



# CITY OF SEDONA SEDONA WWRP HEADWORKS BAR SCREEN REPLACEMENT

LOCATED IN A PORTION OF SECTION 25, TOWNSHIP 17 NORTH,  
RANGE 4 EAST, GILA AND SALT RIVER MERIDIAN,  
YAVAPAI COUNTY, ARIZONA.

### CONTACT INFORMATION

OWNER: CITY OF SEDONA  
102 ROADRUNNER DRIVE  
SEDONA, ARIZONA 86336  
(928) 204-7111  
J. ANDY DICKEY, P.E.  
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER

MAYOR: SANDY MORIARTY

VICE MAYOR: JOHN MARTINEZ

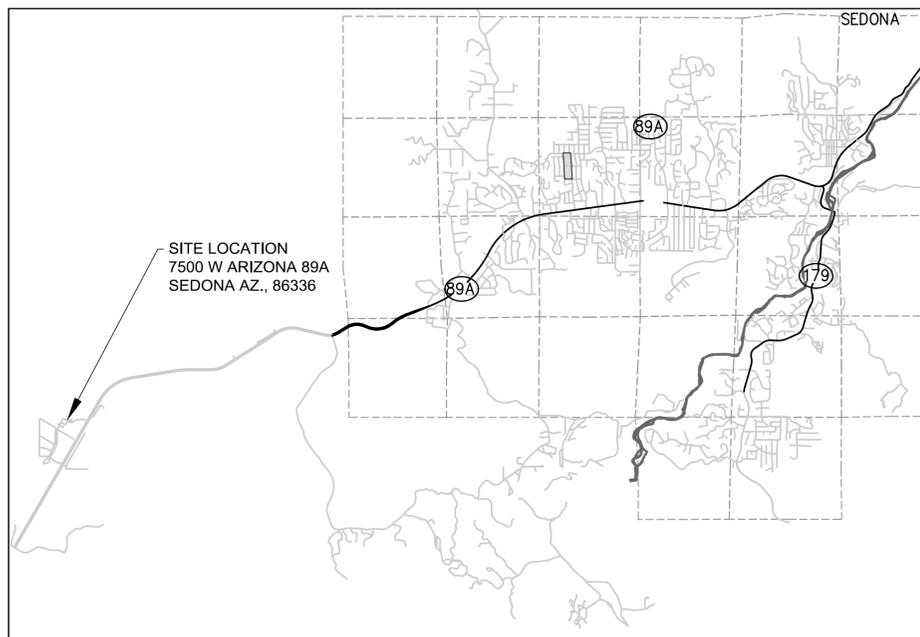
CITY COUNCIL: SCOTT JABLOW  
TOM LAMKIN  
JON THOMPSON  
JOHN CURRIVAN  
JOE VERNIER

CITY MANAGER: JUSTIN CLIFTON

ENGINEER: SUNRISE ENGINEERING, INC.  
2152 S VINEYARD, SUITE 123  
MESA, AZ 85210  
TELEPHONE: (480) 768-8600  
FAX: (480) 768-8609  
CONTACT: TYSON GLOCK, P.E.

DIRECTOR OF WASTEWATER: CHARLES MOSLEY, P.E., MPA

### LOCATION MAP



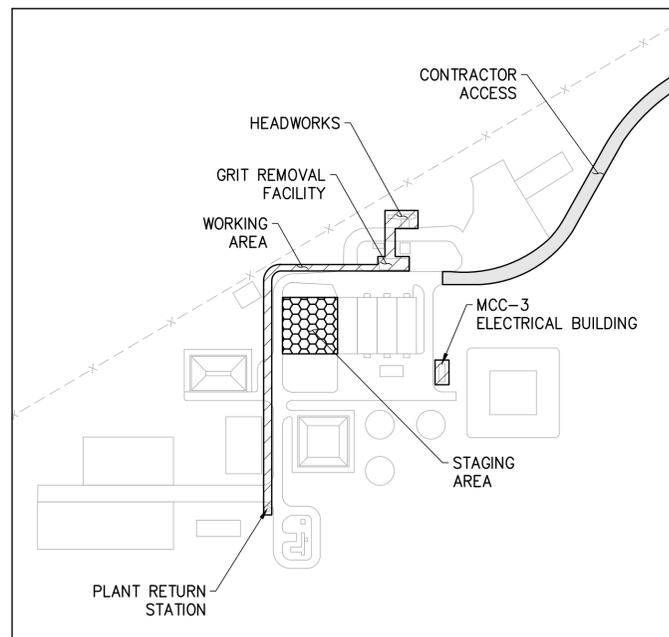
### DIRECTIONS TO THE SITE FROM PHOENIX

GET ON I-17 N/US-60 W FROM WEST WASHINGTON STREET AND W ADAMS STREET; FOLLOW 1-17 N TO AZ 260 W/FINNE FLAT RD IN CAMP VERDE. TAKE EXIT 287 FROM 1-17 N; FOLLOW AZ-260 W AND AZ-89A N/E HWY 89A TO 7500 ARIZONA 89A, SEDONA, AZ., 86336. SITE IS BETWEEN MILE MARKERS 365 & 366 ON W. SR 89A.

### UTILITY COORDINATION BLOCK

<input type="checkbox"/> ARIZONA PUBLIC SERVICE	SANDY FINLEY COMPANY REPRESENTATIVE CONTACTED	RECEIVED: _____
<input type="checkbox"/> ARIZONA WATER COMPANY	KEITH SELF COMPANY REPRESENTATIVE CONTACTED	RECEIVED: _____
<input type="checkbox"/> SUDDEN LINK	JOHN PATTERSON COMPANY REPRESENTATIVE CONTACTED	RECEIVED: _____
<input type="checkbox"/> UNISOURCE	JIM DUNCAN COMPANY REPRESENTATIVE CONTACTED	RECEIVED: _____
<input type="checkbox"/> CENTURY LINK	CHAD HENKEL COMPANY REPRESENTATIVE CONTACTED	RECEIVED: _____

### WASTEWATER RECLAMATION PLANT VIEW



### COORDINATE SYSTEM DETAIL

BENCHMARKS		
POINT	COORDINATES	ELEVATION
BM1	N 8926.56 / E 10937.94	4076.48'
BM2	N 8614.52 / E 8286.01	4029.35'

### NOTICE OF EXTENDED PAYMENT PROVISION

(PER ARS 32-1129.01) THIS CONTRACT ALLOWS THE OWNER TO MAKE PAYMENT WITHIN 15 DAYS AFTER CERTIFICATION AND APPROVAL OF BILLINGS AND ESTIMATES FOR PROGRESS PAYMENTS, WITHIN 15 DAYS AFTER CERTIFICATION AND APPROVAL OF BILLINGS AND ESTIMATES FOR RELEASE OF RETENTION AND WITHIN 15 DAYS AFTER CERTIFICATION AND APPROVAL OF BILLINGS AND ESTIMATES FOR FINAL PAYMENT.

### LEGEND

	EXISTING CONCRETE
	EXISTING PAVEMENT
	EXISTING SEWER
	EXISTING WATER LINE
	EXISTING ABOVE GROUND ELECTRIC
	EXISTING UNDERGROUND ELECTRIC
	EXISTING OVERHEAD ELECTRIC
	EXISTING PROPERTY LINE
	EXISTING BARBED WIRE FENCE
	EXISTING FLOWLINE
	EXISTING SPOT ELEVATION
	EXISTING CONTOUR
	EXISTING SIGN
	EXISTING GATE VALVE
	EXISTING FIRE HYDRANT
	EXISTING WATER METER
	EXISTING POWER POLE
	EXISTING CATCH BASIN
	EXISTING VEGETATION
	PROPOSED CONCRETE
	PROPOSED UNDERGROUND ELECTRIC
	PROPOSED SIGN
	BRASS CAP MONUMENT
	PLAN, SECTION OR DETAIL LABEL
	DRAWING TITLE/SHEET NUMBER

SHEET INDEX		
SHT NO.	DWG NO.	DESCRIPTION
1	COV	COVER SHEET
2	GN1	GENERAL NOTES, ABBREVIATIONS
3	TOPO	HORIZONTAL CONTROL, TOPO, AND DEMOLITION PLAN
4	SP1	SITE PLAN
5	MOPO	MAINTENANCE OF PLANT OPERATION PLAN
6 - 7	DT1 - DT2	DETAILS
8	E1	ELECTRICAL NOTES AND SYMBOLS
9	E2.1	ELECTRICAL ON-LINE DIAGRAM
10	E2.2	ELECTRICAL CONDUIT SCHEDULE
11	E3	ELECTRICAL SITE PLAN
12	E4	ELECTRICAL ELEVATIONS

### APPROVAL

APPROVED: \_\_\_\_\_ DATE \_\_\_\_\_  
J. ANDY DICKEY, P.E.  
DIRECTOR OF PUBLIC WORKS/CITY ENGINEER

### RECORD DRAWING STATEMENT

I, \_\_\_\_\_, HEREBY STATE, BASED ON MY FIELD OBSERVATION AND INFORMATION PROVIDED BY THE GENERAL CONTRACTOR AND OTHERS, THAT THE WORK ON SHEETS 1 THROUGH \_\_\_\_\_, MARKED AS "RECORD DRAWING" HAS BEEN CONSTRUCTED IN SUBSTANTIAL CONFORMANCE WITH THESE CONSTRUCTION PLANS, SPECIFICATIONS, INCLUDING CHANGES AND REVISIONS.

