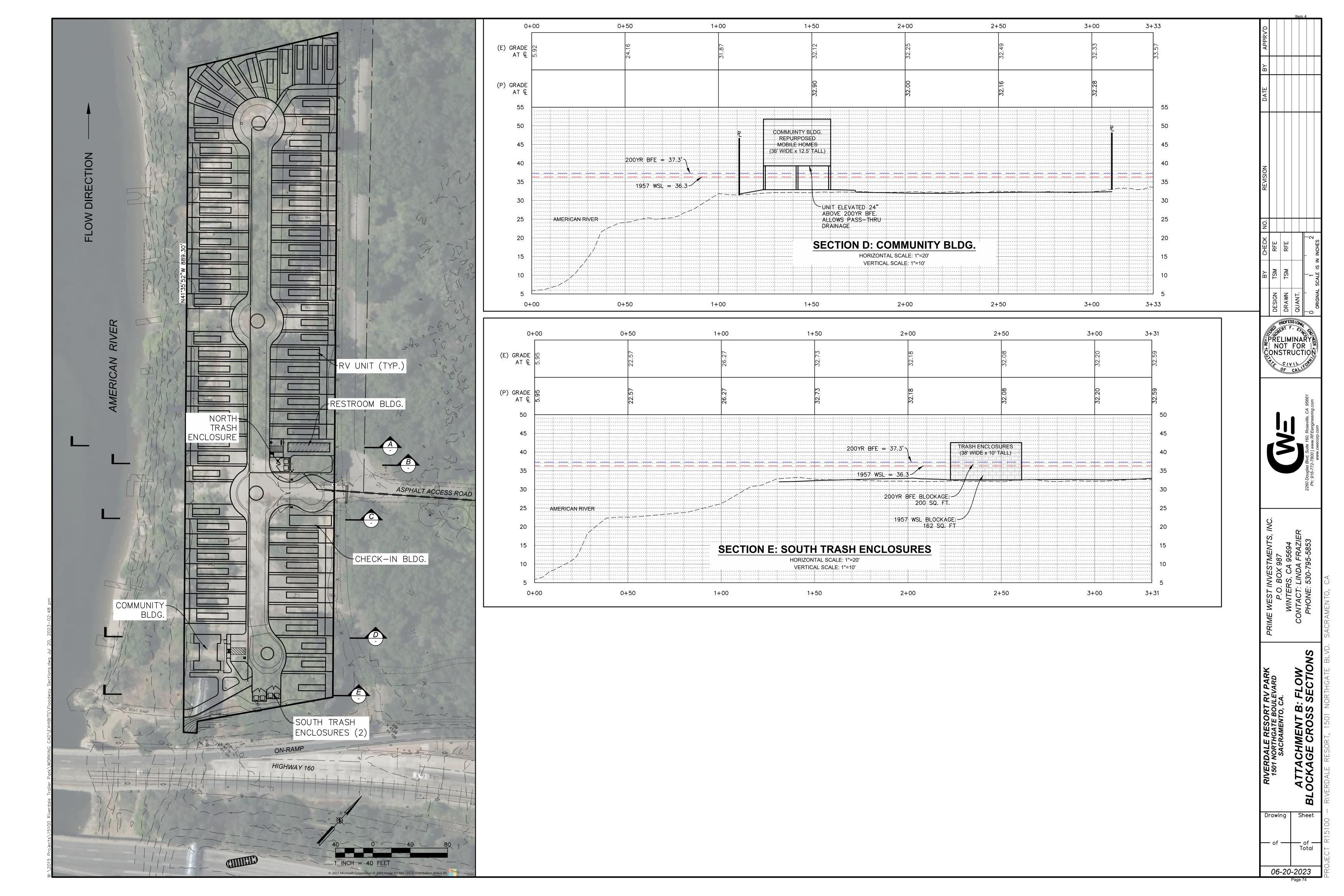
# ATTACHMENT B – EXISTING FLOODWAY CROSS SECTION





# ATTACHMENT C – FLOW BLOCKAGE CROSS SECTIONS (TWO SHEETS)







# ATTACHMENT D - HCD OPERATING PERMIT

Total

Lots

80

Lots

Without

**Drains** 

0

٥

#### ANNUAL

# State of California DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT **DIVISION OF CODES AND STANDARDS**

PERMIT TO OPERATE

May 3, 2023

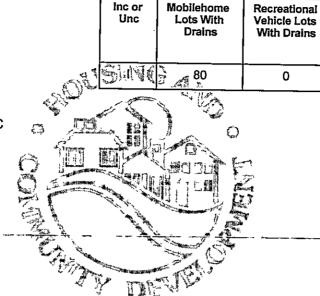
Park ID No.	
34-0054-MP	

#### **OPERATOR**

PRIME WEST INVESTMENTS INC ATTN LINDA FRAZIER **PO BOX 987** WINTERS, CA 95694

#### **PARK NAME & ADDRESS**

RIVERDALE-MHP-1501 NORTHGATE BLVD SACRAMENTO, CA 95815



### **CONDITIONAL USES**

Cathodic Protection - March 21, 2017 Flood Plain - March 28, 2019 Emergency Preparedness Plan - April 12, 2011

Fire Hydrant System Status: Date of Construction - Exempt

50 AMP LOTS:

## THIS PERMIT EXPIRES February 29, 2024

THIS PERMIT IS ISSUED IN ACCORDANCE WITH THE PROVISIONS OF THE CALIFORNIA HEALTH AND SAFETY CODE AND IS SUBJECT TO SUSPENSION OR REVOCATION AS PROVIDED THEREIN. THIS PERMIT IS NOT TRANSFERABLE. THE DEPARTMENT SHALL BE NOTIFIED WITHIN 30 DAYS OF ANY CHANGE OF NAME, OWNERSHIP OR OPERATOR.

> P.O. Box 278180 Sacramento, CA 95827-8180 (916) 445-9471 From TDD Phones: 1-800-735-2929

From Voice Phones: 1-800-735-2922

**POST IN A CONSPICUOUS PLACE** 



# ATTACHMENT E – SACRAMENTO EAST USGS QUAD MAP



# ATTACHMENT F - FEMA FIRM

# NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole–foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

**Coastal Base Flood Elevations** shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures.** Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was California State Plane II zone (FIPSZONE 0402). The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or State Plane zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of the FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services NOAA, N/NGS12 National Geodetic Survey SSMC-3, #9202 1315 East-West Highway Silver Spring, MD 20910-3282

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713–3242**, or visit its website at http://www.ngs.noaa.gov/.

**Base map** information shown on this FIRM was provided in digital format by the USDA National Agriculture Imagery Program (NAIP). This information was photogrammetrically compiled at a scale of 1:12,000 from aerial photography dated 2012.

This map may reflect more detailed or up to date stream channel configurations than those shown on the previous FIRM. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations and improved topographic data. The profile baselines depicted on this map represent the hydraulic modeling baselines that match the flood profiles and Floodway Data Tables if applicable, in the FIS report. As a result, the profile baselines may deviate significantly from the new base map channel representation and may appear outside of the floodplain.

