

# ENDANGERED HABITATS CONSERVANCY HANSON PONDS RUSSIAN RIVER FLOODPLAIN RESTORATION PROJECT

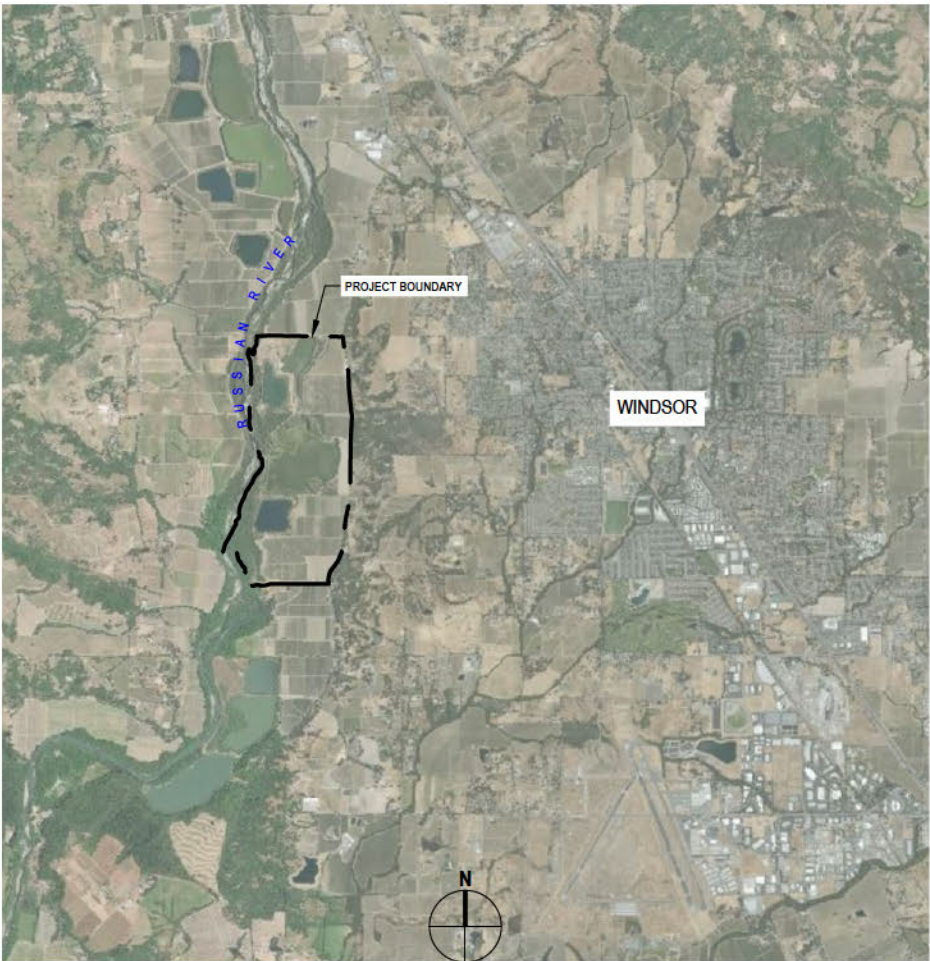
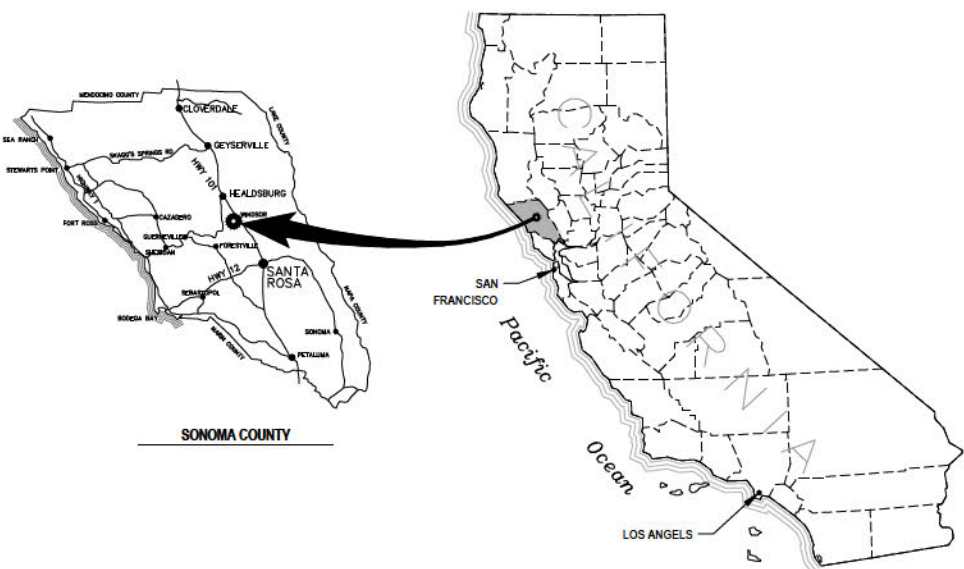


December, 2020

AREA MAP

LOCATION MAP

30% DESIGN COLLABORATING PARTNERS



NOAA'S NATIONAL MARINE FISHERIES SERVICE  
CALIFORNIA STATE COASTAL CONSERVANCY  
RUSSIAN RIVERKEEPER  
SONOMA WATER  
PERMIT SONOMA  
SONOMA COUNTY REGIONAL PARKS  
TOWN OF WINDSOR  
US GEOLOGICAL SERVICES  
H.T. HARVEY & ASSOCIATES  
MILLER PACIFIC ENGINEERING GROUP  
AVOCET RESEARCH ASSOCIATES  
PETER BAYE

30% DESIGN

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- PROJECT REQUIRES A CLASS 2 GENERAL ENGINEERING CONTRACTOR'S LICENSE IN THE STATE OF CALIFORNIA.
- CONTRACTOR SHALL FIELD VERIFY ALL EXISTING SITE CONDITIONS PRIOR TO THE COMMENCEMENT OF WORK AND REPORT ANY DISCREPANCIES TO THE CONSTRUCTION MANAGER. CONTRACTOR IS RESPONSIBLE FOR VISITING THE SITE AND BECOMING FAMILIAR WITH THE SITE CONDITIONS PRIOR TO BIDDING. SHOULD EXISTING CONDITIONS DIFFER FROM THOSE SHOWN OR INDICATED, OR IF IT APPEARS THAT THESE PLANS, AND SPECIFICATIONS DO NOT ADEQUATELY DETAIL THE WORK TO BE DONE, CONTRACTOR SHALL NOTIFY THE CONSTRUCTION MANAGER PRIOR TO CONTINUING WITH ANY RELATED WORK. NO ALLOWANCE WILL BE MADE ON CONTRACTOR'S BEHALF FOR ANY EXTRA EXPENSE RESULTING FROM FAILURE OR NEGLIGENCE IN DETERMINING THE CONDITIONS UNDER WHICH WORK IS TO BE PERFORMED.
- NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALE.
- QUANTITIES OF ITEMS, LENGTH OF PROJECT, AND SITE CONDITIONS SHOWN IN THE PLANS ARE APPROXIMATE. ALL MATERIALS SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR UNLESS OTHERWISE NOTED.
- CONTRACTOR AGREES TO ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD THE CITY, GHD, AND THEIR REPRESENTATIVES HARMLESS FROM ANY AND ALL LIABILITY, REAL AND/OR ALLEGED, IN CONJUNCTION WITH THE PERFORMANCE OF THIS PROJECT.
- CONTRACTOR SHALL BE HELD RESPONSIBLE FOR ANY AND ALL DAMAGES TO EXISTING STRUCTURES, ROADS, PARKING AREAS, AND UTILITIES DURING CONSTRUCTION. ALL DAMAGE SHALL BE RESTORED TO AN "AS GOOD OR BETTER" CONDITION AT THE CONTRACTOR'S EXPENSE.
- A SET OF SIGNED CONSTRUCTION DRAWINGS AND SPECIFICATIONS WILL BE KEPT AT ALL TIMES AT THE JOB SITE ON WHICH ALL CHANGES OR VARIATIONS IN THE WORK, INCLUDING ALL EXISTING UTILITIES, ARE TO BE RECORDED AND/OR CORRECTED DAILY AND SUBMITTED TO THE CONSTRUCTION MANAGER WHEN THE WORK TO BE DONE IS COMPLETED.
- CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 72 HOURS IN ADVANCE OF COMMENCEMENT OF ANY PART OF THE WORK AND SHALL COORDINATE CONSTRUCTION SCHEDULE ACCORDINGLY.
- THE DESIGN FEATURES INCLUDING HORIZONTAL AND VERTICAL ALIGNMENTS, SECTIONS, AND ALL DESIGN DETAILS SHOWN ON THESE DESIGN PLANS SHALL NOT BE ALTERED OR MODIFIED IN ANY WAY DURING CONSTRUCTION WITHOUT THE EXPRESSED, WRITTEN DIRECTION AND APPROVAL OF THE CONSTRUCTION MANAGER. DRAINAGE STRUCTURES SHALL BE INSTALLED AS SHOWN ON THE PLANS WITH ONLY MINOR CORRECTIONS IN LOCATION SKEW, AND/OR ELEVATIONS AS NEEDED TO FIT FIELD CONDITIONS AS DETERMINED BY THE CONSTRUCTION MANAGER.
- THE CONTRACTOR SHALL READ AND MAKE CAREFUL EXAMINATION OF THE PLANS, SPECIFICATIONS, QUANTITIES AND MATERIAL ESTIMATES AND VISIT THE SITE OF THE PROPOSED CONSTRUCTION TO BECOME FAMILIAR WITH THE SITE CONDITIONS AND LIMITATIONS BEFORE MAKING A BID. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL ERRORS RESULTING FROM THE FAILURE TO MAKE SUCH AN EXAMINATION. ANY INFORMATION DERIVED FROM THE MAPS, PLANS, SPECIFICATIONS, PROFILES, DRAWINGS OR FROM THE ENGINEER WILL NOT RELIEVE THE CONTRACTOR FROM ANY RISK OR FROM FULFILLING THE TERMS OF THE CONTRACT.
- NO WORK SHALL BE PERFORMED OUTSIDE OF THE APPROXIMATE LIMITS OF DISTURBANCE SHOWN ON THE PLANS WITHOUT THE APPROVAL OF THE CONSTRUCTION MANAGER.
- THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING STAGING AREAS AND EXTENTS WITH THE CONSTRUCTION MANAGER.
- UNLESS OTHERWISE NOTED, THE CONTRACTOR SHALL PROTECT EXISTING SURVEY MONUMENTS WITHIN WORK LIMITS. ANY MONUMENT DAMAGED BY THE CONTRACTOR SHALL BE RESET IN ACCORDANCE WITH THE CALIFORNIA PROFESSIONAL LAND SURVEYORS ACT AT THE CONTRACTOR'S SOLE EXPENSE.
- WHENEVER ANY MATERIAL OR EQUIPMENT IS INDICATED OR SPECIFIC BY PATENT OR PROPRIETARY NAME OR BY THE NAME OF THE MANUFACTURER, SUCH SPECIFICATION SHALL BE CONSIDERED AS USED FOR DESCRIBING THE MATERIAL OR EQUIPMENT DESIRED AND SHALL BE CONSIDERED AS FOLLOWED BY THE WORDS "OR APPROVED EQUAL". THE CONTRACTOR MAY OFFER ANY MATERIAL OR EQUIPMENT WHICH SHALL BE EQUAL IN EVERY RESPECT TO THAT SPECIFIED; PROVIDED THAT WRITTEN APPROVAL FIRST IS OBTAINED FROM THE CONSTRUCTION MANAGER.
- ANY INFORMATION DERIVED FROM THE MAPS, PLANS, SPECIFICATIONS, PROFILES, DRAWINGS OR FROM THE CONSTRUCTION MANAGER WILL NOT RELIEVE THE CONTRACTOR FROM ANY RISK OR FROM FULFILLING THE TERMS OF THE CONTRACT.
- THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE CONSTRUCTION MANAGER UPON DISCOVERING DISCREPANCIES, ERRORS OR OMISSIONS IN THE PLANS OR SITE CONDITIONS. PRIOR TO PROCEEDING, THE DISCREPANCY SHALL BE RESOLVED TO THE SATISFACTION OF THE CONSTRUCTION MANAGER.
- CONTRACTOR SHALL MAINTAIN DAILY COMMUNICATIONS WITH THE CONSTRUCTION MANAGER TO DISCUSS DETAILS OF IMPLEMENTATION, ORDER OF WORK, METHODS OF MINIMIZING ENVIRONMENTAL IMPACTS AND OTHER RELEVANT COMPONENTS OF CONSTRUCTION. CONTRACTOR AND CONSTRUCTION MANAGER SHALL MEET MINIMUM WEEKLY ON-SITE TO DISCUSS PROJECT DETAILS.
- THE CONTRACTOR SHALL COMPLETELY REVIEW, BE FAMILIAR WITH, UNDERSTAND AND ADHERE TO THE TERMS OF ALL PERMITS AND AGENCY APPROVALS FOR THIS PROJECT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW AND UNDERSTAND THE CONDITIONS RELEVANT TO THE CONSTRUCTION ACTIVITIES. A COPY OF ALL PROJECT PERMITS SHALL REMAIN ON-SITE AT ALL TIMES.
- NO SHUTDOWN OF THE PROJECT SITE IS ANTICIPATED. HOWEVER, UNFORESEEABLE CONDITIONS INCLUDING BUT NOT LIMITED TO FIRE, GEO-HAZARD CONDITIONS, OR PRECIPITATION COULD REQUIRE THE CONSTRUCTION MANAGER TO SUSPEND CONSTRUCTION ACTIVITIES AT ALL OR PART OF THE SITE FOR SAFETY REASONS AT NO COST TO THE CITY OR THEIR REPRESENTATIVES.
- ALL EQUIPMENT AND PERSONNEL SHALL ACCESS THE CORRIDOR VIA THE CONSTRUCTION ENTRANCES AND ACCESS ROUTES SHOWN ON THE PLANS.
- CONTRACTOR SHALL BE AWARE THE PROJECT IS LOCATED ON PRIVATE LANDS AND CITY RIGHT-OF-WAY AND THEREFORE ALL ACTIVITIES SHALL REMAIN WITHIN LIMITS SHOWN ON PLANS AND ALL ADVANCEMENT WITHIN THE LIMITS SHALL BE PRE-AUTHORIZED BY THE CONSTRUCTION MANAGER.
- CONSTRUCTION ACCESS ROUTES AND EQUIPMENT STAGING AREAS SHALL BE LIMITED TO THE LIMITS OF CONSTRUCTION DISTURBANCE AS SHOWN ON THE PLANS. CONSTRUCTION ACTIVITIES SHALL BE PROHIBITED FROM UNNECESSARILY DISTURBING AQUATIC HABITAT AND WETLANDS. DISTURBANCE SUCH AS EXCAVATION, FILLING OR DEWATERING OF ANY EXISTING DITCHES, CHANNELS AND OTHER PONDED WATER AREAS SHALL OCCUR AFTER THE AREA HAS BEEN SEINED AND CLEARED BY A QUALIFIED BIOLOGIST, PROCURED BY OTHERS. THE CONTRACTOR SHALL COOPERATE WITH THE BIOLOGIST IN THE COLLECTION AND RELOCATION EFFORTS.
- THE CONTRACTOR SHALL RESTORE TEMPORARY HAUL ROADS AND STAGING AREAS AT THE CONCLUSION OF USE THROUGH BLADING, RIPPING OR OTHERWISE REMOVING RUTS, DE-COMPACTING AND NATURALIZING TO PRE-CONSTRUCTION CONDITIONS. THE CONSTRUCTION MANAGER/MONITOR RESERVES THE RIGHT TO REQUIRE THE CONTRACTOR TO REPAIR DAMAGE WHERE HAUL ROADS AND STAGING AREAS WERE CONSTRUCTED.
- BIOLOGIST PROVIDED BY OTHERS (NIG) SHALL IDENTIFY ALL AREAS OF NESTING BIRDS PRIOR TO ANY CONSTRUCTION DISTURBANCE (FEBRUARY 15 - AUGUST 15). CONTRACTOR TO MAINTAIN APPLICABLE SETBACKS.