REGISTERED LAND SURVEYOR/ENGINEER \_\_\_\_\_ DATE \_\_\_\_\_  
REGISTRATION NUMBER \_\_\_\_\_ EXPIRATION DATE \_\_\_\_\_

REV. NO.	COMMENT	DATE

52543  
Tyson L. Glock  
12/21/16  
ARIZONA, U.S.A.  
Exp Res 9/30/17

**SUNRISE ENGINEERING**

2152 SOUTH VINEYARD, SUITE 123  
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www.sunrise-eng.com

**CITY OF SEDONA**  
**SEDONA WWRP HEADWORKS**  
**BAR SCREEN REPLACEMENT**  
**COVER SHEET**



SEI NO.	DESIGNED	DRAWN	CHECKED	SHEET NO.	
05623.000	TG	JC	TG/GP	1 of 12	<b>COV</b>

**SEI GENERAL NOTES**

- ALL SITE WORK SHALL CONFORM TO THE SPECIFICATIONS AND DETAILS BY THE JHA (JURISDICTION HAVING AUTHORITY) UNLESS SPECIFICALLY STATED OTHERWISE IN THESE PLANS.
- THE CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS PRIOR TO BEGINNING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF EXISTING PERMITS, RENEWAL OF LAPSED PERMITS, AND OBTAINING ANY NEW PERMITS, INCLUDING, BUT NOT LIMITED TO A DUST CONTROL PERMIT, AND TRAFFIC CONTROL PERMITS AS REQUIRED BY THE JHA.
- THE CONTRACTOR IS RESPONSIBLE FOR MAKING ARRANGEMENTS FOR INSPECTION AND TESTING.
- THE CONTRACTOR SHALL NOTIFY THE JHA'S INSPECTION DEPARTMENT 24 HOURS PRIOR TO CONSTRUCTION. CONSTRUCTION CONCEALED WITHOUT THE REQUIRED INSPECTION SHALL BE SUBJECT TO EXPOSURE AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING EXISTING UNDERGROUND UTILITIES PRIOR TO CONSTRUCTION. CALL BLUE STAKE AT (602) 263-1100 AT LEAST 48 HOURS BEFORE ANY CONSTRUCTION BEGINS.
- THE CONTRACTOR SHALL FOLLOW GUIDELINES AND REGULATIONS SET FORTH BY O.S.H.A. SUNRISE ENGINEERING, INC. WILL NOT BE RESPONSIBLE FOR JOB-SITE SAFETY PROCEDURES OR CONDITIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR HIS OWN TAKEOFF QUANTITIES. QUANTITIES IF SHOWN HEREON ARE ESTIMATES ONLY AND AS SUCH ARE NOT TO BE USED FOR BID PURPOSES.
- THE CONTRACTOR IS RESPONSIBLE FOR THE NOTIFICATION OF THE PROPER AUTHORITY(S) IF THERE ARE OBSTRUCTIONS TO PROPOSED IMPROVEMENTS AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY EXISTING ITEM REMOVED TO FACILITATE CONSTRUCTION SHALL BE REPLACED IN THE SAME OR BETTER CONDITION AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL COORDINATE WITH UTILITY COMPANIES FOR LOCATION OF SERVICE AND/OR RELOCATION OF UTILITIES IN CONFLICT WITH PROPOSED CONSTRUCTION. THE ENGINEER SHALL NOT BE RESPONSIBLE FOR COORDINATING THE RELOCATION OF UTILITIES, POWER POLES, ETC.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO REMOVE AND SAFELY DISPOSE OF ALL REMOVAL MATERIAL AND DEBRIS DEEMED UNSALVAGEABLE BY THE DIRECTOR OF WASTEWATER PER THE PROVISIONS SET FORTH IN MAG SPECIFICATION 350.
- THE CONTRACTOR IS RESPONSIBLE FOR TRAFFIC CONTROL ON AND AROUND THE CONSTRUCTION SITE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS.

- THE CONTRACTOR SHALL PROVIDE ADEQUATE MEANS FOR CLEANING TRUCKS AND/OR OTHER EQUIPMENT OF MUD PRIOR TO ENTERING PUBLIC STREETS, AND IT IS THE CONTRACTOR'S RESPONSIBILITY TO CLEAN STREETS, AND TAKE WHATEVER MEASURES ARE NECESSARY TO INSURE THAT ALL ROADS ARE MAINTAINED IN A CLEAN, MUD AND DUST FREE CONDITION AT ALL TIMES. NO WORK WILL BE CONSIDERED COMPLETE UNTIL ALL PAVEMENTS HAVE BEEN SWEEPED CLEAN OF DIRT AND DEBRIS.
- PRIOR TO MOVING OR DESTROYING PROTECTED NATIVE PLANT SPECIES, THE CONTRACTOR SHALL FILE A FORMAL NOTICE OF INTENT WITH THE ARIZONA DEPARTMENT OF AGRICULTURE NATIVE PLANTS (602) 542-3292.
- A THOROUGH ATTEMPT HAS BEEN MADE TO SHOW THE LOCATIONS OF ALL UNDERGROUND OBSTRUCTIONS AND UTILITY LINES IN THE WORK AREA. HOWEVER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO OBSTRUCTIONS AND UTILITY LINES ENCOUNTERED DURING CONSTRUCTION AND SHALL DETERMINE THE EXACT LOCATION OF UTILITIES IN ADVANCE OF TRENCHING. THE ENGINEER WILL NOT GUARANTEE ANY ELEVATIONS AT LOCATIONS OF THE EXISTING UNDERGROUND UTILITIES SHOWN ON THESE PLANS.
- THE CONTRACTOR SHALL PROVIDE A LICENSED SURVEYOR FOR THE SURVEYING/CONSTRUCTION STAKING OF ALIGNMENT AND GRADE FOR EACH MAIN AND/OR FACILITY AS SHOWN ON THE PLANS.
- EXACT POINT OF MATCHING, TERMINATION AND OVERLAY, IF NECESSARY, MAY BE DETERMINED IN THE FIELD BY THE ENGINEER OF RECORD OR THE RESIDENT ENGINEER OVERSEEING THE PROJECT CONSTRUCTION.
- ANY AMBIGUITIES OR DEFICIENCIES DISCOVERED ON THESE PLANS ARE TO BE RESOLVED BY SUNRISE ENGINEERING OR ITS APPOINTED REPRESENTATIVE. ANY MODIFICATIONS TO THESE PLANS MADE BY ANYONE OTHER THAN SUNRISE ENGINEERING OR ITS APPOINTED REPRESENTATIVE IS SOLELY RESPONSIBLE FOR THOSE MODIFICATIONS.
- THE CONTRACTOR SHALL RE-GRADE ALL EARTHEN DRIVEWAYS DISTURBED WITHIN THE RIGHT-OF-WAY DURING THE CONSTRUCTION AND RE-COMPACT THE TOP 1- FEET OF SURFACE MATERIAL TO A MINIMUM COMPACTION OF 90% MAXIMUM DRY DENSITY. THE RE-GRADED DRIVEWAYS SHALL BE OVERLAID WITH A 0.5' LAYER OF HALF-INCH MINUS ROADWAY GRAVEL AND RAKED SMOOTH.
- THE CONTRACTOR SHALL PROVIDE ALL TRAFFIC CONTROL AND BARRICADES FOR WORK IN THE RIGHT-OF-WAY PER THE STANDARDS SET FORTH BY THE JHA.
- INTERFERENCE WITH PLANT OPERATIONS OR SHUTDOWNS SHALL BE COORDINATE AND APPROVED BY THE CHIEF PLANT OPERATOR.
- DESIGNATED STAGING AREAS SHALL BE RESTORED TO THE ORIGINAL CONDITIONS OR BETTER AT THE END OF CONSTRUCTION ACTIVITIES.