**Corporate limits** shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

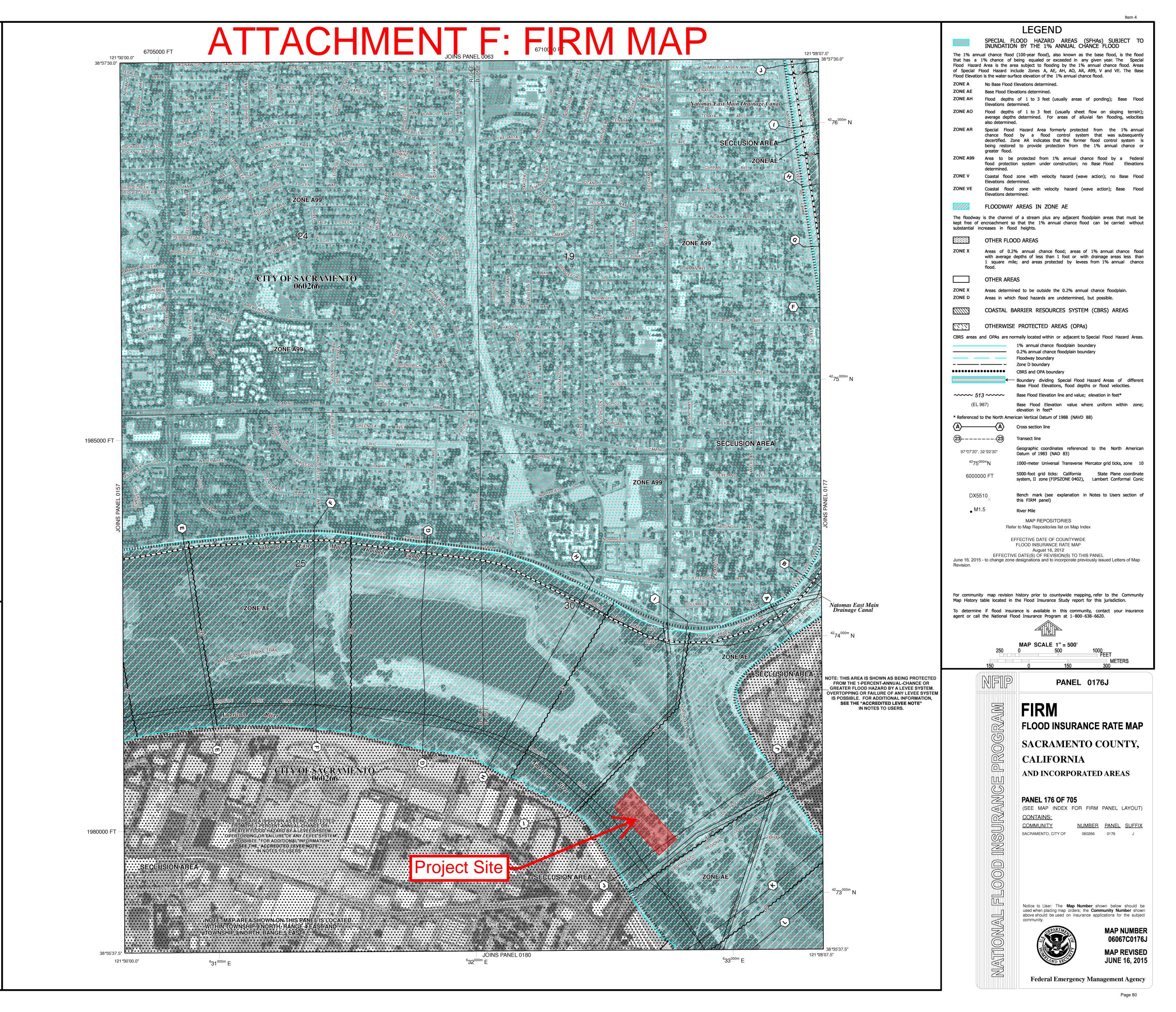
For information and questions about this map, available products associated with this FIRM including historic versions of this FIRM, how to order products or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the **FEMA Map Service Center** website at http://msc.fema.gov. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website. Users may determine the current map date for each FIRM panel by visiting the **FEMA Map Service Center** website or by calling the FEMA Map Information eXchange.

Accredited Levee Notes to Users: Check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system(s) shown as providing protection for areas on this panel. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA Website at http://www.fema.gov/business/nfip/index.shtm.

# SECLUSION NOTE:

Seclusion Area boundary

ATTENTION: THE LEVEES, DIKES, OR OTHER STRUCTURES INSIDE THIS BOUNDARY HAVE NOT BEEN SHOWN TO COMPLY WITH SECTION 65.10 OF THE NFIP REGULATIONS. AS SUCH, THIS FIRM PANEL WILL BE REVISED AT A LATER DATE TO UPDATE THE FLOOD HAZARD INFORMATION ASSOCIATED WITH THESE STRUCTURES. THE FLOOD HAZARD DATA SHOWN INSIDE THIS BOUNDARY (WHICH HAVE BEEN RE-PUBLISHED FROM THE AUGUST 16, 2012, FIRM FOR SACRAMENTO COUNTY, CALIFORNIA), SHOULD CONTINUE TO BE USED UNTIL THIS FIRM PANEL IS REVISED TO UPDATE THE FLOOD HAZARD INFORMATION IN THIS AREA.