1. TOPOGRAPHIC DATA SHOWN HEREON IS BASED ON DATA PROVIDED BY NOAA, 2019.
2. HORIZONTAL DATUM IS NAD 83, STATE PLANES, ZONE 11.
3. VERTICAL DATUM IS NAVD 88.
4. UNDERGROUND UTILITIES SHOWN HEREON WERE LOCATED FROM ABOVE GROUND VISUAL UTILITY STRUCTURES, NO UTILITY RESEARCH WAS CONDUCTED FOR THIS PROJECT.
5. PROPERTY LINE AND EASEMENT PLOTTING IS BASED ON A PRELIMINARY TITLE REPORT DATED JANUARY 13, 2014, PREPARED BY CHICAGO TITLE COMPANY, TITLE NO. 10-495107061-D-KF.
6. SEE ADDITIONAL SURVEY NOTES ON SHEET G-103.

1. FLOODPLAIN DESIGN COMPLETED BY NOAA FISHERIES & USGS PER NOVEMBER 2016 FEASIBILITY STUDY.
2. SEASONAL LOW GROUNDWATER ELEVATIONS PROVIDED BY LUHDORFF & SCALMANINI CONSULTING ENGINEERS (LSCE 2020).
3. REVEGETATION DESIGN COMPLETED BY H.T. HARVEY & ASSOCIATES (NOVEMBER 2020).
4. GEOTECHNICAL ENGINEERING RECOMMENDATIONS PROVIDED BY MILLER PACIFIC ENGINEERING GROUP (MPEG 2020).

1. CONTRACTOR SHALL SUBMIT A WATER MANAGEMENT PLAN IN CONFORMANCE WITH THE PROJECT PERMITS AND IN ACCORDANCE WITH THE FINAL GRADING SEQUENCE.
2. CONTRACTOR SHALL COOPERATE WITH THE AQUATIC BIOLOGIST DURING THE AQUATIC SPECIES RELOCATION.

**LIMITS OF GRADING:** INDICATES APPROXIMATE LIMIT OF PERMANENT GRADING OR LAND DISTURBANCE (EXCAVATION OR FILLING).

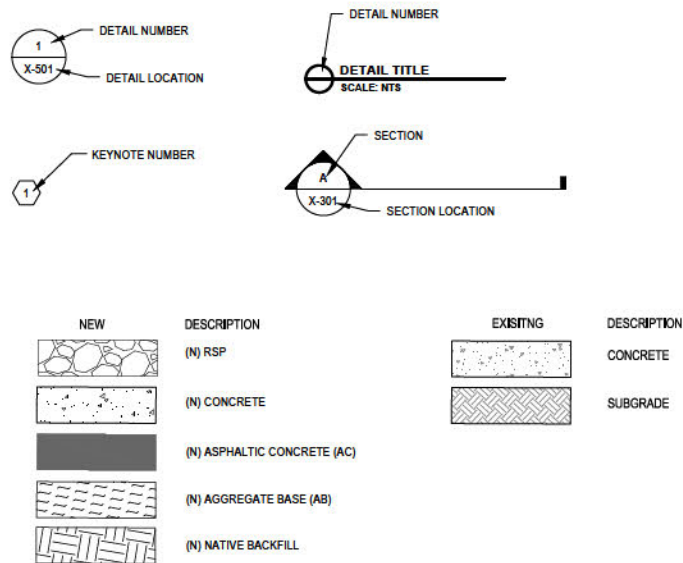
**LIMITS OF DISTURBANCE:** INDICATES APPROXIMATE LIMITS OF TEMPORARY CONSTRUCTION DISTURBANCES AND INCLUDES POTENTIAL ACCESS ROUTES, STAGING AREAS, AND STOCKPILE AREAS THAT SHALL BE RESTORED BACK TO PRE-CONSTRUCTION CONDITIONS.

1. UTILITIES INCLUDING UNDERGROUND GAS, SANITARY SEWER, STORM SEWER, DRINKING WATER, COMMUNICATIONS, AND ABOVE GROUND DRAINAGE AND ELECTRICAL ARE KNOWN TO EXIST WITHIN THE LIMITS OF DISTURBANCE.
2. LOCATIONS OF EXISTING UTILITIES AND STRUCTURES ARE FROM THE BEST INFORMATION AVAILABLE. EXACT LOCATION AND COMPLETENESS ARE NOT GUARANTEED. CONTRACTOR SHALL NOTIFY UNDERGROUND SERVICES ALERT (800) 227-2800 A MINIMUM OF 48 HOURS PRIOR TO ANY EXCAVATION AND POTHOLE FOR EXACT LOCATION. NOTIFY THE CONSTRUCTION MANAGER IMMEDIATELY IF LOCATE INDICATES THAT EXISTING UTILITIES ARE DIFFERENT THAN SHOWN ON DRAWINGS.
3. LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE PLOTTED FROM INTERPOLATION OF PHYSICAL EVIDENCE ON THE SITE SURFACE. ALL UTILITIES ARE SUBJECT TO FIELD VERIFICATION BY THE CONTRACTOR.
4. ALL LOCATIONS FOR WORK SHALL BE CHECKED AND COORDINATED WITH EXISTING CONDITIONS IN THE FIELD BEFORE BEGINNING CONSTRUCTION UNDER THIS SECTION OR ANY OTHER SECTION.
5. CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE TO UTILITIES, FEATURES, AND STRUCTURES LOCATED ON THE SITE, LOCATE, PROTECT, AND AVOID DISRUPTION OF ALL ABOVE AND BELOW GRADE UTILITIES DURING CONSTRUCTION, UNLESS STATED OTHERWISE.
6. CONSTRUCTION ACTIVITY WILL TAKE PLACE IN THE VICINITY OF ABOVE GROUND AND UNDERGROUND ELECTRIC TRANSMISSION LINES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE AWARE OF, AND OBSERVE, THE MINIMUM CLEARANCES FOR WORKERS AND EQUIPMENT OPERATING NEAR HIGH VOLTAGE ELECTRIC LINES AS SET OUT IN THE HIGH VOLTAGE SAFETY ORDERS OF THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY AS WELL AS OTHER APPLICABLE SAFETY REGULATIONS.
7. CONSTRUCTION ACTIVITY WILL TAKE PLACE IN THE VICINITY OF GAS LINES. IT IS THE CONTRACTOR'S RESPONSIBILITY TO BE AWARE OF, AND OBSERVE, THE MINIMUM CLEARANCES FOR WORKERS AND EQUIPMENT OPERATING NEAR GAS LINE AS SET OUT IN THE SAFETY ORDERS OF THE CALIFORNIA DIVISION OF INDUSTRIAL SAFETY AS WELL AS OTHER APPLICABLE SAFETY REGULATIONS.
8. ALL UTILITY CONSTRUCTION SHALL CONFORM TO CITY STANDARDS, UTILITY PROVIDOR REQUIREMENTS, AND CURRENT CALIFORNIA CODES.
9. ALL EXISTING UTILITIES AND TIE-IN POINTS SHOULD BE CONSIDERED ACTIVE UTILITIES UNLESS OTHERWISE INDICATED.

1. CONTRACTOR IS RESPONSIBLE FOR CONSTRUCTION STAKING AND SHALL ARRANGE FOR STAKING, STAKING WILL BE REVIEWED BY THE CONSTRUCTION MANAGER FOR CONFORMANCE TO DESIGN PRIOR TO CONSTRUCTION.
2. ALL GRADES BETWEEN SPOT AND CONTOUR ELEVATIONS SHALL HAVE UNIFORM SLOPE UNLESS OTHERWISE INDICATED, MAINTAIN POSITIVE DRAINAGE AWAY FROM ALL BUILDING WALLS AND DOORS.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF ALL CONSTRUCTION, ADEQUATE SHORING BRACING, TIES, AND SUPPORTS SHALL BE USED TO PROVIDE PROPER TEMPORARY INTEGRITY DURING ALL PHASES OF CONSTRUCTION.
4. ALL EXISTING LANDSCAPED AND UNPAVED AREAS WHICH ARE DISTURBED OUTSIDE LIMITS OF GRADING BY CONSTRUCTION OR EARTHWORK OPERATIONS SHALL BE RETURNED TO AS GOOD OR BETTER CONDITIONS.
5. ALL DITCHES, SWALES, GUTTERS, ETC. SHOULD BE CONSIDERED ACTIVE STORM CONVEYANCES UNLESS OTHERWISE INDICATED. CONTRACTOR IS RESPONSIBLE FOR ADDRESSING STORM WATER DRAINAGE AND DEWATERING OF WORK AREAS DURING CONSTRUCTION.
6. PERFORM GRADING IN ACCORDANCE WITH THE LATEST EDITION OF THE CALIFORNIA BUILDING CODE AND APPLICABLE HUMBOLDT COUNTY REGULATIONS.
7. THE CONTRACTOR SHALL BE AWARE OF THE SOFT AND SATURATED SOIL CONDITION THAT MAY BE ENCOUNTERED DURING THE CONSTRUCTION.
8. IN THE EVENT CULTURAL RESOURCES (IE, HISTORICAL, ARCHAEOLOGICAL, AND PALEONTOLOGICAL RESOURCES, AND/OR HUMAN REMAINS) ARE DISCOVERED DURING CONSTRUCTION ACTIVITIES, WORK SHALL BE HALTED. A QUALIFIED ARCHEOLOGIST SHALL BE PROVIDED BY THE CITY FOR AN ON-SITE EVALUATION. IF HUMAN BURIALS OR HUMAN REMAINS ARE ENCOUNTERED, THE CONTRACTOR SHALL ALSO NOTIFY THE COUNTY CORONER.
9. SHOULD GRADING OPERATIONS ENCOUNTER HAZARDOUS MATERIALS, OR WHAT APPEAR TO BE HAZARDOUS MATERIALS, STOP WORK IN THE AFFECTED AREA IMMEDIATELY AND CONTACT THE CONSTRUCTION MANAGER OR THE APPROPRIATE AGENCY FOR FURTHER INSTRUCTION.
10. ALL CONSTRUCTION SITES AND HAUL ROADS SHALL BE MAINTAINED, AS NECESSARY, TO MINIMIZE THE EMISSION OF DUST AND PREVENT CREATION OF NUISANCE TO ADJACENT PROPERTIES.
11. ALL STAGING/STOCKPILE AREAS WHICH ARE DISTURBED BY CONSTRUCTION OR EARTHWORK OPERATIONS SHALL BE RETURNED TO ORIGINAL EXISTING CONDITIONS OR BETTER.
12. DURING WET WEATHER PERIODS, CONTRACTOR IS RESPONSIBLE FOR SEQUENCING CONSTRUCTION IN A MANNER TO MINIMIZE IMPACT ON OPEN EARTHWORK AND COMPACTION OPERATIONS.

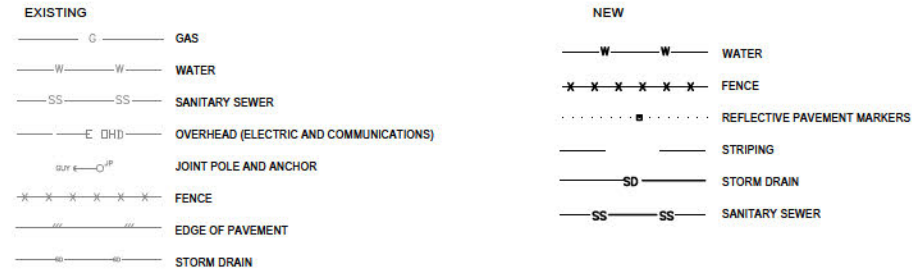
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## SYMBOLS



NOTE: THESE ARE UNIVERSAL HATCH PATTERNS SHOWN ON MULTIPLE CIVIL SHEETS. SOME PATTERNS ARE SHEET SPECIFIC AND ARE DENOTED ON THE LEGENDS OF THEIR CORRESPONDING SHEETS.

## UTILITIES



## SHEET INDEX

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16	C-202	PROFILES 2 OF 2
17	C-301	CROSS SECTIONS 1 OF 2
18	C-302	CROSS SECTIONS 2 OF 2
19	C-401	REVEGETATION PLAN
20	C-402	REVEGETATION TYPICAL SECTION

## ABBREVIATIONS

AC	AGGREGATE BASE	FG	FINISH GRADE	N	NORTH	S	SOUTH	UBC	UNIFORM BUILDING CODE
ACI	ASPHALTIC CONCRETE	FL	FLOW LINE	(N)	NEW	SCH	SCHEDULE	UG	UNDERGROUND
ACI	AMERICAN CONCRETE INSTITUTE	FT	FOOT OR FEET	NIC	NOT IN CONTRACT	SD	STORM DRAIN	UGT	UNDERGROUND TELEPHONE
ACP	ASBESTOS CEMENT PIPE			NO	NUMBER, NUMBERING	SECT	SECTION	UNK	UNKNOWN
ACW	ACTIVE CHANNEL WIDTH	G	GAS	NOM	NOMINAL	SHT	SHEET	UNO	UNLESS NOTED OTHERWISE
AGG	AGGREGATE	GAL	GAGE	NTS	NOT TO SCALE	SIM	SIMILAR		
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE	GALV	GALLON			SL	SLOPE	V	VENT, VOLT, VALVE
APN	ASSESSOR'S PARCEL NUMBER	GB	GALVANIZED	OC	ON CENTER	SPEC	SPECIFICATIONS	VC	VERTICAL CURVE
APPROX	APPROXIMATE	GB	GRADE BREAK	OD	OUTSIDE DIAMETER	SQ	SQUARE	VERT	VERTICAL
		GPM	GALLONS PER MINUTE	OF	OUTSIDE FACE, OVERFLOW	SQ FT	SQUARE FOOT		
BC	BEGIN CURVE	GUY	GUY WIRE	OHE	OVER HEAD ELECTRIC	SQ IN	SQUARE INCH	W	WATER
BF	BANK FULL	GVL	GRAVEL	OPNG	OPENING	SS	SANITARY SEWER	WI	WITH
BM	BENCH MARK			OR	OFFICIAL RECORDS	SST	STAINLESS STEEL	WM	WATER METER
BP	BEGIN POINT	HCR	HUMBOLDT COUNTY RECORDS			SSCO	SANITARY SEWER CLEANOUT	WP	WATERPROOF
BVC	BEGIN VERTICAL CURVE	HDPE	HIGH DENSITY POLYETHYLENE	P	PROPOSED	STA	STATION	WS	WATER SURFACE
BVCE	BEGIN VERTICAL CURVE ELEVATION	HGT	HEIGHT	PE	PERMANENT EASEMENT	STD	STANDARD	WSE	WATER SURFACE ELEVATION
		HMA	HOT MIX ASPHALT	PG&E	PACIFIC GAS & ELECTRIC	STL	STEEL, STEEL PIPE	WSP	WELDED STEEL PIPE
CFS	CUBIC FEET PER SECOND	HOR	HORIZONTAL	PL	PLATE, PROPERTY LINE	STR	STRAIGHT	WTR	WATER
CJ	CONSTRUCTION JOINT			PP	POWER POLE	STRUCT	STRUCTURE	WWF	WELDED WIRE FABRIC
CLR	CLEAR			PRCST	PREFCAST				
CM	CONSTRUCTION MANAGER	ID	INSIDE DIAMETER	PREFAB	PREFABRICATED			XFMR	TRANSFORMER
CMU	CONCRETE MASONRY UNIT	IN	INCH	PRESS	PRESSURE			XING	CROSSING
CONC	CONCRETE	INV	INVERT	PROP	PROPERTY	T	TANGENT	YD	YARD
CONN	CONNECTION	JP	JOINT UTILITY POLE	PSF	POUNDS PER SQUARE FOOT	TC	TOP OF CURB	YR	YEAR
CONT	CONTINUOUS, CONTINUATION	JT	JOINT	PSI	POUNDS PER SQUARE INCH	TCE	TEMPORARY CONSTRUCTION EASEMENT		
COORD	COORDINATE			PSIG	POUNDS PER SQUARE INCH, GAUGE	TECH	TECHNICAL	&	AND
CTD	CENTERED	KIP	THOUSAND POUNDS	PVC	POLYVINYL CHLORIDE PLASTIC	TEL	TELEPHONE	@	AT
CTR	CENTER			PVI	POINT OF VERTICAL INTERSECTION	TEMP	TEMPORARY	Ø	DIAMETER
CF	CUBIC FOOT	L	LEFT, LENGTH	PVMT	PAVEMENT	THK	THICK	£	CENTER LINE
CY	CUBIC YARD	LB	POUNDS			TW	TOP OF WALL	ℓ	PROPERTY LINE, PLATE
DR	DRAIN	LF	LINEAR FEET			TYP	TYPICAL	(E)	EXISTING
DI	DROP INLET	LG	LONG	R, RAD	RADIUS			(P)	PROPOSED
DIA	DIAMETER	LONG	LONGITUDINAL	RC	REINFORCED CONCRETE			(N)	NEW
DW	DRIVEWAY			RCB	REINFORCED CONCRETE BOX				
DWG	DRAWING	MAX	MAXIMUM	REF	REFER, REFERENCE				
		MFR	MANUFACTURER	REINF	REINFORCED, REINFORCING, REINFORCE				
(E)	EXISTING	MH	MANHOLE	REQD	REQUIRED				
EA	EACH	MIN	MINIMUM, MINUTE	ROW	RIGHT OF WAY				
EC	END CURVE	MISC	MISCELLANEOUS	RSP	ROCK SLOPE PROTECTION				
EG	EXISTING GROUND	MON	MONUMENT						
EL, ELEV	ELEVATION	MSNRY	MASONRY						
ELEC	ELECTRIC, ELECTRICAL	MTL	MATERIAL						
ENGR	ENGINEER	MWS	MAXIMUM WATER SURFACE						
EP	END POINT								
EQ	EQUAL								
EQ SP	EQUALLY SPACED								
EQPT	EQUIPMENT								
ESM	ENGINEERED STREAMBED MATERIAL								
EXC	EXCAVATE								
EXP	EXPOSED, EXPANSION								