ABC	AGGREGATE BASE COURSE
AC	ASPHALT CONCRETE
ALT	ALTERNATIVE
BC	BACK OF CURB
BCF	BRASS CAP FLUSH
BCHH	BRASS CAP IN HAND HOLE
BCR	BEGIN CURB RETURN
BM	BENCHMARK
BTM	BOTTOM
CB	CATCH BASIN
C/L	CENTERLINE
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
CONC	CONCRETE
CONST	CONSTRUCTION
CY	CUBIC YARD
D/W	DRIVEWAY
DWG	DRAWING
DTL	DETAIL
E	EAST
ECR	END CURB RETURN
ELEV	ELEVATION
EP	EDGE OF PAVEMENT
ESMT	EASEMENT
EX, EXIST	EXISTING
FA	FOUL AIR
FC	FACE OF CURB
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLANGE
FND	FOUND
FO	FIBER OPTIC
FPS	FEET PER SECOND
FT	FOOT, FEET
G	GAS, GUTTER, GRADE
GM	GAS METER
GB	GRADE BREAK
GEN	GENERATOR
GPM	GALLONS PER MINUTE
GT	GREASE TRAP
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HP	HIGH POINT
HW	HIGHWAY
IN.	INCH, INCHES
INV	INVERT
IRRIG	IRRIGATION
JHA	JURISDICTION HAVING AUTHORITY
L	LENGTH
LF	LINEAR FEET
LT	LEFT

**ABBREVIATIONS**

MAG	MARICOPA ASSOCIATION OF GOVERNMENTS
MH	MANHOLE
MJ	MECHANICAL JOINT
MNPT	MALE NOMINAL PIPE THREAD
MOPO	MAINTENANCE OF PLANT OPERATIONS
N	NORTH
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO.	NUMBER
OHE	OVERHEAD ELECTRIC
OPNG	OPENING
P/L	PROPERTY LINE
PC	POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PCC	PORTLAND CEMENT CONCRETE
PRC	POINT OF REVERSE CURVE
PT	POINT OF TANGENCY
PUE	PUBLIC UTILITY EASEMENT
PVI	POINT OF VERTICAL INTERSECTION
PW	PROCESSED PLANT WATER
R	RADIUS
RW	RAW WATER
R/W	RIGHT-OF-WAY
RGRCP	RUBBER GASKETED REINFORCED CONCRETE PIPE
RJ	RESTRAINED JOINT
RS	RAW SEWAGE
RT	RIGHT
S	SEWER, SLOPE, SOUTH
S/M	SAWCUT AND MATCH
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SF	SQUARE FEET
SPEC	SPECIFICATION
SSMH	SANITARY SEWER MANHOLE
STA	STATION
STD	STANDARD
SWK	SIDEWALK
SY	SQUARE YARD
TAN	TANGENT
TBC	TOP BACK OF CURB
T, TEL	TELEPHONE
TL	TRUE LENGTH
TYP	TYPICAL
UGE	UNDERGROUND ELECTRIC
VNAE	VEHICLE NON-ACCESS EASEMENT
Vr	VOLUME REQUIRED
Vp	VOLUME PROVIDED
W	WATER, WEST, WITH
XFMR	TRANSFORMER

**DESIGN CRITERIA**

DESIGN FLOWS	VALUE
AVERAGE FLOW	2.00 MGD
PEAK FLOW	6.91 MGD

CHANNEL CONFIGURATION	VALUE
CHANNEL WIDTH	1.5 FEET
CHANNEL DEPTH	6.0 FEET
CHANNEL BOTTOM ELEVATION	4,056.00 FEET
MAXIMUM WATER DEPTH	4.75 FEET
PARSHALL FLUME BOTTOM ELEVATION	4,057.25 FEET
FREEBOARD	1.25 FEET
DOWNSTREAM WATER LEVEL @ PEAK FLOWS	3.07 FEET

SCREEN CONFIGURATION	VALUE
NUMBER OF SCREENS	2
SCREEN MATERIAL	316SS
ANGLE OF SCREENS	75°
BAR SPACING	0.25 INCHES
MAX HEAD LOSS THROUGH SCREENS	12 INCHES
SCREEN OPERATION	TIMER AND WATER LEVEL DIFFERENTIAL SENSORS

**SPECIAL INSPECTIONS**

ITEM
EXPANSION/EPOXY ANCHORS

**NOTICE OF EXTENDED PAYMENT PROVISION**

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REV. NO.	COMMENT	DATE
 <b>SUNRISE ENGINEERING</b>		
2152 SOUTH VINEYARD, SUITE 123 MESA, ARIZONA 85210 TEL 480.768.8600 · FAX 480.768.8609 www.sunrise-eng.com		
<b>CITY OF SEDONA</b>		
<b>SEDONA WWRP HEADWORKS</b> BAR SCREEN REPLACEMENT GENERAL NOTES, LEGEND, ABBREVIATIONS		
SEI NO. 05623.000	DESIGNED TG	DRAWN JC
CHECKED TG/GP	SHEET NO. 2 of 12	<b>GN1</b>

FINAL SUBMITTAL

P:\Secodna\05623.000 - WWRPBarScreens.dwg Sheets\SEI-GN.dwg Dec 21, 2016 12:47pm jacobellis





MOPO NOTES

- 1 PUMPS SUCTION INLET SHALL BE LOCATED IN THIS AREA
- 2 BYPASS LINE, SIZE AND ALIGNMENT TO BE SUBMITTED AS PART OF MOPO PLAN FOR APPROVAL. CONTRACTOR TO SECURE PIPE TO PREVENT MOVEMENT AND PROVIDE PROTECTION AGAINST TRIPPING HAZARDS
- 3 BYPASS DISCHARGE. CONTRACTOR TO COORDINATE WITH CHIEF PLAN OPERATOR FOR EXACT DISCHARGE LOCATION DISCHARGE PIPING TO BE SECURED TO PREVENT MOVING
- 4 CHANNEL DAM SHALL BE LOCATED IN THIS AREA
- 5 PIPE PROTECTION FOR VEHICLE TRAFFIC TO BE PROVIDED BY CONTRACTOR

GENERAL NOTES

- 1. THIS MOPO PLAN IS TO PROVIDED GENERAL GUIDELINES TO THE CONTRACTOR. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE A COMPLETE MOPO TO THE CLIENT AND ENGINEER FOR APPROVAL. MOPO SHALL MEET ALL REQUIREMENTS OF SPECIFICATIONS 02910
- 2. THE CONTRACTOR SHALL FOLLOW THIS MOPO PLAN AND PROJECT SPECIFICATIONS DURING THE A CHANNEL BY PASS PROCESS, TO MINIMIZE PLANT INTERRUPTIONS AND TO AVOID ANY PERMIT VIOLATIONS.
- 3. THE CONTRACTOR SHALL WORK WITH THE CHIEF PLANT OPERATOR TO MAINTAIN COMPLIANCE TO ALL LOCAL, STATE AND FEDERAL REGULATION.
- 4. IF THE PLANT EXPERIENCES AN UNEXPECTED CATASTROPHIC FAILURE OF PLANT OPERATIONS INFRASTRUCTURE, THE MOPO PLAN AND PROJECT SPECIFICATIONS WILL REMAIN A CRITICAL COMPONENT TO BE USED TO DETERMINE THE ORDER WITH WHICH TO BRING THE SYSTEM ONLINE.