# ATTACHMENT G - CORRESPONDENCE WITH CVFPB

## **Tony McCreary (CWE)**

From: Kibret, Natnael@CVFPB <Natnael.Kibret@cvflood.ca.gov>

Sent: Friday, January 6, 2023 3:32 PM

**To:** Tony McCreary (CWE)

Cc: Bob Eynck (CWE); Lamb, Steven@CVFPB
Subject: RE: Riverdale Resort Hydraulic Analysis

\*\*\*\*\* CAUTION: THIS EMAIL IS FROM AN EXTERNAL (i.e. NON-CWE) SENDER. \*\*\*\*\*

Tony – I suggest latter, evaluate both elevations and submit your results upfront.

Regards,

#### **Nate Kibret**

Permitting Section
Central Valley Flood Protection Board
(916) 574-2646 direct
natnael.kibret@CVFlood.ca.gov

From: Tony McCreary (CWE) <amccreary@cwecorp.com>

Sent: Friday, January 6, 2023 3:24 PM

To: Kibret, Natnael@CVFPB <Natnael.Kibret@cvflood.ca.gov>

Cc: Bob Eynck (CWE) <reynck@cwecorp.com>; Lamb, Steven@CVFPB <Steven.Lamb@cvflood.ca.gov>

Subject: RE: Riverdale Resort Hydraulic Analysis

Okay, so what do you suggest we do? Just evaluate using the 200-Yr and provide our findings to you which you'd then provide to the Corps and then wait and see if they comment or should we instead evaluate both elevations first and submit the findings of both of them to you up front?

#### Tony McCreary, PE, QSD

#### **Project Manager**

Please note: RFE Engineering has become CWE



#### Certified MBE and SBE

2260 Douglas Boulevard, Suite 160, Roseville, CA 95661

**P** (916) 772-7800 | **F** (916) 772-7804 | <u>amccreary@cwecorp.com</u>

www.cwecorp.com

#### Let's connect!







From: Kibret, Natnael@CVFPB <Natnael.Kibret@cvflood.ca.gov>

Sent: Friday, January 6, 2023 3:17 PM

To: Tony McCreary (CWE) < amccreary@cwecorp.com >

Cc: Bob Eynck (CWE) < reynck@cwecorp.com >; Lamb, Steven@CVFPB < Steven.Lamb@cvflood.ca.gov >

Subject: RE: Riverdale Resort Hydraulic Analysis

\*\*\*\*\* CAUTION: THIS EMAIL IS FROM AN EXTERNAL (i.e. NON-CWE) SENDER. \*\*\*\*\*

Tony – Hydraulic analysis is only required for blockage over 1%, however, the Corps. would still look at the blockage calculation regardless of the results. The concern is that the wider 200-year cross section area might diminish the impact associated with the proposed improvements compared to the 1957 cross section area.

Regards,

#### **Nate Kibret**

Permitting Section
Central Valley Flood Protection Board
(916) 574-2646 direct
natnael.kibret@CVFlood.ca.gov

From: Tony McCreary (CWE) <amccreary@cwecorp.com>

Sent: Friday, January 6, 2023 3:06 PM

To: Kibret, Natnael@CVFPB < Natnael.Kibret@cvflood.ca.gov >

Cc: Bob Eynck (CWE) < reynck@cwecorp.com >; Lamb, Steven@CVFPB < Steven.Lamb@cvflood.ca.gov >

Subject: RE: Riverdale Resort Hydraulic Analysis

Nate,

I am hoping that our cross sectional blockage is below the 1% threshold, so that we do not have to provide a hydraulic analysis. And based on your prior email, it seemed as though the cross section would be evaluated at the 200-Yr wsl. If we are below that 1% blockage given the 200-yr wsl, I was of the impression that there is no hydraulic analysis that would need to be done and so there would be nothing the Corps would need to look at.