### 30% DESIGN

[illegible]

EROSION, SEDIMENT, POLLUTION, & WASTE CONTROL NOTES

1. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MINIMIZE EROSION AND PREVENT THE TRANSPORT OF SEDIMENT TO THE ADJACENT RIVER AND SENSITIVE AREAS.

2. PERFORM EROSION PREVENTION AND SEDIMENT CONTROL IN ACCORDANCE WITH THE LATEST EDITION OF CHAPTER 33 OF THE CALIFORNIA BUILDING CODE, APPLICABLE SONOMA COUNTY REGULATIONS, AND SECTION 20 OF THE CALTRANS STANDARD SPECIFICATIONS.

3. AT A MINIMUM, THE CONTRACTOR SHALL EMPLOY THE FOLLOWING BEST MANAGEMENT PRACTICES (BMPS) AS DESCRIBED IN THE CURRENT CALTRANS STORM WATER QUALITY HANDBOOK AS NEEDED:

SS-2 PRESERVATION OF EXISTING VEGETATION

SS-6 REDWOOD MULCH

SS-10 OUTLET PROTECTION/VELOCITY DISSIPATION DEVICES

SC-1 SILT FENCE

NS-2 DEWATERING OPERATIONS

NS-3 PAVING AND GRINDING OPERATIONS

NS-6 CLEAR WATER DIVERSION

4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO FIX ANY EROSION, SEDIMENT, POLLUTION, & WASTE CONTROL DEFICIENCIES IDENTIFIED BY THE OWNER OR THE OWNERS REPRESENTATIVE.

5. PRIOR TO FINAL ACCEPTANCE ALL AREAS OF THE SITE WILL BE VEGETATED OR PERMANENTLY STABILIZED AND ALL TEMPORARY SEDIMENT CONTROL MEASURES SHALL BE REMOVED.

6. IF DISCREPANCIES OCCUR BETWEEN THESE NOTES, MATERIAL REFERENCED HEREIN OR MANUFACTURERS RECOMMENDATIONS, THEN THE MOST PROTECTIVE SHALL APPLY.

7. THE OWNER IS RESPONSIBLE FOR OBTAINING AND COMPLYING WITH THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) GENERAL PERMIT WASTE DISCHARGE REQUIREMENTS FOR DISCHARGES OF STORM WATER RUNOFF ASSOCIATED WITH CONSTRUCTION ACTIVITY. THE SITE DISTURBANCE IS GREATER THAN 1 ACRE, THEREFORE THE CONTRACTOR IS RESPONSIBLE TO COMPLY WITH THE STORMWATER POLLUTION PREVENTION PLAN (SWPPP) FOR THE PROJECT.

8. PRESERVATION OF EXISTING VEGETATION SHALL OCCUR TO THE MAXIMUM EXTENT PRACTICABLE.

9. DISCHARGES OF POTENTIAL POLLUTANTS FROM CONSTRUCTION SITES SHALL BE PREVENTED USING SOURCE CONTROLS TO THE MAXIMUM EXTENT PRACTICABLE. POTENTIAL POLLUTANTS INCLUDE BUT ARE NOT LIMITED TO: SEDIMENT, TRASH, NUTRIENTS, PATHOGENS, PETROLEUM HYDROCARBONS, METALS, CONCRETE, CEMENT, ASPHALT, LIME, PAINT, STAINS, GLUES, WOOD PRODUCTS, PESTICIDES, HERBICIDES, CHEMICALS, HAZARDOUS WASTE, SANITARY WASTE, VEHICLE OR EQUIPMENT WASH WATER AND CHLORINATED WATER.

10. WHENEVER IT IS NOT POSSIBLE TO UTILIZE EROSION PREVENTION MEASURES, EXPOSED SLOPES SHALL EMPLOY SEDIMENT CONTROL DEVICES, SUCH AS FIBER ROLLS AND SILT FENCES. FIBER ROLLS AND SILT FENCES SHALL BE TRENCHED AND KEYED INTO THE SOIL AND INSTALLED ON CONTOUR. SILT FENCES SHALL BE INSTALLED APPROXIMATELY 2 TO 5 FEET FROM TOE OF SLOPE.

11. THE CONTRACTOR SHALL PROTECT STORM DRAIN INLETS FROM POTENTIAL POLLUTANTS UNTIL DRAINAGE CONVEYANCE SYSTEMS ARE FUNCTIONAL, THE SITE IS STABILIZED, AND CONSTRUCTION HAS BEEN COMPLETED.

12. ENERGY DISSIPATERS SHALL BE INSTALLED AT STORM DRAIN OUTLETS WHICH MAY CONVEY STORM WATER FLOW LEADING TO SOIL EROSION.

13. SOIL AND MATERIAL STOCKPILES SHALL BE PROPERLY PROTECTED TO MINIMIZE SEDIMENT AND POLLUTANT TRANSPORT FROM THE CONSTRUCTION SITE.

14. SOLID WASTE, SUCH AS TRASH AND DEBRIS, SHALL BE PLACED IN DESIGNATED COLLECTION AREAS OR CONTAINERS. THE CONSTRUCTION SITE SHALL BE CLEARED OF SOLID WASTE DAILY, OR AS NECESSARY, AND REGULAR REMOVAL AND PROPER DISPOSAL SHALL BE ARRANGED.

15. PROPER APPLICATION, CLEANING AND STORAGE OF POTENTIALLY HAZARDOUS MATERIALS, SUCH AS PAINTS AND CHEMICALS, SHALL BE CONDUCTED TO PREVENT THE DISCHARGE OF POLLUTANTS.

16. WHEN UTILIZED, TEMPORARY RESTROOMS AND SANITARY FACILITIES SHALL BE LOCATED AND MAINTAINED TO PREVENT THE DISCHARGE OF POLLUTANTS.

17. APPROPRIATE VEHICLE STORAGE, FUELING, MAINTENANCE AND CLEANING AREAS SHALL BE DESIGNATED AND MAINTAINED TO PREVENT DISCHARGE OF POLLUTANTS.

18. ENTRANCE(S) TO THE CONSTRUCTION SITE SHALL BE MAINTAINED IN A CONDITION THAT WILL PREVENT TRACKING OR FLOWING OF POTENTIAL POLLUTANTS OFFSITE. POTENTIAL POLLUTANTS DEPOSITED ON PAVED AREAS WITHIN THE COUNTY RIGHT-OF-WAY, SUCH AS ROADWAYS AND SIDEWALKS, SHALL BE PROPERLY DISPOSED OF EACH WORKING DAY OR MORE FREQUENTLY AS NECESSARY.

19. CHANGES TO THE STORM WATER POLLUTION PREVENTION PLAN MAY BE MADE TO RESPOND TO FIELD CONDITIONS. CHANGES SHALL BE NOTED ON THE PLAN WHEN MADE.

NS-4 VEHICLE EQUIPMENT AND FUELING

WM-1 MATERIALS DELIVERY AND STORAGE

WM-2 MATERIAL USE

WM-4 SPILL PREVENTION AND CONTROL

WM-8 CONCRETE WASTE MANAGEMENT

WM-9 SANITARY/SEPTIC WASTE MANAGEMENT
- 
- NOTES:

1. FILTER FABRIC SHALL BE INSTALLED IN A CONTINUOUS ROLL TO AVOID THE USE OF JOINTS. WHERE JOINTS ARE NECESSARY SPLICE FABRIC TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 6" OVERLAP. SECURELY FASTEN BOTH ENDS TO THE POST.

2. POSTS SHALL BE SPACED A MAXIMUM OF 6' APART AND DRIVEN SECURELY INTO THE GROUND A MINIMUM OF 12".

3. A TRENCH SHALL BE EXCAVATED APPROXIMATELY 4" WIDE AND 6" DEEP ALONG THE LINE OF POSTS UPHILL FROM THE BARRIER, TRENCH SHALL FOLLOW THE CONTOUR.

4. TRENCH SHALL BE BACKFILLED WITH NATIVE MATERIAL.

5. INSPECT AND REPAIR AFTER EACH RAINFALL. INSPECT DAILY DURING PROLONGED RAINFALL.

6. REMOVE SEDIMENT WHEN IT REACHES APPROXIMATELY ONE THIRD THE HEIGHT ABOVE GROUND PORTION OF THE FENCE.

7. ANY SEDIMENT DEPOSITS REMAINING IN PLACE AFTER THE FILTER FENCE IS NO LONGER REQUIRED SHALL BE DRESSED TO CONFORM WITH THE EXISTING GRADE AND SEEDED.
- 1 SILT FENCE DETAIL
- NTS
- 
- NOTES:

1. ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOW OF MUD ONTO PUBLIC ROADWAY.

2. ALL MATERIALS SPILLED, DROPPED, WASHED OR TRACKED FROM VEHICLES ONTO ROADWAYS MUST BE REMOVED IMMEDIATELY.

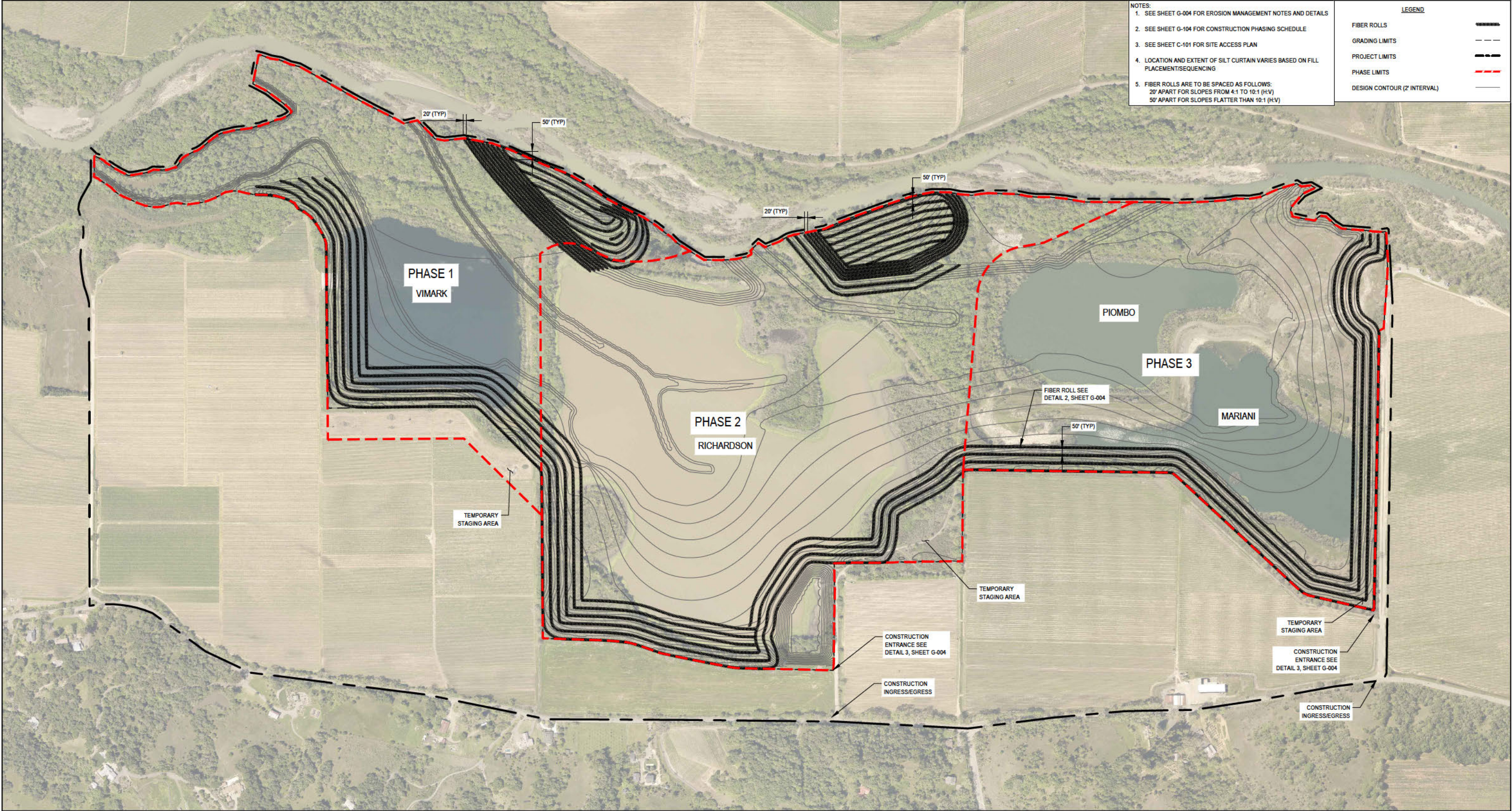
3. ACCESSES SHALL BE INSPECTED MONTHLY AND AFTER EACH RAINFALL WITH MAINTENANCE PROVIDED AS NECESSARY.
- 3 GRAVEL CONSTRUCTION ENTRANCE
- NTS
- 
- NOTES:

1. CONTRACTOR SHALL INSPECT WATTLES WEEKLY AND AFTER EACH RAINFALL. REPLACE WATTLES WHEN THEY HAVE DECOMPOSED, COLLAPSED, OR BEEN DAMAGED. REMOVE SEDIMENT FROM BEHIND THE WATTLE WHEN IT REACHES ONE INCH OF DEPTH.