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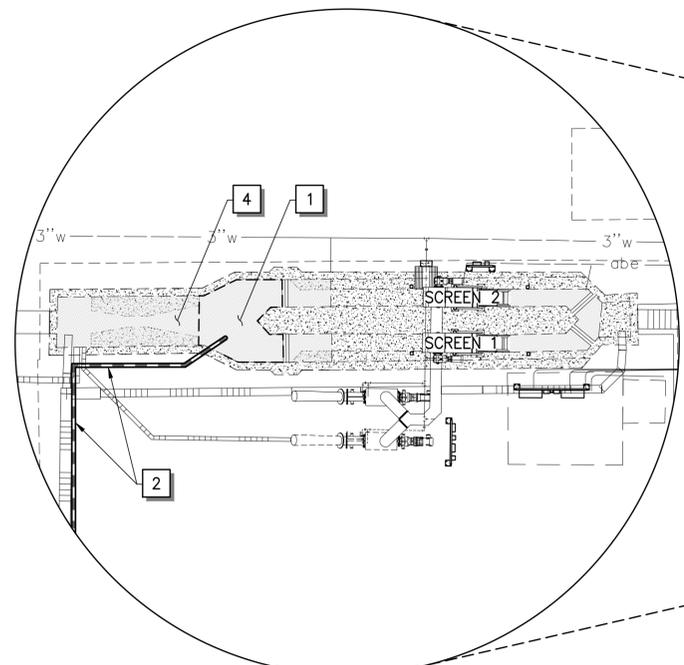
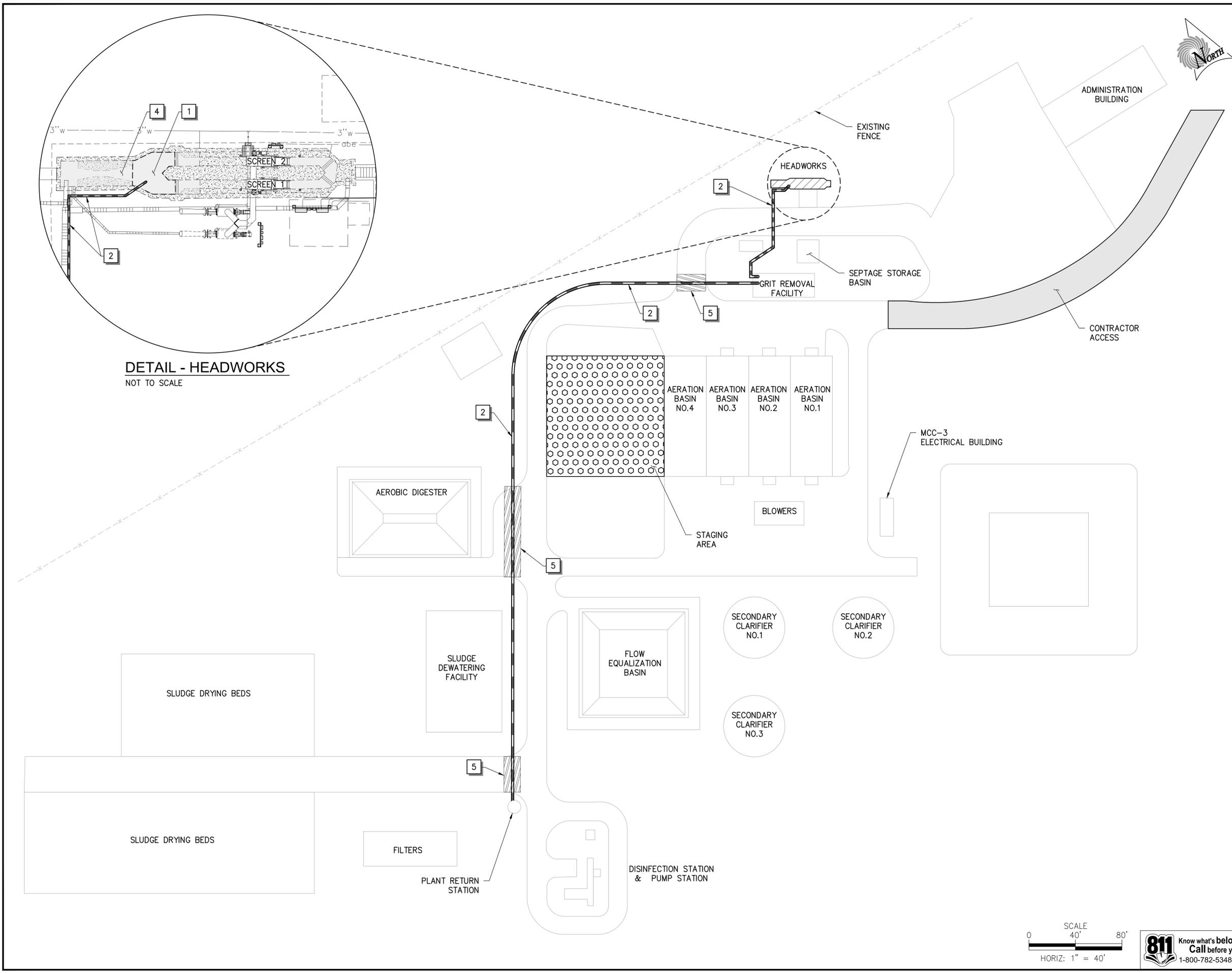
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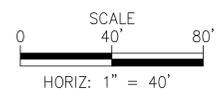
**CITY OF SEDONA**