#### Tony McCreary, PE, QSD

## **Project Manager**

Please note: RFE Engineering has become CWE



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www.cwecorp.com

#### Let's connect!







From: Kibret, Natnael@CVFPB < Natnael.Kibret@cvflood.ca.gov>

Sent: Friday, January 6, 2023 2:56 PM

To: Tony McCreary (CWE) < amccreary@cwecorp.com >

Cc: Bob Eynck (CWE) <reynck@cwecorp.com>; Lamb, Steven@CVFPB <Steven.Lamb@cvflood.ca.gov>

Subject: RE: Riverdale Resort Hydraulic Analysis

\*\*\*\*\* CAUTION: THIS EMAIL IS FROM AN EXTERNAL (i.e. NON-CWE) SENDER. \*\*\*\*\*

Tony – I want to clarify that the Board will be reviewing the calculations based on the 200-year WSE since this is an urban levee. However, the levees were designed using the 1957 DWSE (approximately 36.3 feet NAVD 88) and the Corps. might require the analysis at this elevation. I recommend utilizing both elevations in your analysis. Please let me know if you have any questions or would like to discuss.

Regards,

#### **Nate Kibret**

Permitting Section
Central Valley Flood Protection Board
(916) 574-2646 direct
natnael.kibret@CVFlood.ca.gov

From: Tony McCreary (CWE) < amccreary@cwecorp.com >

Sent: Friday, January 6, 2023 2:22 PM

**To:** Kibret, Natnael@CVFPB < Natnael.Kibret@cvflood.ca.gov >

Cc: Bob Eynck (CWE) <reynck@cwecorp.com>; Lamb, Steven@CVFPB <Steven.Lamb@cvflood.ca.gov>

Subject: RE: Riverdale Resort Hydraulic Analysis

Nate,

Thank you for getting back with me on those items.

#### Tony McCreary, PE, QSD

#### **Project Manager**

Please note: RFE Engineering has become CWE



#### **Certified MBE and SBE**

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**P** (916) 772-7800 | **F** (916) 772-7804 | <u>amccreary@cwecorp.com</u>

www.cwecorp.com

#### Let's connect!







From: Kibret, Natnael@CVFPB < Natnael.Kibret@cvflood.ca.gov>

Sent: Friday, January 6, 2023 2:17 PM

To: Tony McCreary (CWE) <amccreary@cwecorp.com>

Cc: Bob Eynck (CWE) <reynck@cwecorp.com>; Lamb, Steven@CVFPB <Steven.Lamb@cvflood.ca.gov>

Subject: RE: Riverdale Resort Hydraulic Analysis

\*\*\*\*\* CAUTION: THIS EMAIL IS FROM AN EXTERNAL (i.e. NON-CWE) SENDER. \*\*\*\*\*

Hello Tony – please see my responses below in red and let me know if you have additional questions.

Regards,

#### **Nate Kibret**

Permitting Section
Central Valley Flood Protection Board
(916) 574-2646 direct
natnael.kibret@CVFlood.ca.gov

From: Tony McCreary (CWE) < amccreary@cwecorp.com >

Sent: Thursday, January 5, 2023 4:46 PM

To: Lamb, Steven@CVFPB < <a href="mailto:Steven.Lamb@cvflood.ca.gov">Steven.Lamb@cvflood.ca.gov</a>>

Cc: Kibret, Natnael@CVFPB <Natnael.Kibret@cvflood.ca.gov>; Bob Eynck (CWE) <reynck@cwecorp.com>

Subject: RE: Riverdale Resort Hydraulic Analysis

Good afternoon Steve,

We are continuing to work on the Riverdale Resort project and I have some more questions regarding the hydraulic evaluation.

- From meeting notes on June 16, 2022, the river cross section that is evaluated to determine whether the proposed improvements will create a 1% or more blockage is based on entire cross section, from top of levee to top of levee, not any particular water surface elevation given a particular storm (e.g. 100 Yr WSL). Please confirm.
  - The blockage calculation should be based on the 200-year water surface elevation which is approximately 37.3 feet (NAVD88) just upstream of your project site.
- It appears from the FEMA map that the site is in Zone AE and has a 100Yr BFE of 37-38 feet. Our past notes on this project mention that any habitable or communal permanent structure would need to have a finished floor elevation at least 1-foot above the BFE. Is this the correct information to base any permanent structure finished floor elevation on?
  - Our regulations state the finished floor elevation of any habitable structure should be 2 feet above the 200-year water surface elevation.
- Are we to consider the RVs as a blockage of the river cross section? It seems like they would not be since the
  residents would be notified and could evacuate the Park in the event of a flood but I wanted to confirm.
  The RVs can be excluded from the calculation but we will need to understand how you will be monitoring
  flows/weather conditions to notify residents.