2. WATTLES SHOULD BE PLACED ON THE CONTOUR AND IN A ROW WITH ENDS TIGHTLY ABUTTING THE ADJACENT WATTLE.

3. THE DIRECTION OF RUNOFF FLOW TO THE WATTLES SHOULD BE PERPENDICULAR TO THE STAKED WATTLE LOCATION.

4. REMOVE UPON COMPLETION OF CONSTRUCTION SO AS NOT TO BLOCK OR IMPEDE STORM FLOW OR DRAINAGE.
- 2 STRAW WATTLE/FIBER ROLL SEDIMENT BARRIER
- NTS
- 
- 4 FLOATING SILT CURTAIN DETAIL
- NTS
- 30% DESIGN
- |     |       |       |          |      |  |   |   |  |  |   |           |          |               |         |   |          |       |
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|     |       |       |          |      |  |   |   |  |  | Project   | J. SVEHLA | Date     | 12/3/2020     | Title   | EROSION MANAGEMENT NOTES AND DETAILS                |          |       |
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|     |       |       |          |      |  |   |   |  |  |   |           |          |               |         | Sheet   | 4        | of 20 |
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- Plotted By: Camille Penny
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EROSION MANAGEMENT PLAN

SCALE



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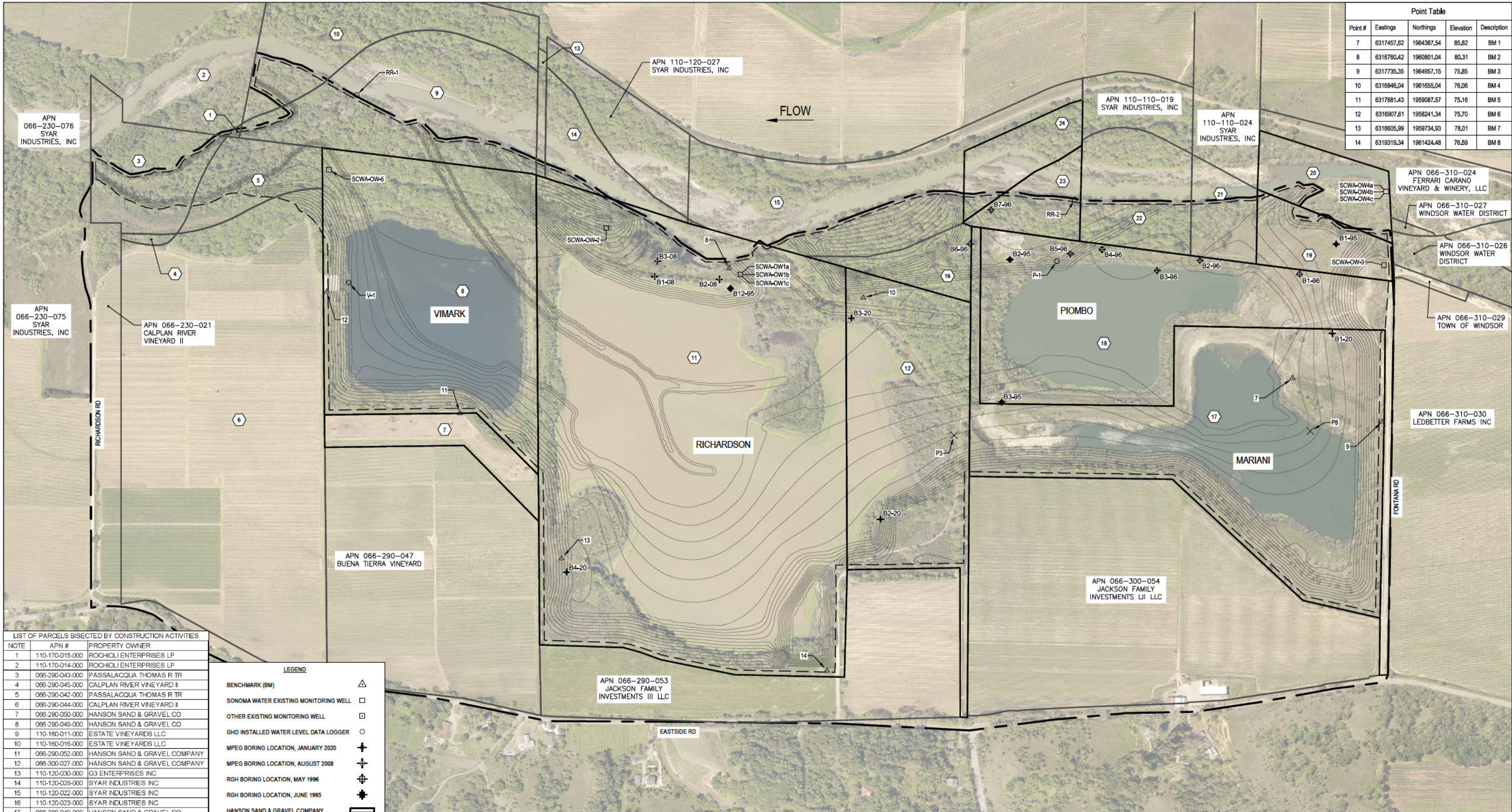
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Project Manager	J. SVEHLA	Date	12/4/2020
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Title	EROSION MANAGEMENT PLAN		
Project No.	11195953		
ANSI D	Sheet No.	G-005	
Original Size		Sheet	5 of 20



Point Table				
Point #	Eastings	Northings	Elevation	Description
7	6317457.62	1964387.54	85.82	BM 1
8	6316760.42	1960801.04	80.31	BM 2
9	6317735.35	1964957.15	75.85	BM 3
10	6316948.04	1961655.04	76.06	BM 4
11	6317681.43	1959087.57	75.16	BM 5
12	6316907.61	1958241.34	75.70	BM 6
13	6318605.99	1959734.93	78.01	BM 7
14	6319319.34	1961424.48	76.59	BM 8

LIST OF PARCELS BISECTED BY CONSTRUCTION ACTIVITIES		
NOTE	APN #	PROPERTY OWNER
1	110-170-015-000	ROCHIOLI ENTERPRISES LP
2	110-170-014-000	ROCHIOLI ENTERPRISES LP
3	066-290-043-000	PASSALACQUA THOMAS R TR
4	066-290-045-000	CALPLAN RIVER VINEYARD II
5	066-290-042-000	PASSALACQUA THOMAS R TR
6	066-290-044-000	CALPLAN RIVER VINEYARD II
7	066-290-050-000	HANSON SAND & GRAVEL CO
8	066-290-049-000	HANSON SAND & GRAVEL CO
9	110-160-011-000	ESTATE VINEYARDS LLC
10	110-160-016-000	ESTATE VINEYARDS LLC
11	066-290-052-000	HANSON SAND & GRAVEL COMPANY
12	066-300-027-000	HANSON SAND & GRAVEL COMPANY
13	110-120-030-000	G3 ENTERPRISES INC
14	110-120-028-000	SYAR INDUSTRIES INC
15	110-120-022-000	SYAR INDUSTRIES INC
16	110-120-023-000	SYAR INDUSTRIES INC
17	066-300-049-000	HANSON SAND & GRAVEL CO
18	066-300-011-000	HANSON SAND & GRAVEL CO
19	110-110-016-000	HANSON SAND & GRAVEL CO
20	110-110-015-000	HANSON SAND & GRAVEL CO
21	110-110-018-000	SYAR INDUSTRIES INC
22	110-110-020-000	SYAR INDUSTRIES INC
23	110-120-021-000	HANSON SAND & GRAVEL CO
24	110-120-020-000	HANSON SAND & GRAVEL CO

LEGEND	
BENCHMARK (BM)	△
SONOMA WATER EXISTING MONITORING WELL	□
OTHER EXISTING MONITORING WELL	□
GHD INSTALLED WATER LEVEL DATA LOGGER	○
MPEG BORING LOCATION, JANUARY 2020	+
MPEG BORING LOCATION, AUGUST 2008	+
RGH BORING LOCATION, MAY 1996	+
RGH BORING LOCATION, JUNE 1995	+
HANSON SAND & GRAVEL COMPANY	■
PARCEL BOUNDARIES	—
PROJECT BOUNDARY	- - -
GRADING LIMITS	- - -
DESIGN CONTOUR (2' INTERVAL)	—

# SITE MONITORING PLAN AND SURVEY CONTROL

SCALE



30% DESIGN

No.	Issue	Drawn	Approved	Date

NOTE:  
PLANSET CONTENT  
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Drafting	J. SVEHLA	Design	S. ALLEN
Check	J. SVEHLA	Date	12/3/2020
Project	J. SVEHLA	Scale	AS SHOWN
Manager	J. SVEHLA		

Client	ENDANGERED HABITATS CONSERVANCY		
Project	HANSON RUSSIAN RIVER FLOODPLAIN RESTORATION PROJECT		
Title	MONITORING WELL AND SURVEY CONTROL		
Project No.	11195953		
ANSI D	Sheet No.	G-101	

Sheet 6 of 20



ZONING AND LAND USE PLAN



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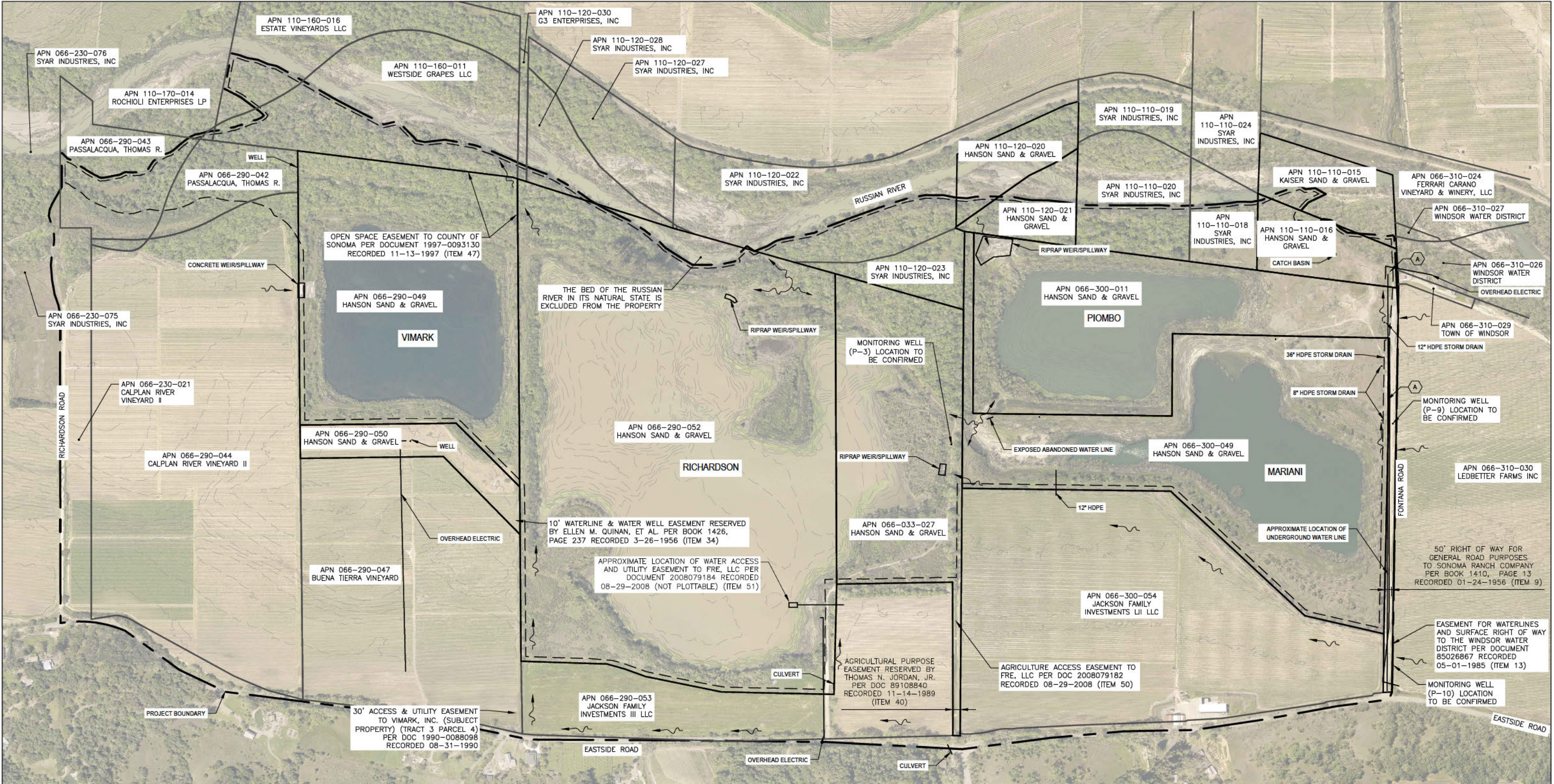
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Title	ZONING AND LAND USE PLAN		
Project No.	11195953		
Original Size	ANSI D	Sheet No.	G-102
		Sheet	7 of 20



**LEGEND**

HANSON SAND & GRAVEL COMPANY	
PARCEL BOUNDARIES	
GRADING LIMITS	
PROJECT LIMITS	
EXISTING CONTOURS (2' INTERVAL)	

**NOTES**

1. THE HANSON SAND & GRAVEL CO BOUNDARY SHOWN HEREON IS BASED ON A FIELD SURVEY, RECORDED MAPS AND THE TITLE REPORT PRODUCED BY FIDELITY NATIONAL TITLE COMPANY, ORDER NUMBER: FSNX-T01701229S-CC, DATED MAY 23, 2017. THE SURVEY WAS COMPLETED IN FEBRUARY 2020. OTHER PROPERTY LINES AND EASEMENT LOCATIONS ARE BASED ON RECORD INFORMATION AND ARE NOT THE RESULT OF A FIELD SURVEY. AN ACCURATE FIELD SURVEY WOULD LIKELY PROVIDE DIFFERENT RESULTS THAT ALTER THE LOCATIONS OF PROPERTY LINES AND EASEMENTS.
2. UTILITY LOCATIONS ARE BASED ON FIELD OBSERVATIONS. A FIELD SURVEY OF THE LOCATIONS WAS NOT PERFORMED.
3. TITLE FOR ALL PARCELS WITHIN THE PROPERTY BOUNDARY IS VESTED IN HANSON AGGREGATES MID-PACIFIC, INC., A DELAWARE CORPORATION, FORMERLY KNOWN AS KAISER SAND & GRAVEL COMPANY, A DELAWARE CORPORATION.

**TITLE REPORT**

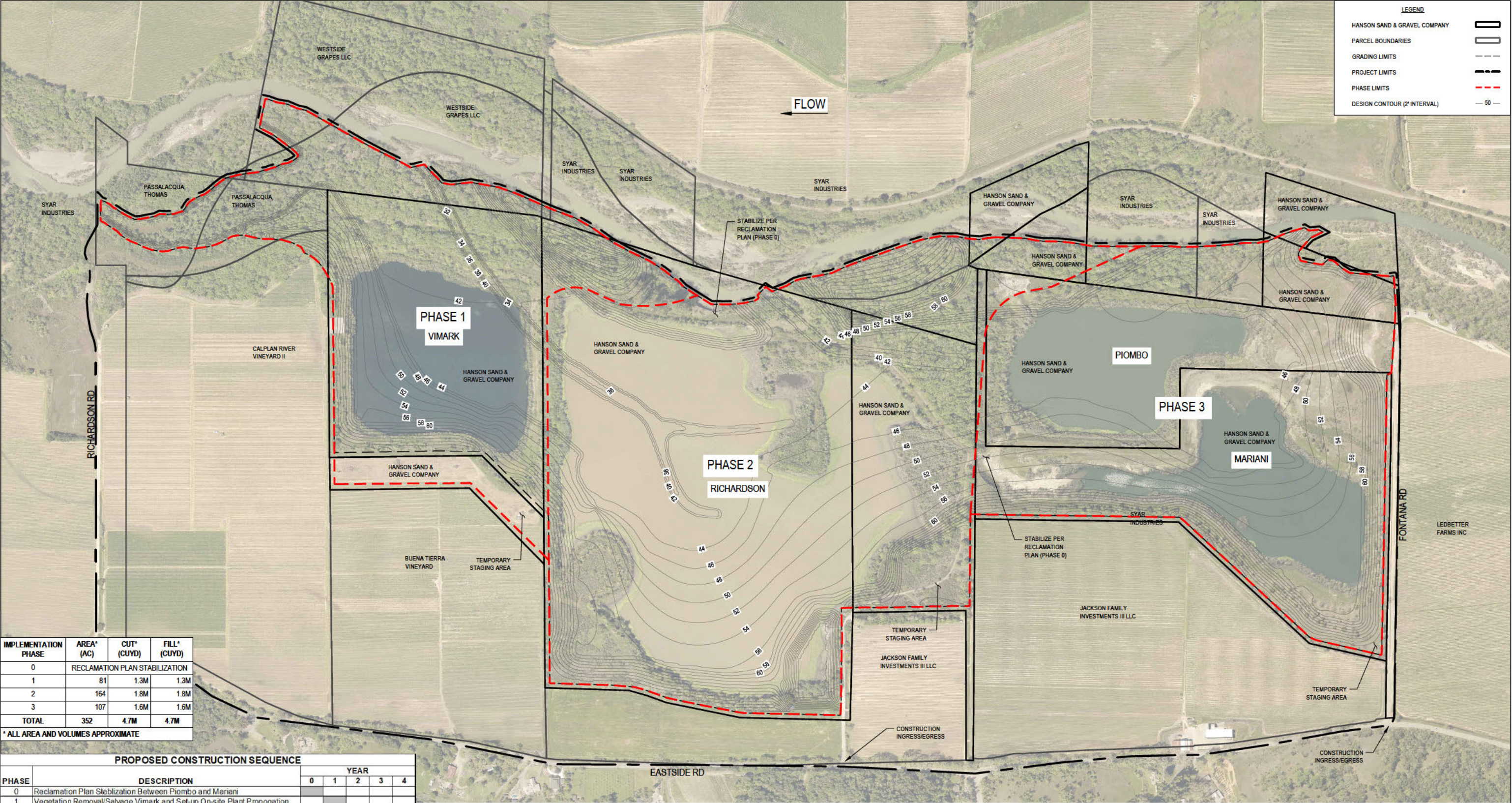
OTHER PROPERTY LINE AND EASEMENT PLOTTING IS BASED ON A PRELIMINARY TITLE REPORT DATED JANUARY 13, 2014, PREPARED BY CHICAGO TITLE COMPANY, TITLE NO. 10-495107061-D-KF.