**SEDONA WWRP HEADWORKS  
 BAR SCREEN REPLACEMENT  
 MAINTENANCE OF PLANT OPERATIONS PLAN**

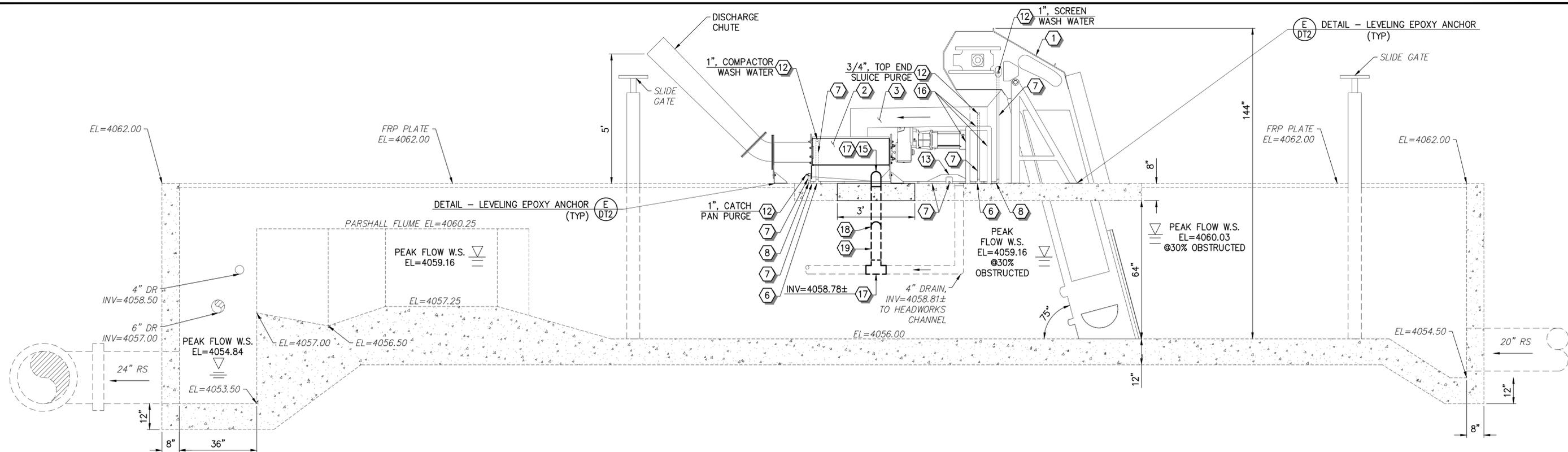
SEI NO. 05623.000	DESIGNED TG	DRAWN JC	CHECKED TG/GP	SHEET NO. 5 of 12	MOPO
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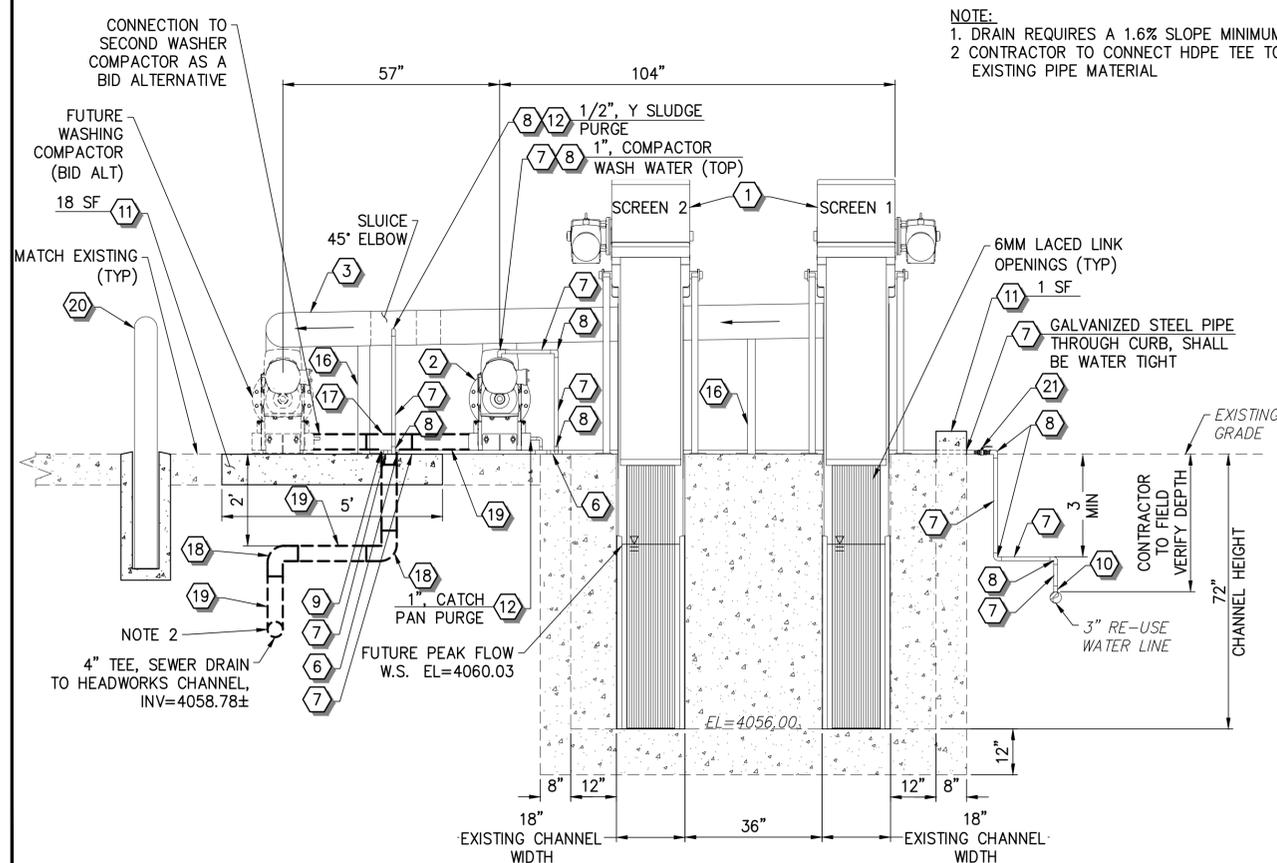
**DETAIL - HEADWORKS**  
 NOT TO SCALE



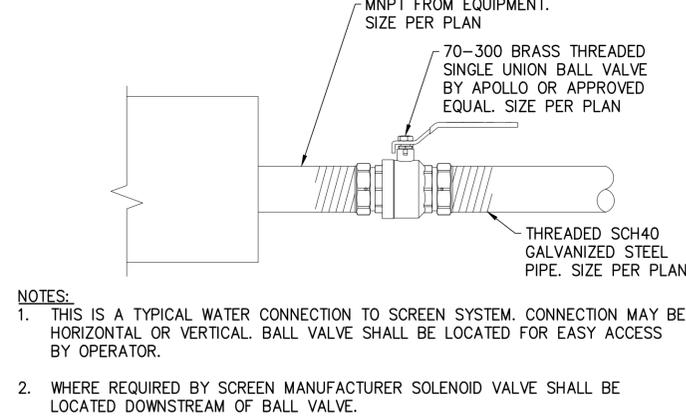
**811** Know what's below.  
 Call before you dig.  
 1-800-782-5348



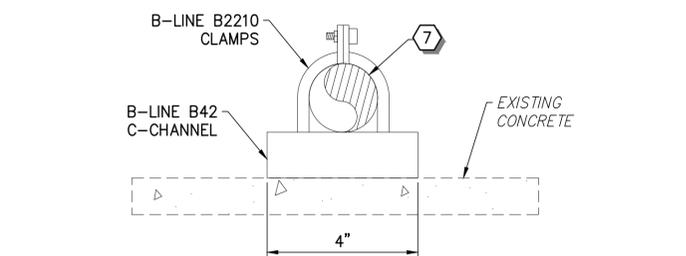
**(A) SECTION - HEADWORKS**  
SCALE: 1" = 2'



**(B) SECTION - BAR SCREEN EQUIPMENT, SLUICE, AND WASHING COMPACTOR**  
SCALE: 1" = 2'



**(C) DETAIL - WATER CONNECTION**  
NOT TO SCALE



**(D) DETAIL - PIPE SUPPORT**  
NOT TO SCALE

**CONSTRUCTION NOTES**

- 1 BULL SHARK SCREENS (18 INCH WIDE BY 72 IN DEEP) BY HYDRO-DYNE MODEL# STR 17-143-6 L. INSTALL AT LOCATION OF EXISTING SCREEN
- 2 WHITETIP SHARK WASHING COMPACTOR (8 INCH) BY HYDRO-DYNE
- 3 SLUICE BY HYDRO-DYNE
- 6 1" SCH40 GALVANIZED STEEL TEE
- 7 1" SCH40 GALVANIZED STEEL PIPE
- 8 1" SCH40 GALVANIZED STEEL 90° BEND
- 9 1" SCH40 GALVANIZED STEEL CAP
- 10 3" X 1" SCH40 GALVANIZED STEEL TEE
- 11 REPLACE CONCRETE IN KIND
- 12 WATER CONNECTION, SIZE PER PLAN. SEE DETAIL C, DRAWING DT1
- 13 24" X 24" PIPE CROSSOVER RAMP WITH USABLE SPAN 3" X 3" PER VESTIL MANUFACTURING CORP. OR APPROVED EQUAL
- 15 4" FERNCO COUPLING DRAIN OUTLET
- 16 PIPE SUPPORT PER SLUICE MANUFACTURER'S RECOMMENDATIONS
- 17 4" HDPE DR 21 TEE
- 18 4" HDPE DR 21 90° BEND
- 19 4" HDPE DR 21 PIPE
- 20 BOLLARD PER SPEC 05570 (BID ALTERNATIVE)
- 21 3" BRASS THREADED SINGLE UNION BALL VALVE BY APOLLO OR APPROVED EQUAL

**GENERAL NOTES**

1. NEW ABOVE GROUND GALVANIZED STEEL PIPING AND FITTINGS SHALL BE PROTECTED WITH FIBER INSULATION AND ALUMINUM SHIELD.
2. THE FIBER INSULATION MATERIAL SHALL BE 1 INCH THICK PER MICRO-LOK BY JOHNS MANVILLE OR APPROVED EQUAL.
3. THE ALUMINUM SHIELD SHALL WRAP AROUND COMPLETELY THE INSULATED PIPE WITH ONLY ONE SEAM. THE ALUMINUM SHIELD SHALL BE INSUL-MATE ALUMINUM ROLL JACKETING PER RPR PRODUCTS INC., OR APPROVED EQUAL.
4. GALVANIZED STEEL WATER LINE SHALL BE SUPPORTED PER DETAIL D, DRAWING DT1.
5. INSTALL 1" STRAINER PROVIDED BY SYSTEM MANUFACTURERS BEFORE ALL WATER CONNECTIONS.