Thank you.

Tony McCreary, PE, QSD

**Project Manager** 

Please note: RFE Engineering has become CWE



Certified MBE and SBE

2260 Douglas Boulevard, Suite 160, Roseville, CA 95661

**P** (916) 772-7800 | **F** (916) 772-7804 | <u>amccreary@cwecorp.com</u>

#### www.cwecorp.com

#### Let's connect!







From: Lamb, Steven@CVFPB < Steven.Lamb@cvflood.ca.gov>

Sent: Thursday, November 17, 2022 3:30 PM

**To:** Tony McCreary (CWE-RFE) < amccreary@cwecorp.com > Cc: Kibret, Natnael@CVFPB < Natnael.Kibret@cvflood.ca.gov >

Subject: Re: Riverdale Resort Hydraulic Analysis

\*\*\*\*\* CAUTION: THIS EMAIL IS FROM AN EXTERNAL (i.e. NON-CWE) SENDER. \*\*\*\*\*

### Tony,

If the blockage calculation at the most constrained floodway cross-section is 1% or greater in depth hydraulic analysis is required.

#### Steve Lamb, PE

Permitting Section Manager Central Valley Flood Protection Board (916) 820-7638 direct steven.lamb@CVFlood.ca.gov

From: Tony McCreary (CWE-RFE) <amccreary@cwecorp.com>

Sent: Thursday, November 17, 2022 2:59:31 PM

To: Lamb, Steven@CVFPB <Steven.Lamb@cvflood.ca.gov>

Subject: Riverdale Resort Hydraulic Analysis

Good afternoon Steve,

When we had our meeting months ago to discuss Riverdale Resort upgrades, you mentioned that there are certain parameters that might preclude the project from being required to submit a complete hydraulic analysis of the American River floodway at our project site. Can you remind of what those parameters are?

Thank you.

#### Tony McCreary, PE

#### **Project Manager**

#### Please note: RFE Engineering has become CWE.

We will continue providing the same level of **quality, value, and customer service**, and now we have a larger team to help meet each project goal.



#### Certified SRF



# **ATTACHMENT H - CORRESPONDANCE WITH HCD**

# DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT DIVISION OF CODES AND STANDARDS

9342 Tech Center Drive, Suite 500, Sacramento, CA 95826 P.O. Box 277820, Sacramento, CA 95827-7820 (800) 952-8356 / TTY (800) 735-2929 / FAX (916) 263-3383 HCD Website: www.hcd.ca.gov

September 29, 2022

Linda Frazier Riverdale MHP 1501 Northgate Blvd Sacramento, CA 95815

Re: August 11, 2022 Meeting

Dear Linda Frazier:

The California Department of Housing and Community Development (HCD) has evaluated your request surrounding the requirements for a California Environmental Quality Act (CEQA), Public Resources Code Division 13, section 21000, associated with Riverdale MHP, park ID # 34-0054-MP, located at 1501 Northgate Blvd., Sacramento, CA 95815. Pursuant to Title 25 California Code of Regulations (T25 CCR) section 1032, the installation of or replacement of new manufactured homes, accessory structures, or any park related construction does not trigger the requirements of T25 CCR section 1032. Because Riverdale MHP is not enlarging or adding multi-family manufactured housing and has a current permit to operate with an existing use permit issued by the Authority Having Jurisdiction (AHJ), HCD will not be requiring poof of CEQA.

Please feel free to reach out with any further concerns.

Sincerely,

Matthew Weise Administrator III

Matthew Weise

951-255-3569





# ATTACHMENT I – EMERGENCY PREPAREDNESS AND RESPONSE PLAN

# Riverdale Resort Emergency Preparedness and Response

Occasionally a situation occurs that can potentially become deadly. Riverdale and its employees must be prepared to react in this situation. We must understand what we are to do to respond and mitigate the situation so that, to the extent of our ability, the least amount of damage occurs and no person is put in danger. The purpose of this document is to address various types of emergencies, always remembering the protection of human life is the most critical consideration.