**EXISTING CONDITIONS**

SCALE

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**CONSTRUCTION PHASING SCHEDULE**

SCALE 0 300' 600'

0 1 2 3 4

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Client **ENDANGERED HABITATS CONSERVANCY**

Project **HANSON RUSSIAN RIVER FLOODPLAIN RESTORATION PROJECT**

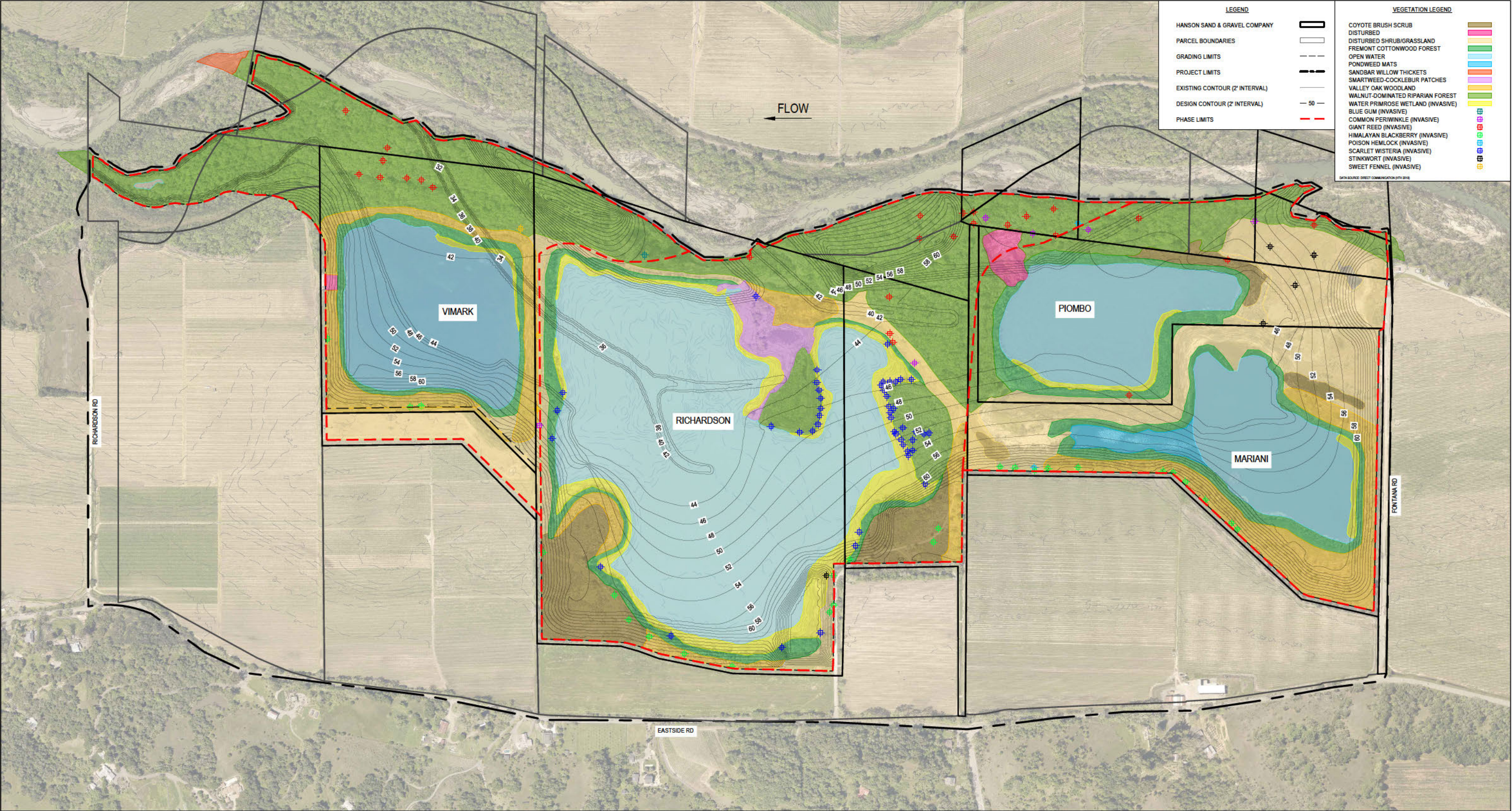
Title **CONSTRUCTION PHASING SCHEDULE**

Project No. **11195953**

Original Size **ANSI D**

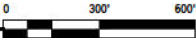
Sheet No. **G-104**

Sheet **9** of **20**



EXISTING HABITATS

SCALE



No.	Issue	Drawn	Approved	Date

NOTE:  
PLANSET CONTENT  
COLOR-DEPENDENT;  
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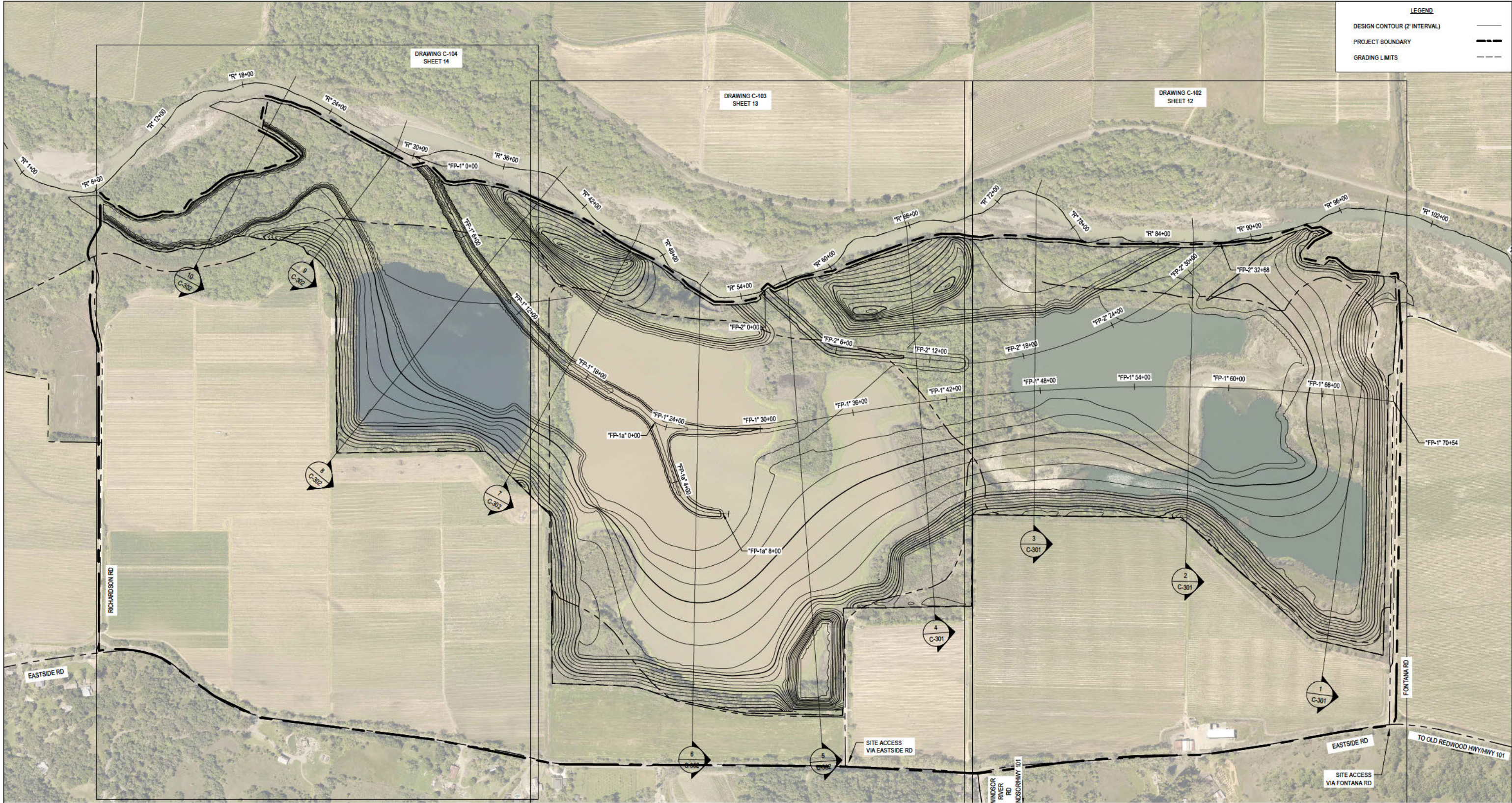


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Drafting	J. SVEHLA	Design	S. ALLEN
Project	J. SVEHLA	Date	12/3/2020
Manager	J. SVEHLA	Scale	AS SHOWN

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Project	HANSON RUSSIAN RIVER FLOODPLAIN RESTORATION PROJECT		
Title	EXISTING HABITATS		
Project No.	11195953		
ANSI D	Sheet No.	G-105	
		Sheet	10 of 20



SITE ACCESS PLAN AND SHEET INDEX

SCALE

No.	Issue	Drawn	Approved	Date

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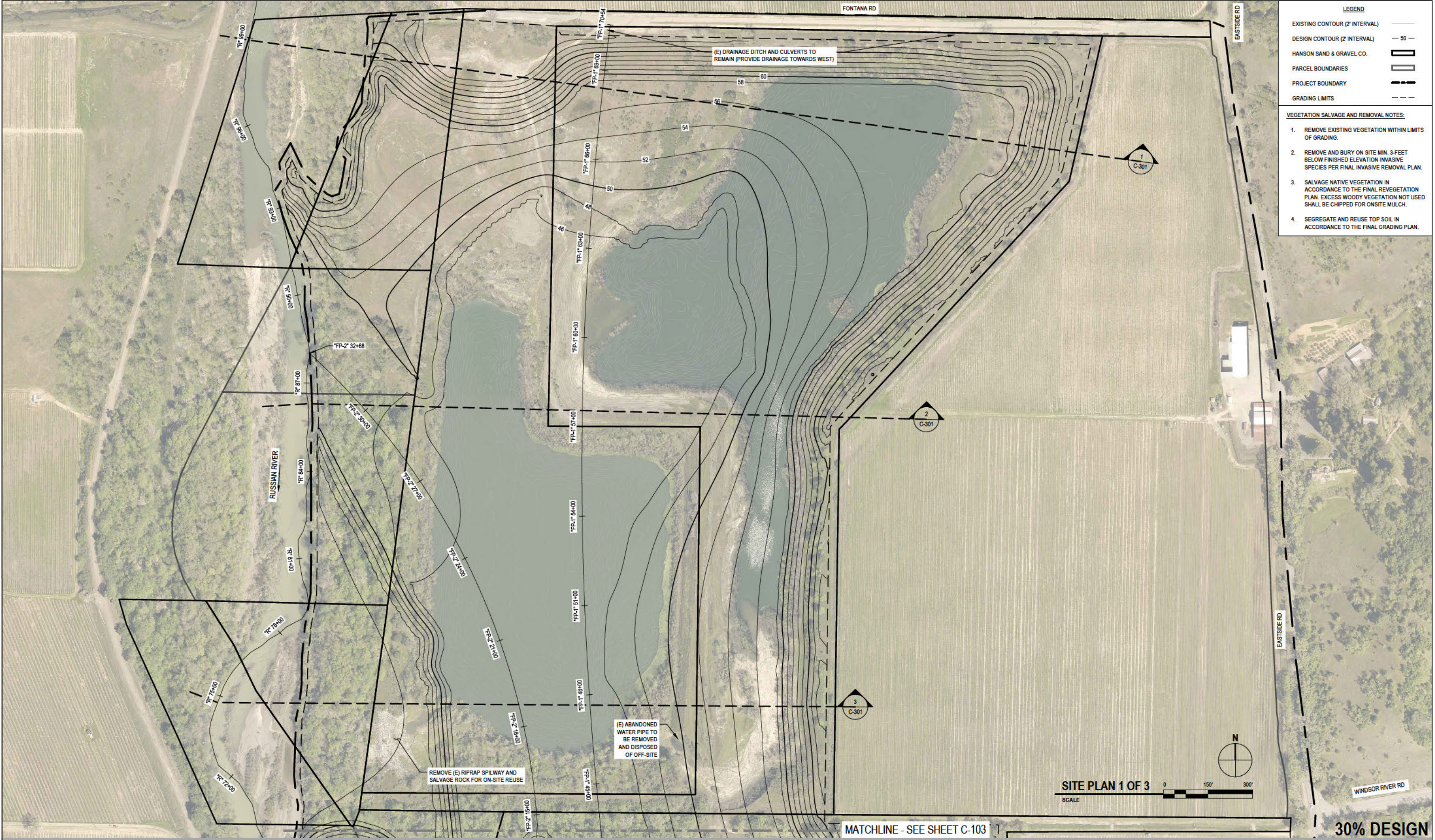
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Drafting	J. SVEHLA	Design	S. ALLEN
Check	J. SVEHLA	Date	12/3/2020
Project	J. SVEHLA	Scale	AS SHOWN
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Client	ENDANGERED HABITATS CONSERVANCY		
Project	HANSON RUSSIAN RIVER FLOODPLAIN RESTORATION PROJECT		
Title	SITE PLAN, ACCESS, AND SHEET INDEX		
Project No.	11195953		
ANSI D	Sheet No.	C-101	
Sheet 11		of 20	



- LEGEND**
- EXISTING CONTOUR (2' INTERVAL)
  - DESIGN CONTOUR (2' INTERVAL)
  - HANSON SAND & GRAVEL CO.
  - PARCEL BOUNDARIES
  - PROJECT BOUNDARY
  - GRADING LIMITS
- VEGETATION SALVAGE AND REMOVAL NOTES:**
1. REMOVE EXISTING VEGETATION WITHIN LIMITS OF GRADING.
  2. REMOVE AND BURY ON SITE MIN. 3-Feet BELOW FINISHED ELEVATION INVASIVE SPECIES PER FINAL INVASIVE REMOVAL PLAN.
  3. SALVAGE NATIVE VEGETATION IN ACCORDANCE TO THE FINAL REVEGETATION PLAN. EXCESS WOODY VEGETATION NOT USED SHALL BE CHIPPED FOR ONSITE MULCH.
  4. SEGREGATE AND REUSE TOP SOIL IN ACCORDANCE TO THE FINAL GRADING PLAN.