**NOTICE OF EXTENDED PAYMENT PROVISION**

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REV. NO.	COMMENT	DATE

52543  
Tyson L.  
Glock  
1212116  
ARIZONA, U.S.A.  
Exp/Res 9/5/11

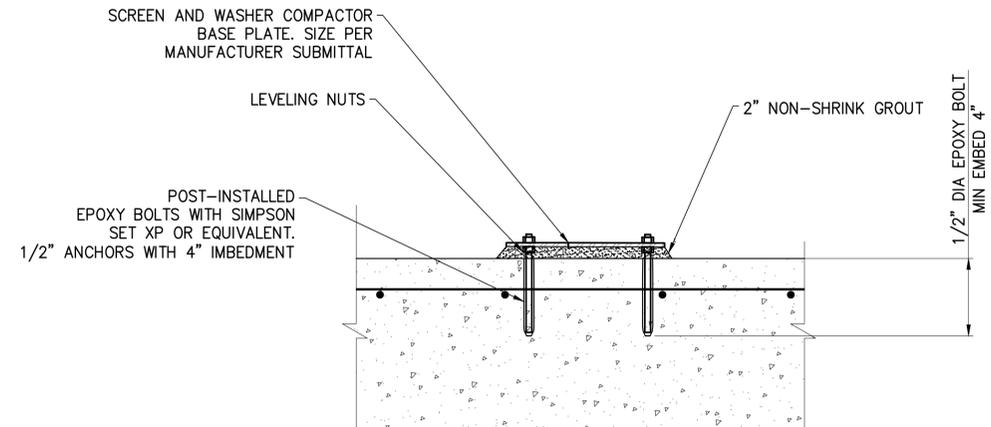
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**DETAILS**

DESIGNED	DRAWN	CHECKED	SHEET NO.
TG	JC	TG/GP	6 of 12

**DT1**



**E** DETAIL - LEVELING EPOXY ANCHOR  
 ~ SCALE: NTS

**811** Know what's below.  
 Call before you dig.  
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REV. NO.	COMMENT	DATE

52543  
Tyson L.  
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 DETAILS**

SEI NO. 05623.000	DESIGNED TG	DRAWN JC	CHECKED TG/GP	SHEET NO. 7 of 12	<b>DT2</b>
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**ELECTRICAL STANDARDS LEGEND**  
(ALL SYMBOLS MAY NOT BE USED IN DRAWINGS)

	DIRECT BURIED OR CONCRETE EMBEDDED CONDUIT
	CONDUIT RUN EXPOSED
	PROCESS FLOW
	PNEUMATIC SIGNAL
	ELECTRICAL SIGNAL
	PANEL OR ENCLOSURE
	STAND-BY GENERATOR ??? DENOTES SIZE
	GENERATOR MAIN BREAKER XXX DENOTES BREAKER SIZE
	WALL PACK FIXTURE. MOUNTING HEIGHT AS INDICATED IN DRAWINGS
	FLOOD LIGHT 7'-2" ABOVE FLOOR
	EMERGENCY EXIT SIGN 7'-2" ABOVE FLOOR
	EMERGENCY LIGHTING PACK 7'-2" ABOVE FLOOR
	HIGH/LOW BAY LED FIXTURE AS INDICATED IN DRAWINGS AND EQUIPMENT SCHEDULE
	1' X 4' LED FIXTURE AS INDICATED IN DRAWINGS AND EQUIPMENT SCHEDULE
	INDICATOR LAMP - LETTER INDICATES COLOR
	FLASHING BEACON - LETTER INDICATES COLOR
	MOTION SENSOR
	EXHAUST FAN
	OTHER LIGHT FIXTURE AS INDICATED IN DRAWINGS.
	AUDIBLE ALARM OR HORN
	UNDERGROUND JUNCTION/PULLBOX - SIZE 5 UNLESS OTHERWISE INDICATED
	STEEL JUNCTION/PULLBOX
	ELECTRIC MANHOLE
	FUSE; XX - DENOTES AMPERAGE
	120 V GROUND FAULT INTERRUPTER DUPLEX RECEPTACLE
	120 V DUPLEX RECEPTACLE, WP (WEATHERPROOF)

	240 V RECEPTACLE
	DISCONNECT SWITCH
	CIRCUIT BREAKER - UPPER NUMBER INDICATES AMP TRIP RATING - LOWER NUMBER INDICATES POLES
	MOTOR OVERLOAD
	EQUIPMENT GROUND
	LIGHT SWITCH, SINGLE POLE, MOUNT 4'-6" ABOVE FLOOR ON BUILDING WALL
	LIGHT SWITCH, SINGLE POINT MOUNT 4'-6" ABOVE FLOOR ON BUILDING WALL, WEATHER PROOF
	RELAY
	TIMING RELAY
	TIMING DELAY RELAY
	CONTROL RELAY COIL
	MAGNETIC RELAY
	MOMENTARY PUSH-BUTTON SWITCH
	HAND-OFF-AUTO SELECTOR SWITCH
	NORMALLY CLOSED PUSHBUTTON
	NORMALLY OPEN PUSHBUTTON
	RUNNING TIME METER
	MOTOR STARTER - NUMBER INDICATES SIZE
	NORMALLY CLOSED CONTACTS
	NORMALLY OPEN CONTACTS
	CONTACTOR OR STARTER, NUMBER DENOTES NEMA SIZE
	MOTOR - NUMBER INDICATES HORSEPOWER RATING

	FLOW METER
	ELAPSED TIME METER
	LIMIT SWITCH
	INSTRUMENT TRANSFORMER
	CURRENT TRANSFORMER
	POWER TRANSFORMER
	THERMOSTAT
	GROUND FAULT INTERRUPTER
	AUXILIARY CONTACT
	INTERLOCK
	PUMP
	SOLENOID VALVE
	VALVE WITH MANUAL OPERATOR
	ELECTRIC MOTOR OPERATED VALVE (MODULATING OR NON-MODULATING)
	MOTOR OPERATED VALVE WITH LIMIT SWITCH ASSEMBLY
	COMPUTER/CONTROL INPUT
	COMPUTER/CONTROL OUTPUT
	CIRCUIT LABEL: LP1 - PANEL NAME XX - CIRCUIT NUMBER
	EXPLOSION PROOF SEAL OFF
	CONDUIT IDENTIFICATION, REFER TO CONDUIT AND CONDUCTOR SCHEDULE FOR QUANTITY AND FILL: X = CONDUIT TYPE P-POWER C-CONTROL F-FIBER OPTIC CABLE X-OTHER YYY = ID
	OTHER SYMBOLS AS SHOWN ON DRAWINGS