## **Agencies and Resources Emergency Numbers**

Emergency: 911

Sacramento Fire Dept./ Fire and Medical Emergencies: (916) 228-3000

City Office of Emergency Services: (916) 808-1300

City Operator: (916) 264-5011

County Office of Emergency Services: (916) 874-2291 Governor's Office of Emergency Services: (916) 262-1772 Dept of Water Resources Flood Notification: (916) 574-2619

Non Emergency Police Response: (916) 264-5471

Local Radio Frequencies: AM 1530 Public Radio FM 893

California Emergency Management Agency: (916) 845-8510 / (916) 845-8100

City Animal Care Services: (916) 808-7387

County Animal Care Services: (916) 368-7387 / (916) 875-5656

# Employee Chain of Command (as available / on site)

- 1. Owner
- 2. General Manager
- 3. Assistant Manager
- 4. Security Personnel
- 5. Sales / Office Personnel

### **Employee Training**

- Each employee is given a copy of this document and asked to become familiar with it.
- 2. A copy of the Emergency Preparedness document will be kept in various places throughout the resort for employee reference.
- 3. All employees are given periodic orientations to remind them of emergency responses and to continually familiarize themselves as to the location of equipment, emergency shutoff valves, emergency gate locks, hoses, first aid kits, etc.

4. Personnel are always asked to make comments and suggestions for change to improve the response to any situation.

## Reporting an Emergency Situation

- 1. Identify yourself and your location (Resort name, street address, phone number)
- 2. What is the nature of the incident
- 3. Who and how many are injured or in danger
- 4. When did the incident occur
- 5. Any difficulties noted as far as access

## Possibility of Flooding within the Resort

- 1. The owner or employee on site will assume the Chain of Command.
- If the Monitoring Notification is not available, Call the Dept. of Water Resources (916) 574-2619 to obtain the current water level at the I Street bridge and/or the H Street reading.
- 3. Request whether this is an alert or if they are expecting rising conditions. (The monitoring notification is generally at 5 ft below flood stage.)
- 4. Notify each current renter of the possibility of flood conditions either by phone or going physically to the unit. (Speak to each renter)
- 5. Ask each renter to make sure all belongings have been gathered and stowed in their rig.
- 6. Ask employees to check throughout the resort to make sure any loose items are stowed or secured.
- 7. Make sure employees are able to open the emergency gate and close any safety valves.
- 8. If it further appears there are rising conditions, again check with Water Resources for current water levels and conditions. If it appears that a flood may be imminent, ask each renter to move to a safer area out of the flood zone.. Give the renter a time frame based on the rising conditions.
  - a. Do not allow renters to wait until the last minute to leave the park. Instruct the evacuation according to current water levels and common sense.
  - b. Direct the renter as to which park exit to use (Main gate or emergency exit)
  - c. Check to see if Northgate is still open, and if the railroad trestle is open. If Northgate has begun to flood, advise the renter they must use the Del Paso emergency exit that leads onto the bridge. It is too dangerous to drive through flood waters.
  - d. Advise the renter they cannot block the Del Paso emergency exit ramp. It must be kept open for all who are leaving as well as for emergency vehicles.

## Possibility of Other Disasters affecting the Park (Fires / Earthquakes)

- 1. The owner or employee on site will assume Chain of Command
- 2. Make a quick, visual assessment of the park for critical damages and/or personal injuries
- 3. All employees gather at the main gate for instruction.

- 4. Determine the location and status of each renter by physically going to their unit.
- 5. Locate all onsite employees and their status.
- 6. Call 911 to report any injuries. Administer first aid until emergency personnel arrive.
- 7. Gather renters into safe areas
- 8. Determine whether it would be safe and/or possible for renters to evacuate the area or whether they must stay on site until directed by fire and/or police emergency services.
- 9. Make sure all valves, switches are turned off as necessary to avoid further issues.
- 10. Gather any hoses, fire extinguishers, and other equipment that could be safely used to mitigate the situation.
- 11. If renters can safely evacuate the area, advise the renter as to the safest route to leave the area.

The following page shows the Evacuation Route to be used in the event of a disaster