<p>NOTE: PLANSET CONTENT COLOR-DEPENDENT; PLANSET TO BE PLOTTED IN FULL COLOR</p>					<p>Bar is one inch on original size sheet</p> <p>0 1"</p>		<p>Reuse of Documents</p> <p>This document and the ideas and designs incorporated herein, as an instrument of professional service, is the property of GHD and shall not be reused in whole or in part for any other project without GHD's written authorization. © 2020 GHD</p>		<p>REGISTERED PROFESSIONAL ENGINEER JEREMY S. PENNY CIVIL STATE OF CALIFORNIA No. 11195953</p>		<p>GHD Inc. 2235 Mercury Way Suite 150 Santa Rosa California 95407 USA T 1 707 523 1010 F 1 707 527 9679 W www.ghd.com</p>		<p>Drawn C. PENNY Drafting J. SVEHLA Project Manager J. SVEHLA</p>		<p>Designer C. PENNY Design Check S. ALLEN Date 12/3/2020 Scale AS SHOWN</p>		<p>Client ENDANGERED HABITATS CONSERVANCY Project HANSON RUSSIAN RIVER FLOODPLAIN RESTORATION PROJECT Title PLAN VIEW 1 OF 3 Project No. 11195953 Original Size ANSI D Sheet No. C-102</p>		<p>Sheet 12 of 20</p>	
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LEGEND

EXISTING CONTOUR (2' INTERVAL) ———

DESIGN CONTOUR (2' INTERVAL) — 50 —

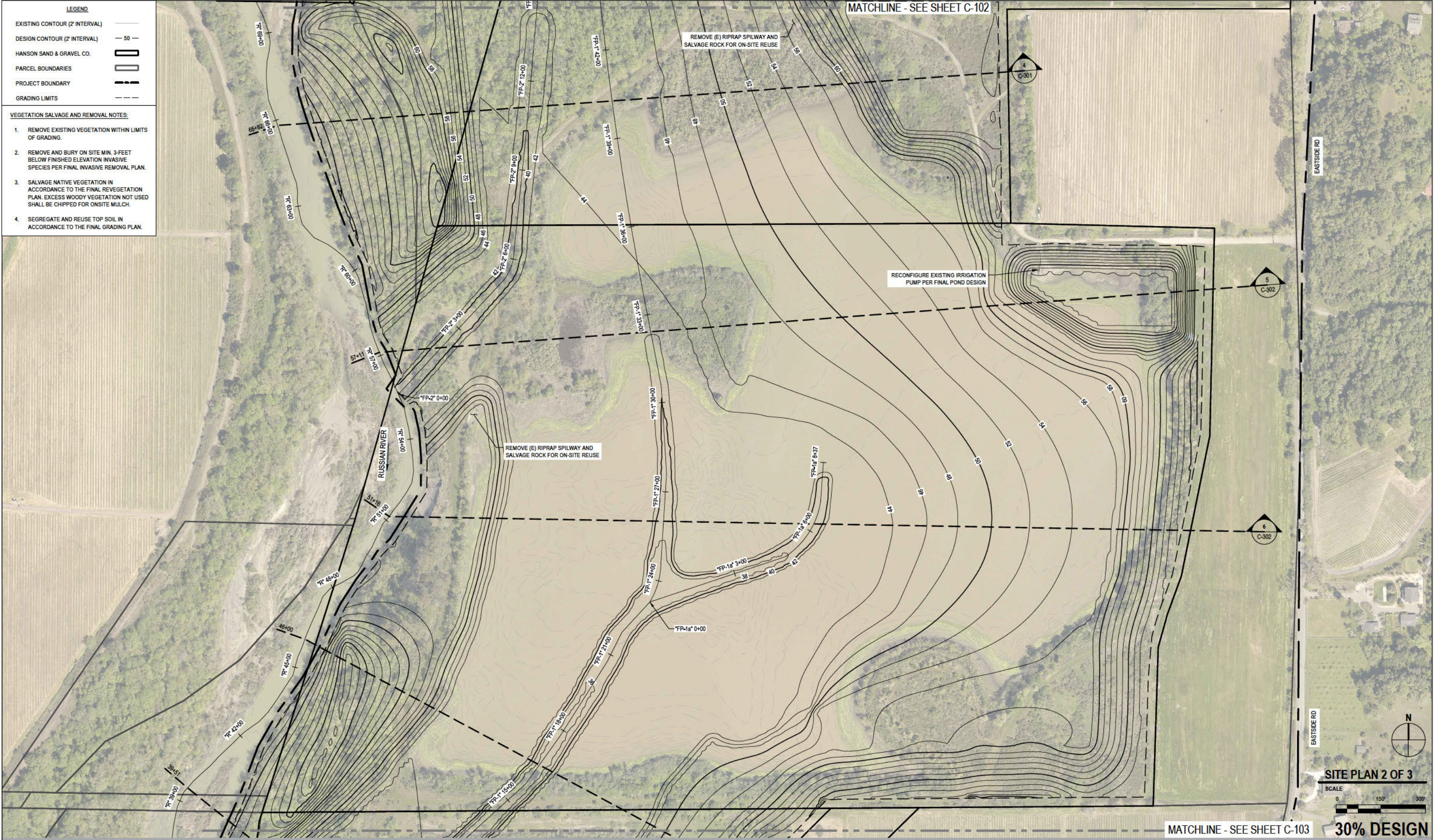
HANSON SAND & GRAVEL CO. [Symbol]

PARCEL BOUNDARIES [Symbol]

PROJECT BOUNDARY [Symbol]

GRADING LIMITS [Symbol]

- VEGETATION SALVAGE AND REMOVAL NOTES:
1. REMOVE EXISTING VEGETATION WITHIN LIMITS OF GRADING.
  2. REMOVE AND BURY ON SITE MIN. 3-FEET BELOW FINISHED ELEVATION INVASIVE SPECIES PER FINAL INVASIVE REMOVAL PLAN.
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No.	Issue	Drawn	Approved	Date

NOTE:  
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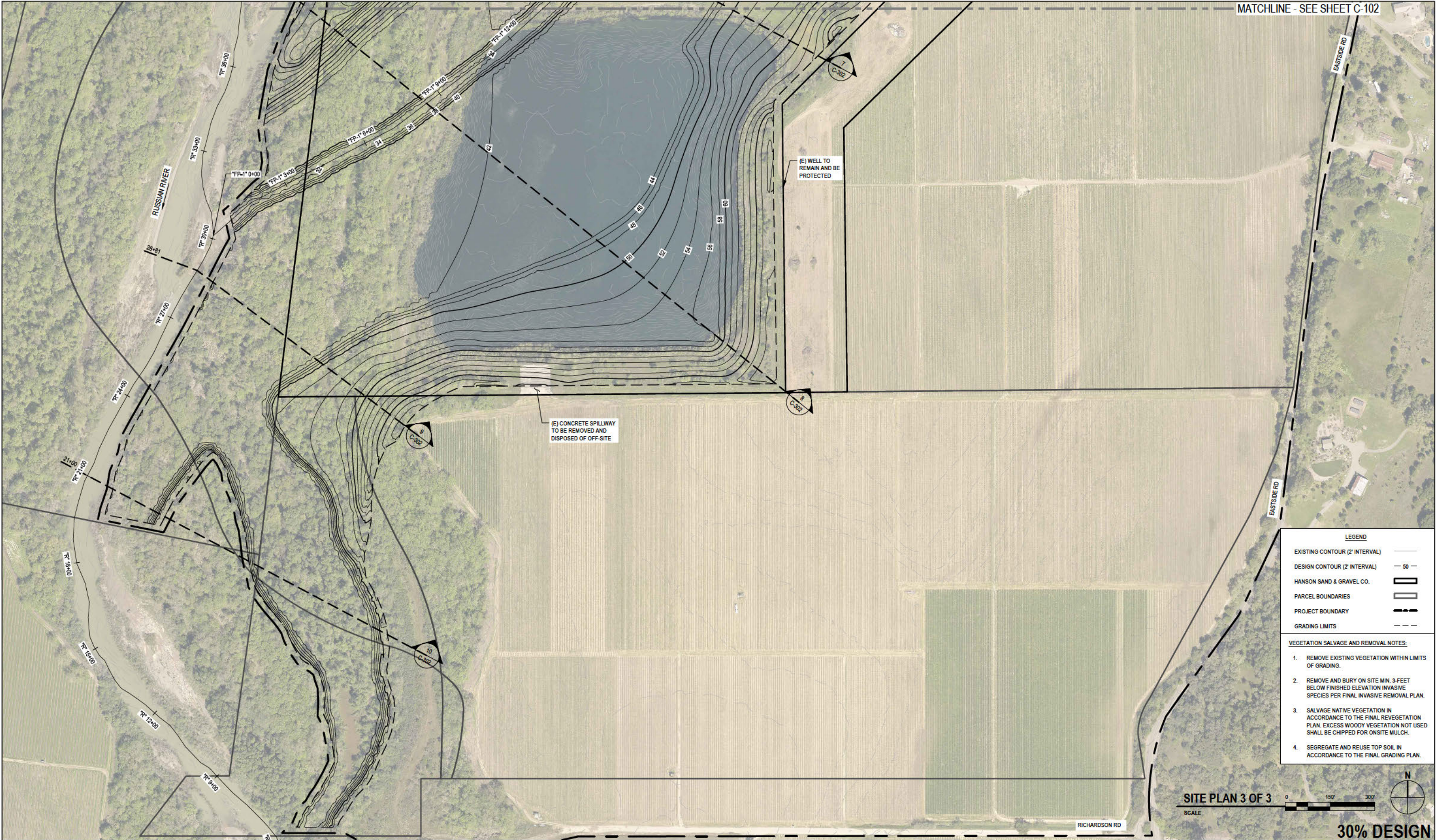
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Drafting Check	J. SVEHLA	Design Check	S. ALLEN
Project Manager	J. SVEHLA	Date	12/3/2020
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Client	ENDANGERED HABITATS CONSERVANCY		
Project	HANSON RUSSIAN RIVER FLOODPLAIN RESTORATION PROJECT		
Title	PLAN VIEW 2 OF 3		
Project No.	11195953		
ANSI D	Sheet No.	C-103	
Sheet 13		of 20	



No.	Issue	Drawn	Approved	Date

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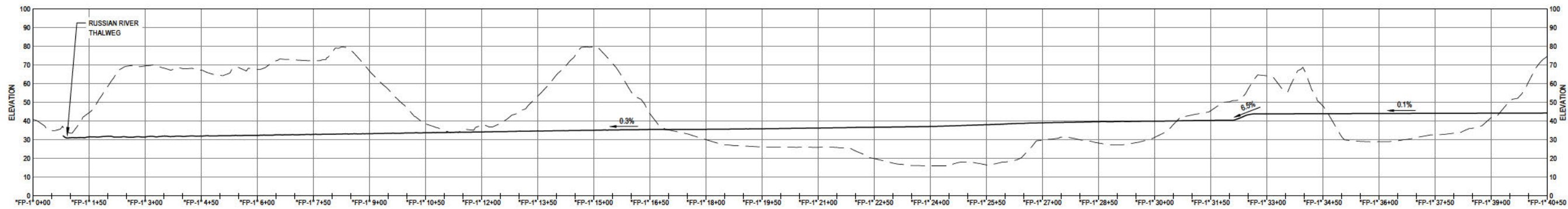
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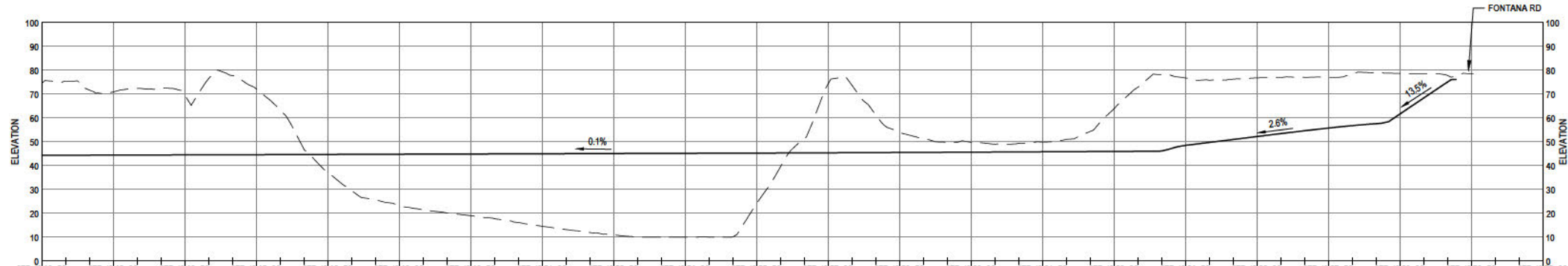
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Drafting Check	J. SVEHLA	Design Check	S. ALLEN
Project Manager	J. SVEHLA	Date	12/3/2020
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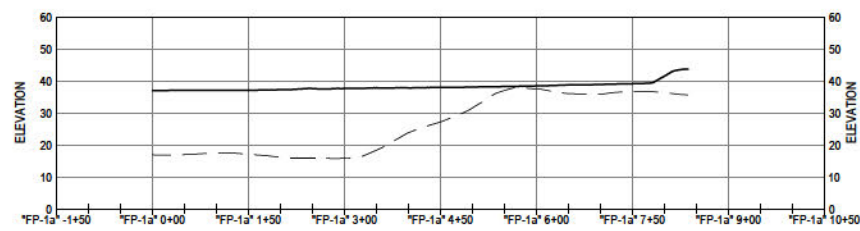
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Project	HANSON RUSSIAN RIVER FLOODPLAIN RESTORATION PROJECT		
Title	PLAN VIEW 3 OF 3		
Project No.	11195953		
Original Size	ANSI D	Sheet No.	C-104
		Sheet	14 of 20