**GENERAL ELECTRICAL REQUIREMENTS**

1. THE COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODE ORDINANCES AND REGULATIONS. CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND INSPECTIONS REQUIRED BY THE GOVERNING AUTHORITIES. ALL WORK SHALL BE DONE IN A NEAT, PROFESSIONAL, FINISHED AND SAFE MANNER, UNDER COMPETENT SUPERVISION. INSTALL GROUNDING AND ALL ELECTRICAL WORK AS REQUIRED BY THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE AS WELL AS ANY OTHER APPLICABLE CODES.
2. MATERIAL, EQUIPMENT AND INSTALLATION SHALL BE IN ACCORDANCE WITH PROJECT SPECIFICATIONS WHICH ARE PART OF THE CONTRACT DOCUMENTS FOR THIS PROJECT.
3. VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND ALL OTHER FACTORS WHICH MAY AFFECT THE EXECUTION OF THIS WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL.
4. ALL MATERIALS SHALL BE NEW AND OF THE BEST QUALITY, MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, U.L. OR OTHER APPLICABLE STANDARDS. THE USE OF MANUFACTURER'S NAMES, MODELS AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS AND BID PRICE. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED IN WRITING AND APPROVED BY THE ENGINEER BEFORE ORDERING.
5. PROTECT ALL ELECTRICAL MATERIAL AND EQUIPMENT INSTALLED UNDER THIS PROJECT AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS OR ANY OTHER CAUSES. EQUIPMENT FOUND DAMAGED OR IN OTHER THAN NEW CONDITIONS WILL BE REJECTED AS DEFECTIVE.
6. LEAVE THE SITE CLEAN, REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAPS AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT AND FOREIGN MATERIALS, LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK.
7. ALL CONDUCTORS SHALL BE THHN/THWN COPPER, STRANDED RATED AT 600 VOLTS UNLESS OTHERWISE NOTED. ALUMINUM WIRE WILL NOT BE ALLOWED.
8. ALL CONDUCTORS SHALL BE INSTALLED IN A CONDUIT SYSTEM EXCEPT WHERE NOTED IN DRAWINGS. REFER TO CONDUIT AND CONDUCTOR SCHEDULE FOR CONDUIT TYPE AND SIZE. WHERE CONDUIT SIZE IS NOT CALLED OUT, CONDUIT SHALL BE INSTALLED PER SPECIFICATION 16010 AND SIZED PER LATEST ADOPTED EDITION OF THE NEC.
9. ALL UNDERGROUND CONDUIT TO BE SCHEDULE 40 PVC. MINIMUM DEPTH 30", MINIMUM SIZE 3/4" EXCEPT AS NOTED IN DRAWINGS AND SPECIFICATIONS. ALL UNDERGROUND ELBOWS SHALL BE RIGID LONG SWEEP WRAPPED WITH 3M-50 10 MIL PIPE WRAP OR APPROVED EQUAL EXCEPT FOR COMMUNICATIONS CABLE AND CONDUIT WHEN SPECIFIED DIFFERENTLY ON THE DETAILED ELECTRICAL DRAWINGS.
10. ALL SAFETY SWITCHES AND OTHER DISTRIBUTION AND CONTROL ELECTRICAL EQUIPMENT SHALL BE RATED FOR HEAVY DUTY SERVICE.
11. ALL WIRING DEVICES SHALL BE SPECIFICATION GRADE GROUNDED BODY TYPE DEVICES.
12. THE CONTRACTOR SHALL INSTALL ALL INSTRUMENTS AND CONTROLS, INCLUDING HVAC AND CONTROL PANELS. THE CONTRACTOR SHALL OBTAIN AND REVIEW ALL INSTRUMENT, CONTROL AND HVAC DRAWINGS FOR TOTAL SCOPE OF WORK.
13. ALL PANELS, DISCONNECTS AND SWITCHGEAR ON THE OUTSIDE OF THE BUILDING SHALL BE NEMA 3R TYPE ENCLOSURES UNLESS OTHERWISE SPECIFIED. CT CABINET AND METER BASE SHALL BE OUTSIDE THE BUILDING.
14. SURGE PROTECTIVE DEVICES (SPD) SHALL BE SIZED FOR 160KA AMPS UNLESS OTHERWISE NOTED.
15. ALL CONDUIT FOR ALL EQUIPMENT, INCLUDING EQUIPMENT FURNISHED BY OTHERS, SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
16. ALL CONDUIT, WHERE LEAVING ELECTRICAL EQUIPMENT TO GO UNDERGROUND, MUST BE ANCHORED TO THE FOUNDATION WITH STAND-OFF BRACKETS TO ALLOW FOR SUFFICIENT CLEARANCE FOR FOOTINGS AND WALL STUDS ON THE WALLS IN THE BUILDING. ALL RGS CONDUIT AND ELBOWS USED UNDERGROUND WILL BE WRAPPED WITH AN APPROVED PIPE WRAP. (TYP. FOR ALL BUILDINGS)
17. ALL WIRING IN CLASS I HAZARDOUS LOCATIONS SHALL COMPLY WITH NEC 501. WET WELL SHALL BE CONSIDERED CLASS I DIV 1, GROUPS C&D.

**GENERAL ELECTRICAL ABBREVIATIONS**

MCP	MOTOR CIRCUIT PROTECTOR	CB	CIRCUIT BREAKER	EMH	ELECTRICAL MANHOLE	RTU	REMOTE TERMINAL UNIT
NC	NORMALLY CLOSED	CNTL	CONTROL	MTU	MASTER TERMINAL UNIT	SPD	SURGE PROTECTIVE DEVICE
NO	NORMALLY OPEN	IC	INSTRUMENTATION CONDUIT	TSP	TWISTED SHIELDED PAIRS	PP	POWER PANEL
SPC	SPARE CONDUIT	INST	INSTRUMENT	VFD	VARIABLE FREQUENCY DRIVE	PCP	PUMP CONTROL PANEL
PLC	PROGRAMMABLE LOGIC CONTROLLER	HMI	HUMAN MACHINE INTERFACE	SPIC	SPARE INSTRUMENT CONDUIT		
ATS	AUTOMATIC TRANSFER SWITCH	SSSS	SOLID STATE SOFT START	WP	WEATHERPROOF		
LCP	LOCAL CONTROL PANEL	ACB	AIR CIRCUIT BREAKER	OL	MOTOR OVERLOAD		
C	CONDUIT	AFF	ABOVE FINISHED FLOOR	LP	LIGHTING PANEL		
		AFG	ABOVE FINISHED GRADE				

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REV. NO.	COMMENT	DATE

Professional Engineer (Electrical)  
53659  
J. RANDALL KNAPP  
Date Signed: 12-20-2018  
Expires: 6/30/2018  
ARIZONA, U.S.A.

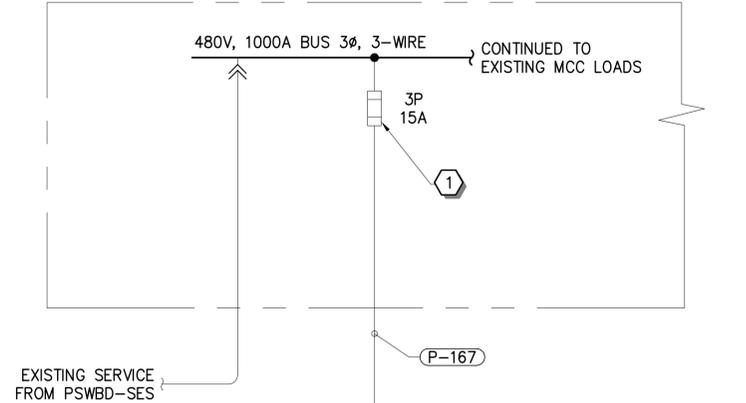
**SUNRISE ENGINEERING**  
2152 SOUTH VINEYARD, SUITE 123  
MESA, ARIZONA 85210  
TEL 480.768.8600 • FAX 480.768.8609  
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**CITY OF SEDONA**

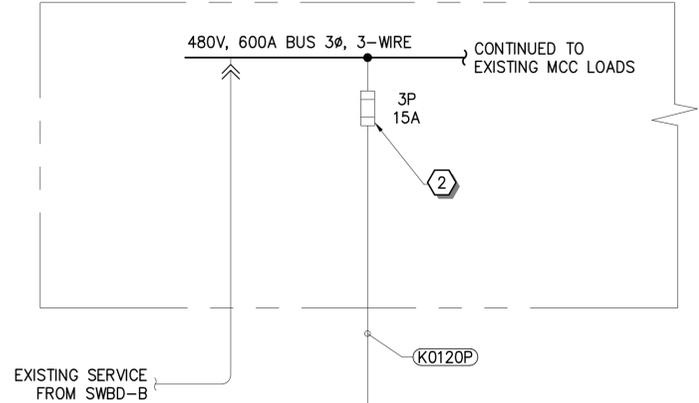
**SEDONA WWRP HEADWORKS  
BAR SCREEN REPLACEMENT  
ELECTRICAL NOTES AND SYMBOLS**

SEI NO. S05623	DESIGNED JRK	DRAWN ----	CHECKED JRK	SHEET NO. 8 of 12	<b>E1</b>
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EXISTING MCC-3  
(LOCATED IN ELECTRICAL BLDG)  
1000A, 480VAC, 3 $\phi$ , 3W  
MAIN LUG ONLY  
50,000 AIC