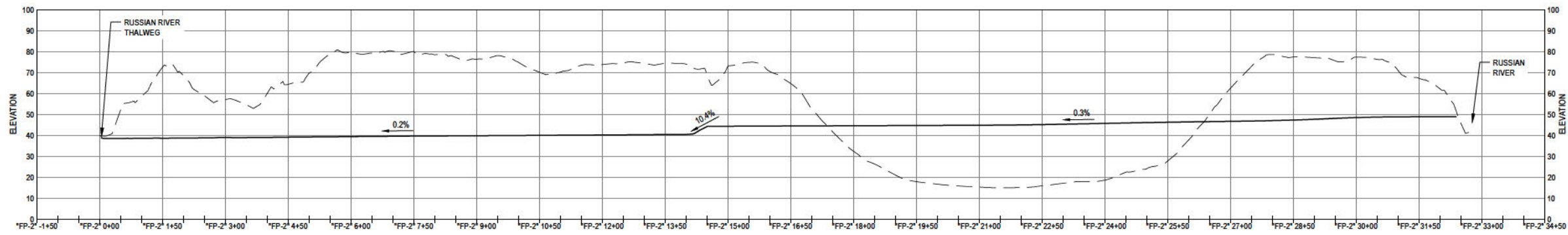
"FP-1" PROFILE STA 0+00 TO STA 40+50



"FP-1" PROFILE STA 40+50 TO STA 72+00



"FP-1a" PROFILE



"FP-2" PROFILE



LEGEND

EXISTING GROUND ---  
FINISH GROUND —

30% DESIGN

No.	Issue	Drawn	Approved	Date

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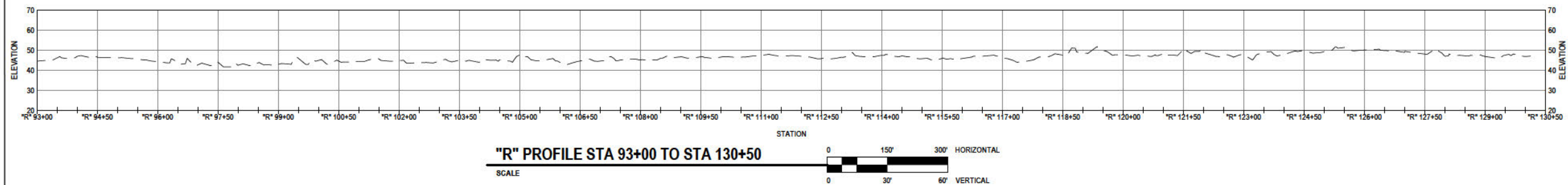
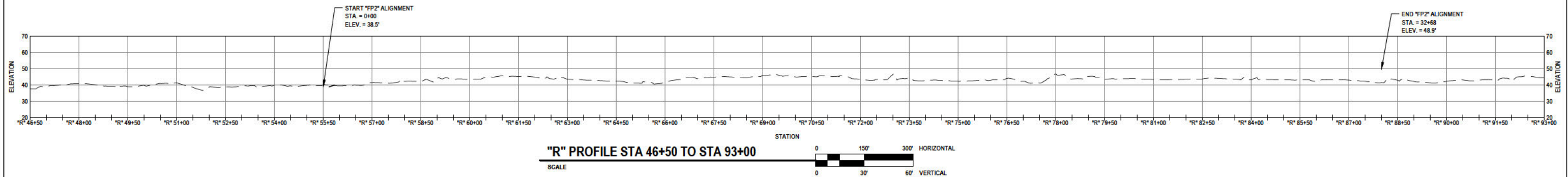
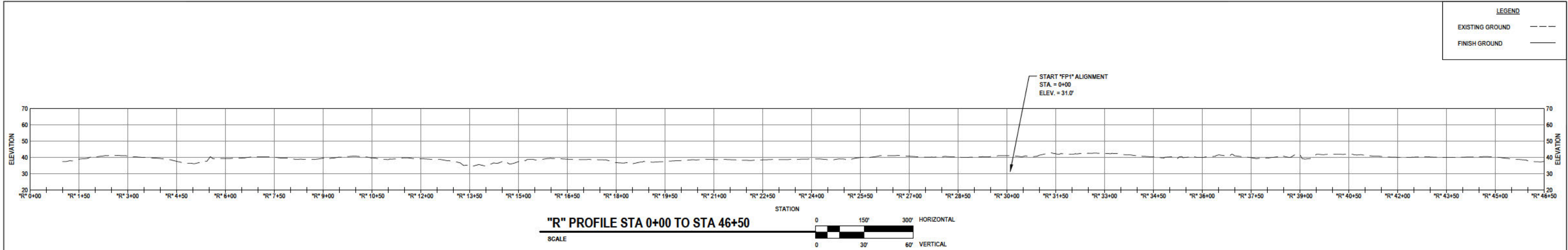
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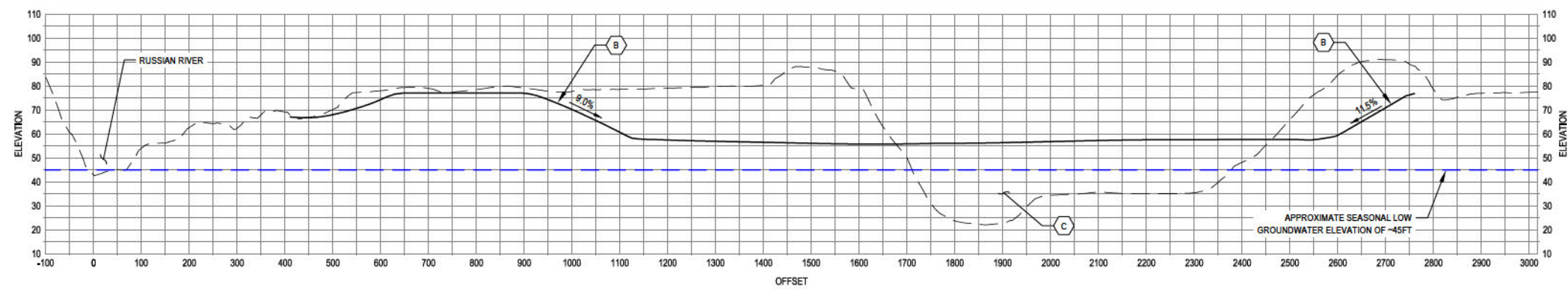
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Drafting Check	J. SVEHLA	Design Check	S. ALLEN
Project Manager	J. SVEHLA	Date	12/3/2020
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Project	HANSON RUSSIAN RIVER FLOODPLAIN RESTORATION PROJECT		
Title	PROFILES 1 OF 2		
Project No.	11195953		
ANSI D	Sheet No.	C-201	
Sheet 15		of 20	

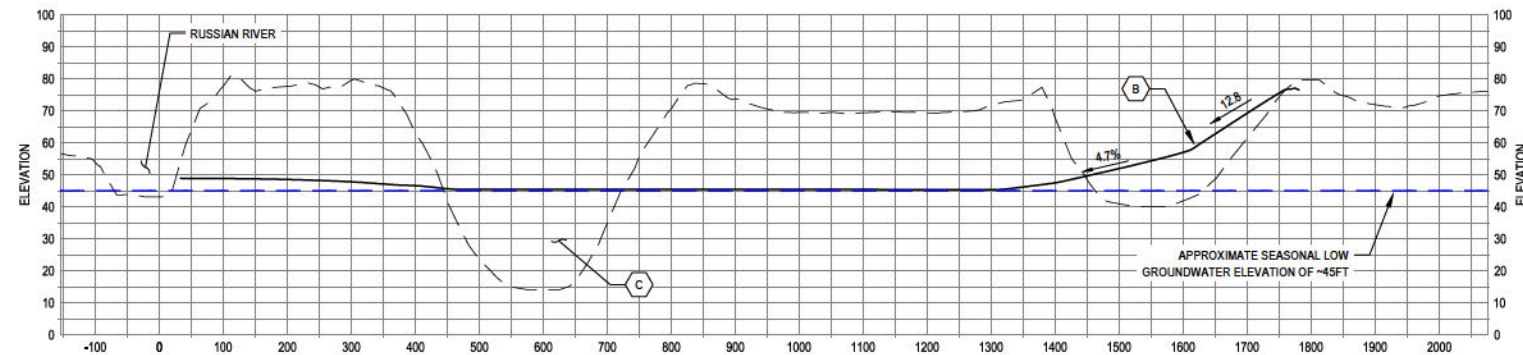


30% DESIGN

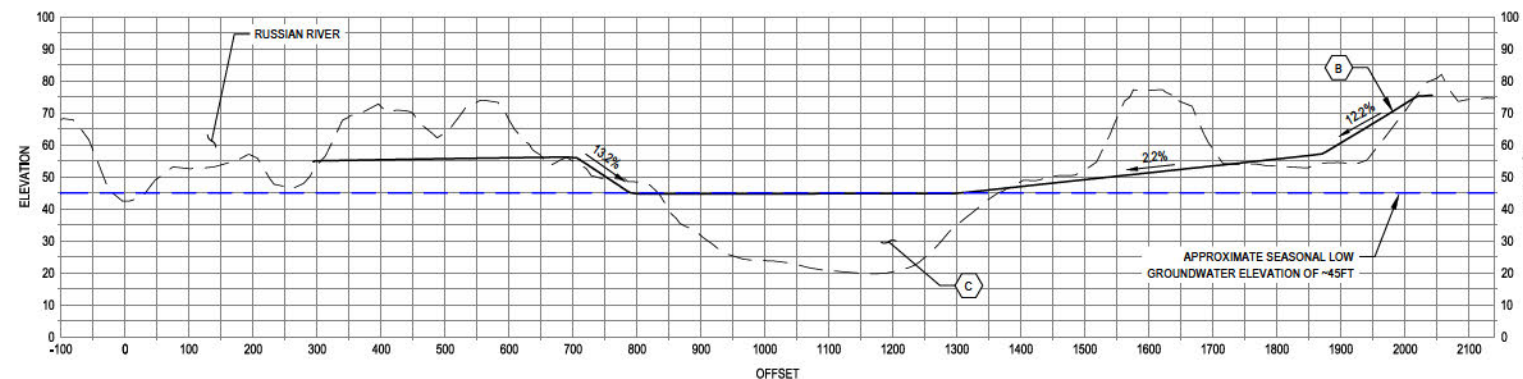
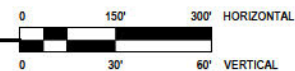
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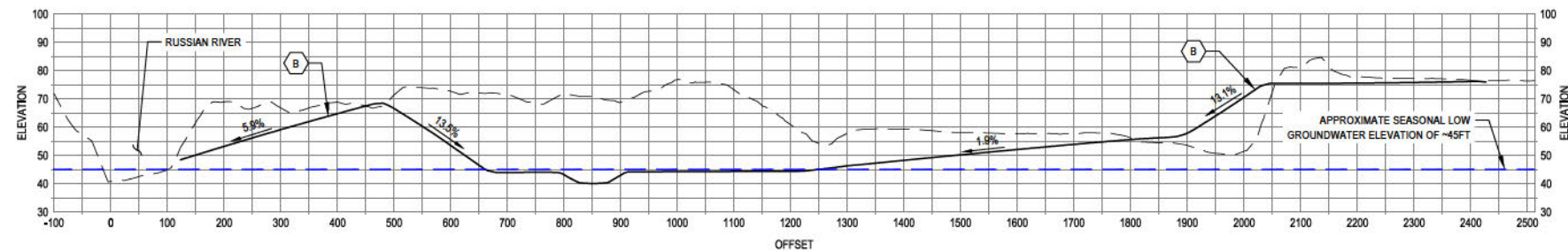
CROSS-SECTION 1



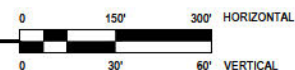
CROSS-SECTION 2



CROSS-SECTION 3



CROSS-SECTION 4

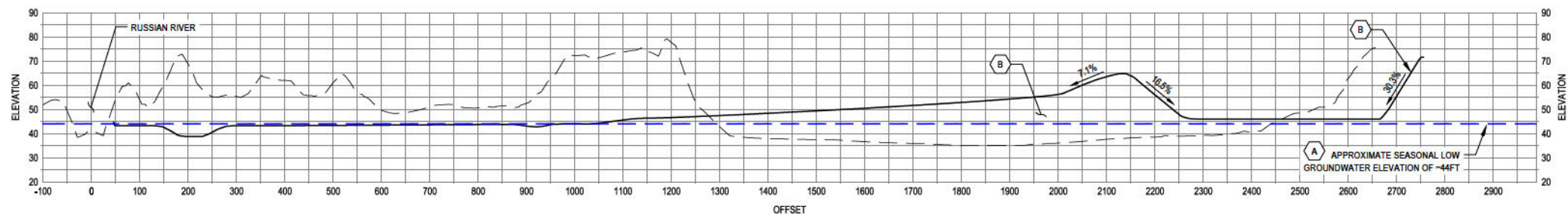


KEYNOTES:

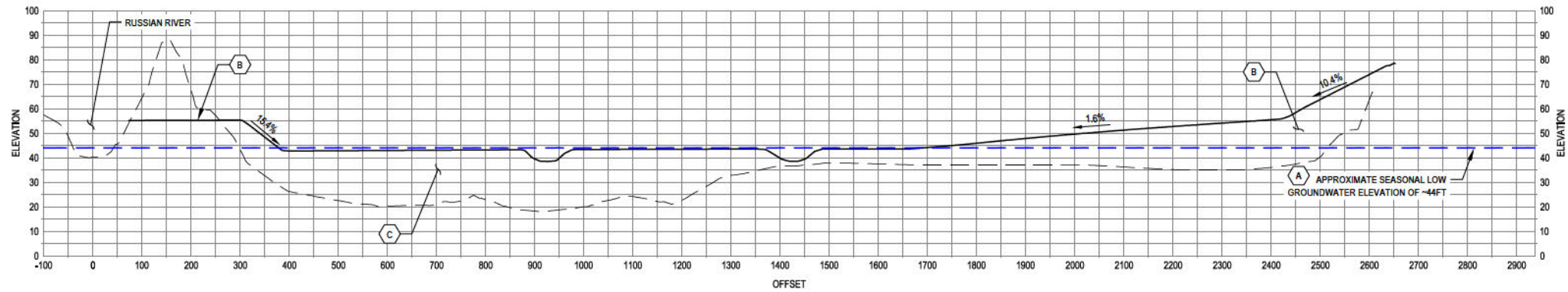
- A DURING FUTURE DESIGN, ELEVATE FINISHED FLOODPLAIN GRADING ~1FT ABOVE SEASONAL LOW GROUNDWATER ELEV. OR ALLOW FOR LONG-TERM SEDIMENTATION. APPROXIMATE SEASONAL LOW GROUNDWATER ELEVATIONS PROVIDED BY LSCE 2020.
- B DURING FUTURE DESIGN, ADJUST SIDE SLOPE GRADING AS NEEDED TO CREATE ADDITIONAL FLOODPLAIN FILL AND BALANCE CUT/FILLS. COMPACT NATIVE FILL TO ~85% RELATIVE COMPACTION.
- C NATIVE BACKFILL - SURCHARGE (OVERFILL) PONDS ABOVE FINISHED ELEVATION WITH SEVERAL FEET OF FILL FOR MINIMUM 6 MONTHS PRIOR TO FINISHED GRADING PER MPEG 2020.

30% DESIGN

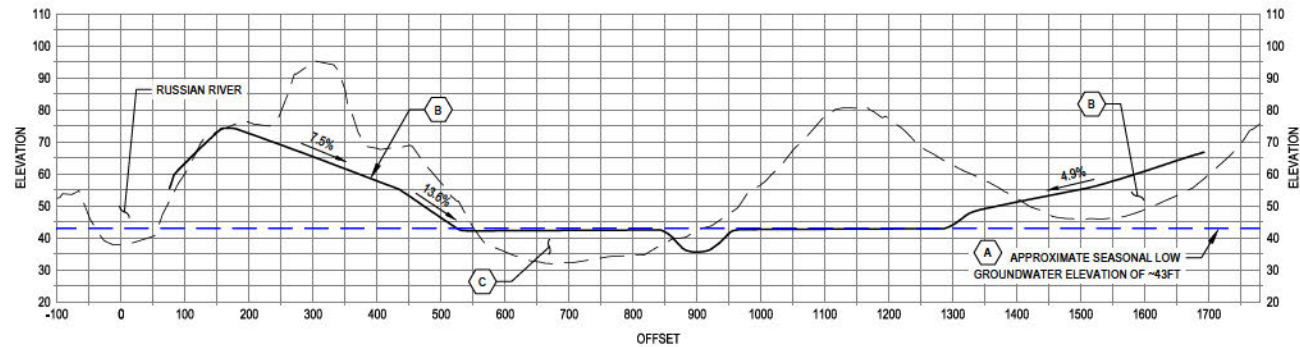
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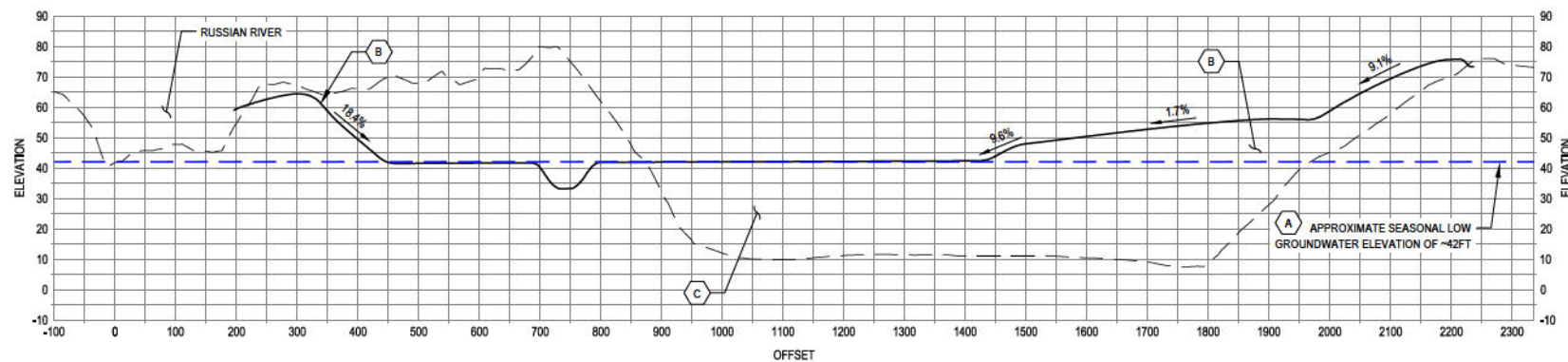
CROSS-SECTION 5



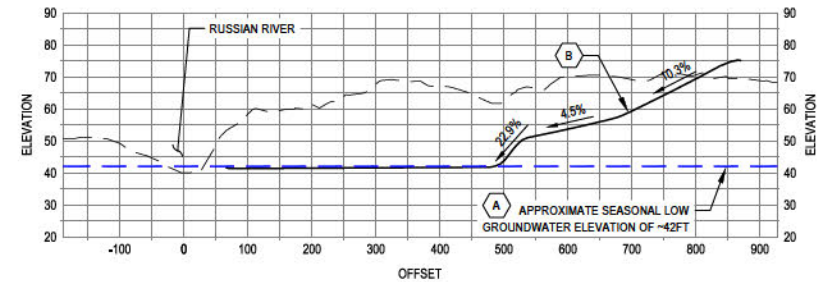
CROSS-SECTION 6



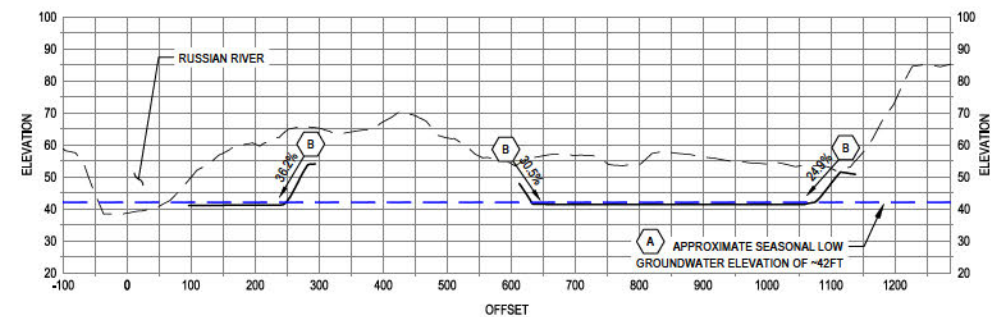
CROSS-SECTION 7



CROSS-SECTION 8



CROSS-SECTION 9



CROSS-SECTION 10

KEYNOTES:

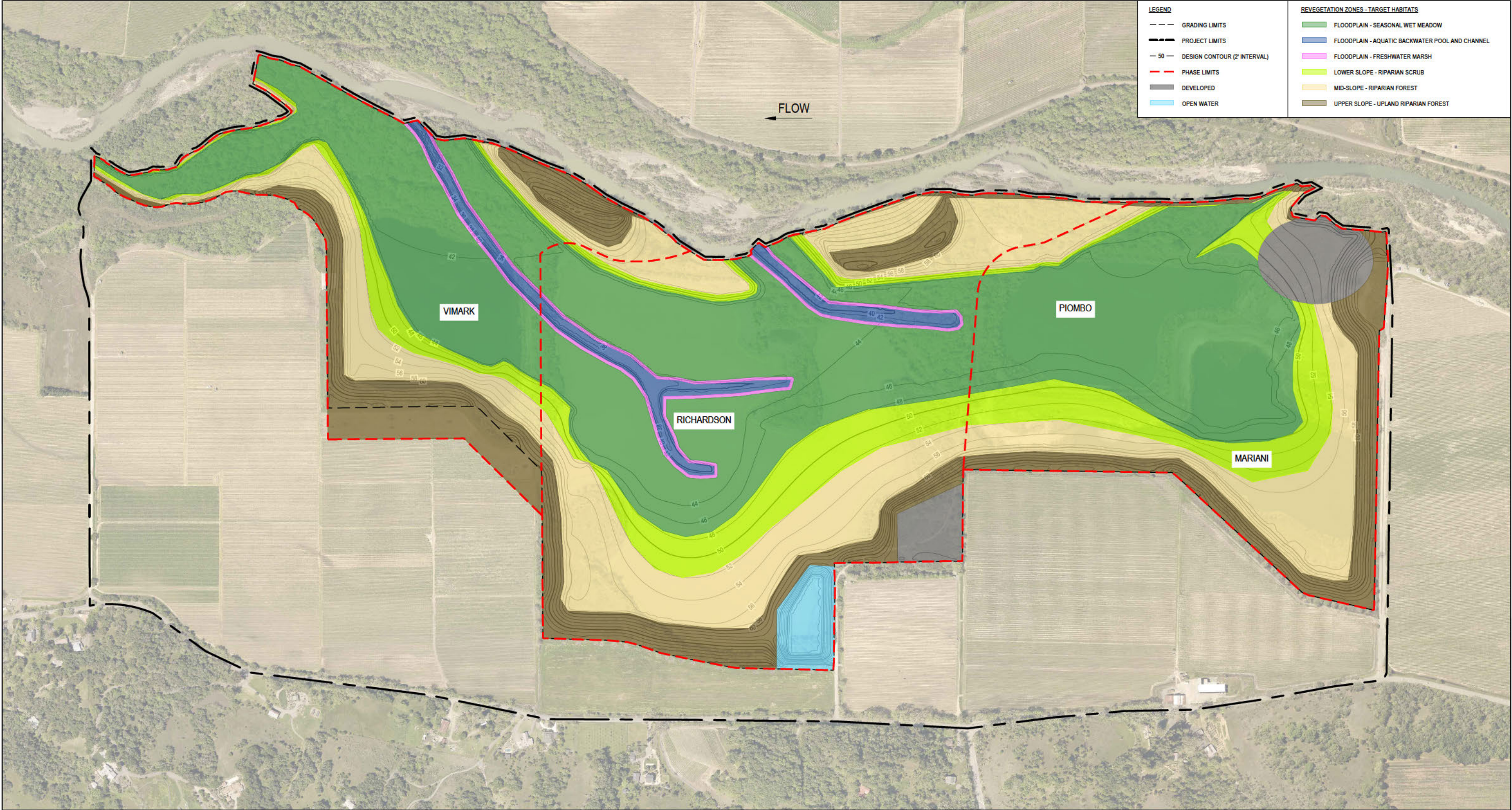
- (A) DURING FUTURE DESIGN, ELEVATE FINISHED FLOODPLAIN GRADING ~1FT ABOVE SEASONAL LOW GROUNDWATER ELEV. OR ALLOW FOR LONG-TERM SEDIMENTATION. APPROXIMATE SEASONAL LOW GROUNDWATER ELEVATIONS PROVIDED BY LSCE 2020.
- (B) DURING FUTURE DESIGN, ADJUST SIDE SLOPE GRADING AS NEEDED TO CREATE ADDITIONAL FLOODPLAIN FILL AND BALANCE CUT/FILLS. COMPACT NATIVE FILL TO ~85% RELATIVE COMPACTION.
- (C) NATIVE BACKFILL - SURCHARGE (OVERFILL) PONDS ABOVE FINISHED ELEVATION WITH SEVERAL FEET OF FILL FOR MINIMUM 6 MONTHS PRIOR TO FINISHED GRADING PER MPEG 2020.

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REVEGETATION PLAN  
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30% DESIGN

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Revegetation Method	Revegetation Zone—Target Habitats					
	Floodplain Seasonal Wet Meadow	Floodplain Aquatic Backwater Pool and Channel	Floodplain Freshwater Marsh	Lower Slope Riparian Scrub	Mid-Slope Riparian Forest	Upper Slope Upland Riparian Forest
Seeding of herbaceous wetland species	X	X	X	X		
Seeding of herbaceous upland species					X	X
Seeding of acorns and California buckeye					X	X
Sod (rootmat) translocation <sup>1</sup>	X		X			
Vegetative sprigging <sup>1</sup>	X		X			
Cuttings				X		
Livewood transplants <sup>1</sup>				X	X	X
Container plants					X	X

REVEGETATION METHODS BY ZONE AND TARGET HABITATS

TABLE 1

Scientific Name	Common Name
<b>Floodplain and Lower Slope Wetland Herbaceous Species Seed Mix</b>	
<i>Artemisia douglasiana</i>	California mugwort
<i>Bidens frondosa</i>	Sticktight
<i>Carex barbarae</i>	Valley sedge
<i>Cyperus eragrostis</i>	Tall cyperus
<i>Eleocharis macrostachya</i>	Spike rush
<i>Elymus triticoides</i>	Beardless wild rye
<i>Epilobium ciliatum</i>	Slender willow herb
<i>Hordeum brachyantherum</i>	Meadow barley
<i>Juncus balticus</i>	Baltic rush
<i>Persicaria punctata</i>	Dotted smartweed
<b>Mid- and Upper Slope Upland Herbaceous Species Seed Mix</b>	
<i>Amsinckia intermedia</i>	Common fiddleneck
<i>Amsinckia menziesii</i>	Fiddleneck
<i>Clarkia gracilis</i> ssp. <i>sonomensis</i>	Sonoma clarkia
<i>Elymus glaucus</i>	Blue wildrye
<i>Epilobium brachycarpum</i>	Willow herb
<i>Hemizonia congesta</i> ssp. <i>leucocephala</i>	Hayfield tarweed
<i>Hemizonia congesta</i> ssp. <i>lutescens</i>	Hayfield tarweed
<i>Lupinus bicolor</i>	Bicolored lupine
<i>Madia elegans</i>	Common madia
<i>Madia sativa</i>	Coastal tarweed
<i>Melica californica</i>	California melic
<i>Stipa pulchra</i>	Purple needle grass

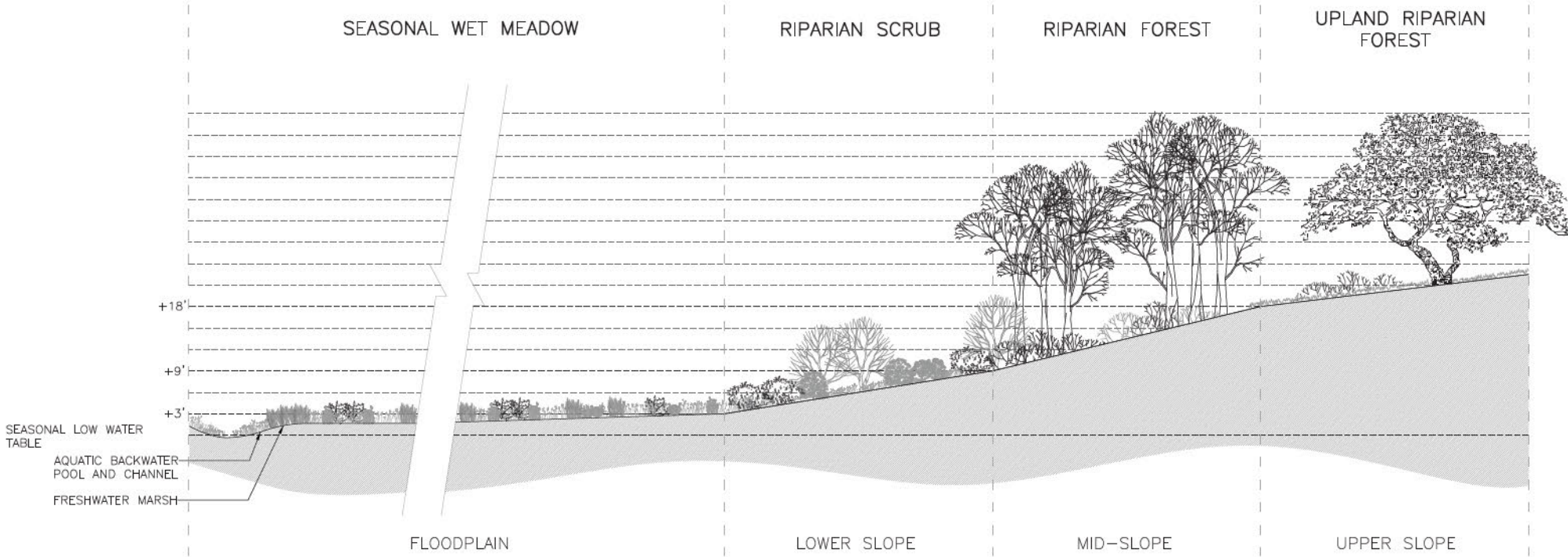
PLANT SPECIES PALETTES FOR SEEDING WETLAND AND RIPARIAN HABITATS

TABLE 2

Scientific Name	Common Name
<i>Artemisia douglasiana</i>	California mugwort
<i>Bolboschoenus fluviatilis</i>	River bulrush
<i>Carex barbarae</i>	Valley sedge
<i>Eleocharis macrostachya</i>	Spike rush
<i>Elymus triticoides</i>	Beardless wild rye
<i>Euthamia occidentalis</i>	Western goldenrod
<i>Juncus balticus</i>	Wire rush
<i>Schoenoplectus acutus</i>	Hardstem bulrush
<i>Schoenoplectus californicus</i>	California bulrush
<i>Scirpus microcarpus</i>	Small fruited bulrush

PLANT SPECIES PALETTE FOR SOD TRANSLOCATION AND VEGETATIVE SPRIGGING TO RESTORE SEASONAL WET MEADOW AND FRESHWATER MARSH HABITATS

TABLE 3



FLOODPLAIN RESTORATION CONCEPTUAL SECTION

NTS

Scientific Name	Common Name	Revegetation Zone—Target Habitats		
		Lower Slope Riparian Scrub	Mid-Slope Riparian Forest	Upper Slope Upland Riparian Forest
<i>Acer negundo</i>	Box elder		X	
<i>Aesculus californicus</i>	California buckeye		X	X
<i>Alnus rhombifolia</i>	White alder	X		
<i>Arbutus menziesii</i>	Pacific madrone		X	X
<i>Calycanthus occidentalis</i>	Spicebush		X	
<i>Cornus sericea</i>	American dogwood		X	
<i>Populus fremontii</i>	Fremont cottonwood	X	X	
<i>Quercus agrifolia</i>	Coast live oak			X
<i>Rhododendron occidentale</i>	Western azalea		X	
<i>Salix exigua</i>	Narrowleaf willow	X		
<i>Salix laevigata</i>	Red willow	X	X	
<i>Salix lasiolepis</i>	Arroyo willow	X	X	
<i>Umbellularia californica</i>	California bay		X	X
<i>Vitis californica</i>	California grape		X	

LIVEWOOD TRANSPLANT SPECIES PALETTE FOR RIPARIAN SCRUB, RIPARIAN FOREST, AND UPLAND RIPARIAN FOREST

TABLE 4

Scientific Name	Common Name
<i>Acer negundo</i>	Box elder
<i>Aesculus californica</i>	California buckeye
<i>Baccharis pilularis</i>	Coyote brush
<i>Fraxinus latifolia</i>	Oregon ash
<i>Juglans hindsii</i>	Northern California black walnut
<i>Populus fremontii</i>	Fremont cottonwood
<i>Quercus agrifolia</i>	Coast live oak
<i>Quercus kelloggii</i>	Black oak
<i>Quercus lobata</i>	Valley oak
<i>Rosa californica</i>	California wild rose
<i>Rubus ursinus</i>	California blackberry
<i>Salix laevigata</i>	Red willow
<i>Salix lasiolepis</i>	Arroyo willow
<i>Sambucus nigra</i>	Blue elderberry
<i>Umbellularia californica</i>	California bay laurel

CONTAINER PLANT SPECIES PALETTE FOR RIPARIAN FOREST AND UPLAND RIPARIAN FOREST

TABLE 5

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