EXISTING MCC-3A  
(LOCATED IN ELECTRICAL BLDG)  
600A, 480VAC, 3 $\phi$ , 3W  
MAIN LUG ONLY

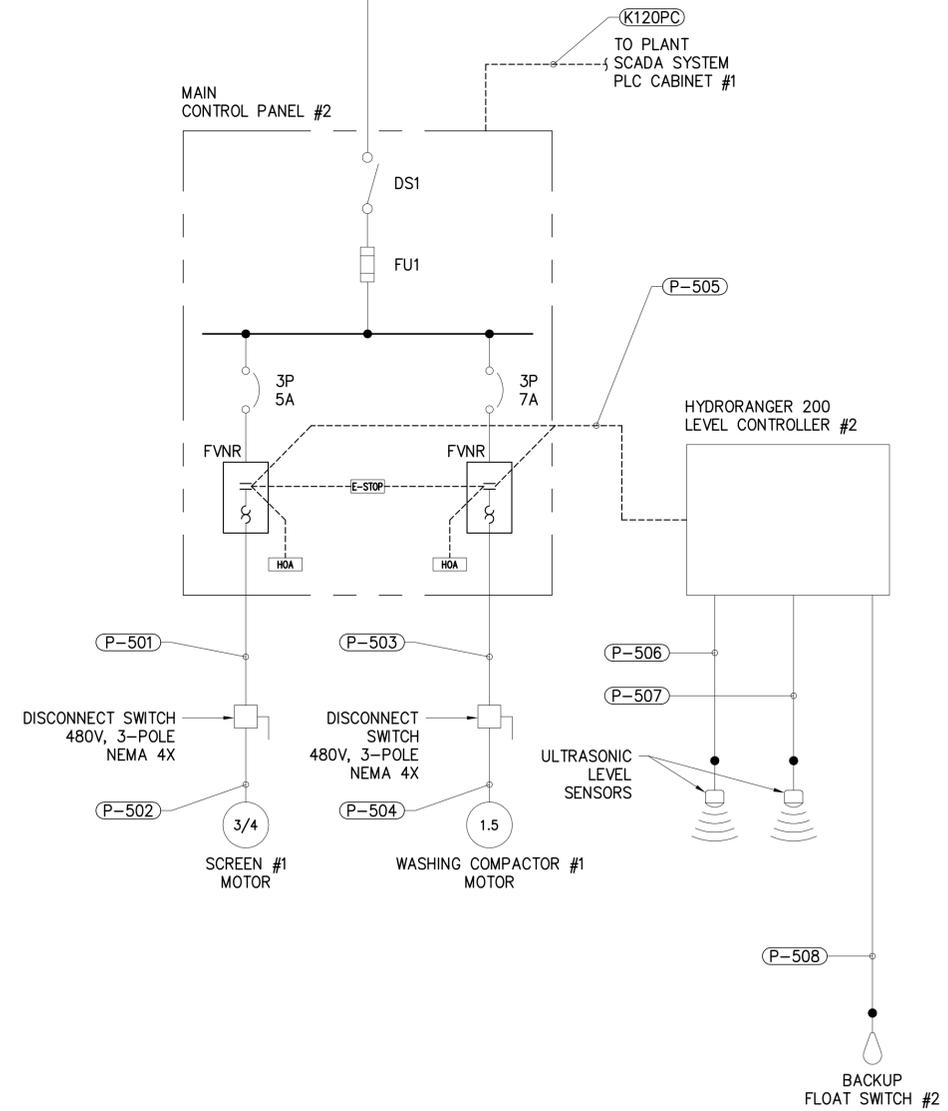
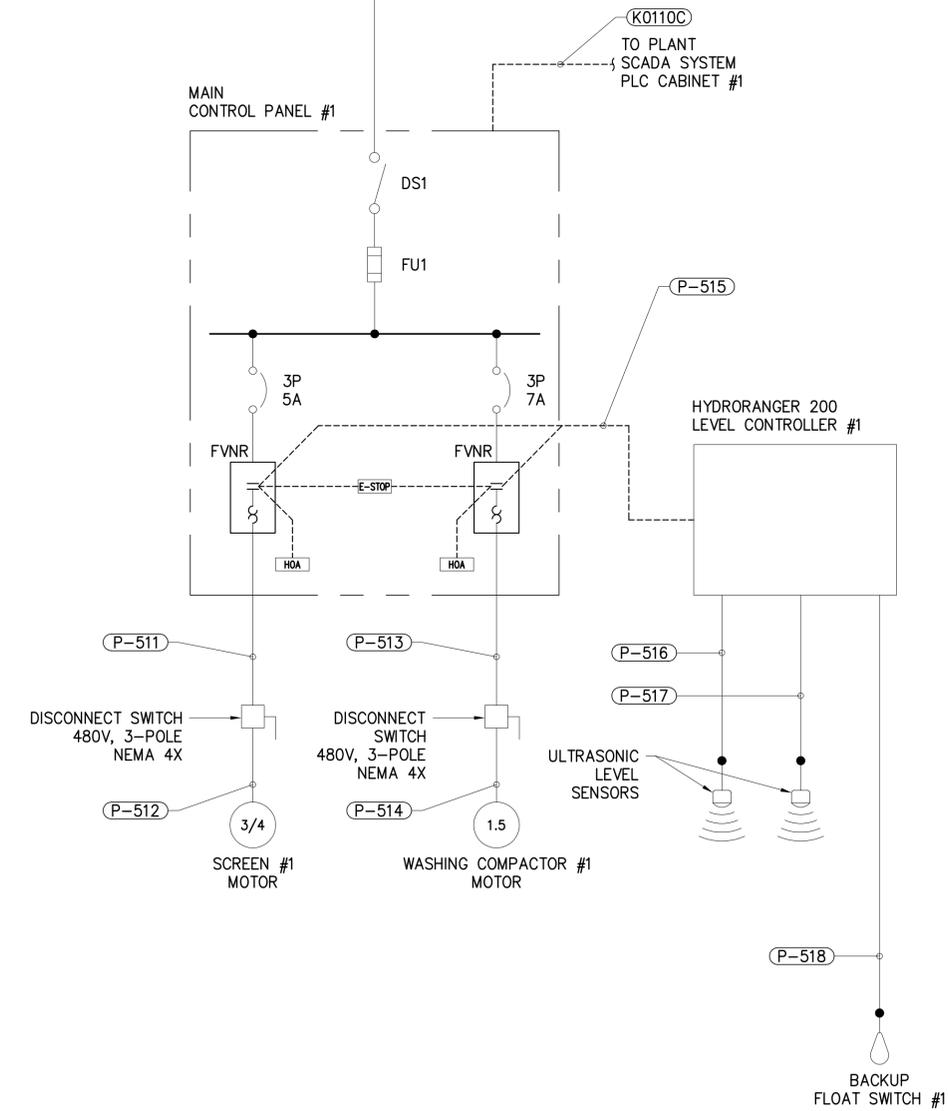


**SHEET NOTES:**

1. THE CONTRACTOR SHALL COORDINATE ALL WORK WITH OWNER PRIOR TO CONSTRUCTION.
2. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRENCHING, BACKFILL, COMPACTION, AND THE INSTALLATION OF CONDUIT SHOWN AS NEW OR TO BE EXTENDED TO NEW EQUIPMENT LOCATION.
3. PROVIDE BONDING AND GREEN INSULATED GROUND FOR ALL ELECTRICAL ENCLOSURES PER LATEST EDITION OF NEC.
4. SOME CONDUITS SHOWN AS COMBINED FOR CLARITY. REFER TO CONDUIT SCHEDULE FOR CONDUIT QUANTITY, SIZE AND FILL.

**KEY NOTES**

1. LOCATE STARTER FOR EXISTING SCREEN #1 IN MCC-3 AND REMOVE. PROVIDE AND INSTALL NEW 3-POLE, 15A FUSE AND FUSE HOLDER FOR NEW EQUIPMENT. CONNECT NEW CIRCUIT FOR MAIN CONTROL PANEL #1 TO NEW FUSED CIRCUIT.
2. LOCATE CIRCUIT TO EXISTING SCREEN #2 IN MCC-3A. PROVIDE AND INSTALL NEW 3-POLE, 15A FUSE AND FUSE HOLDER FOR NEW EQUIPMENT. CONNECT NEW CIRCUIT FOR MAIN CONTROL PANEL #2 TO NEW FUSED CIRCUIT.



REV. NO.	COMMENT	DATE

53659  
J. RANDALL  
KNAPP  
Date Signed: 12-28-2016  
Expires: 6/30/2018

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MESA, ARIZONA 85210  
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**SEDONA WWRP HEADWORKS  
BAR SCREEN REPLACEMENT  
ELECTRICAL ONE-LINE DIAGRAM**

SEI NO. S05623	DESIGNED JRK	DRAWN ----	CHECKED JRK	SHEET NO. 9 of 12	E2.1
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CONDUIT AND CONDUCTOR SCHEDULE

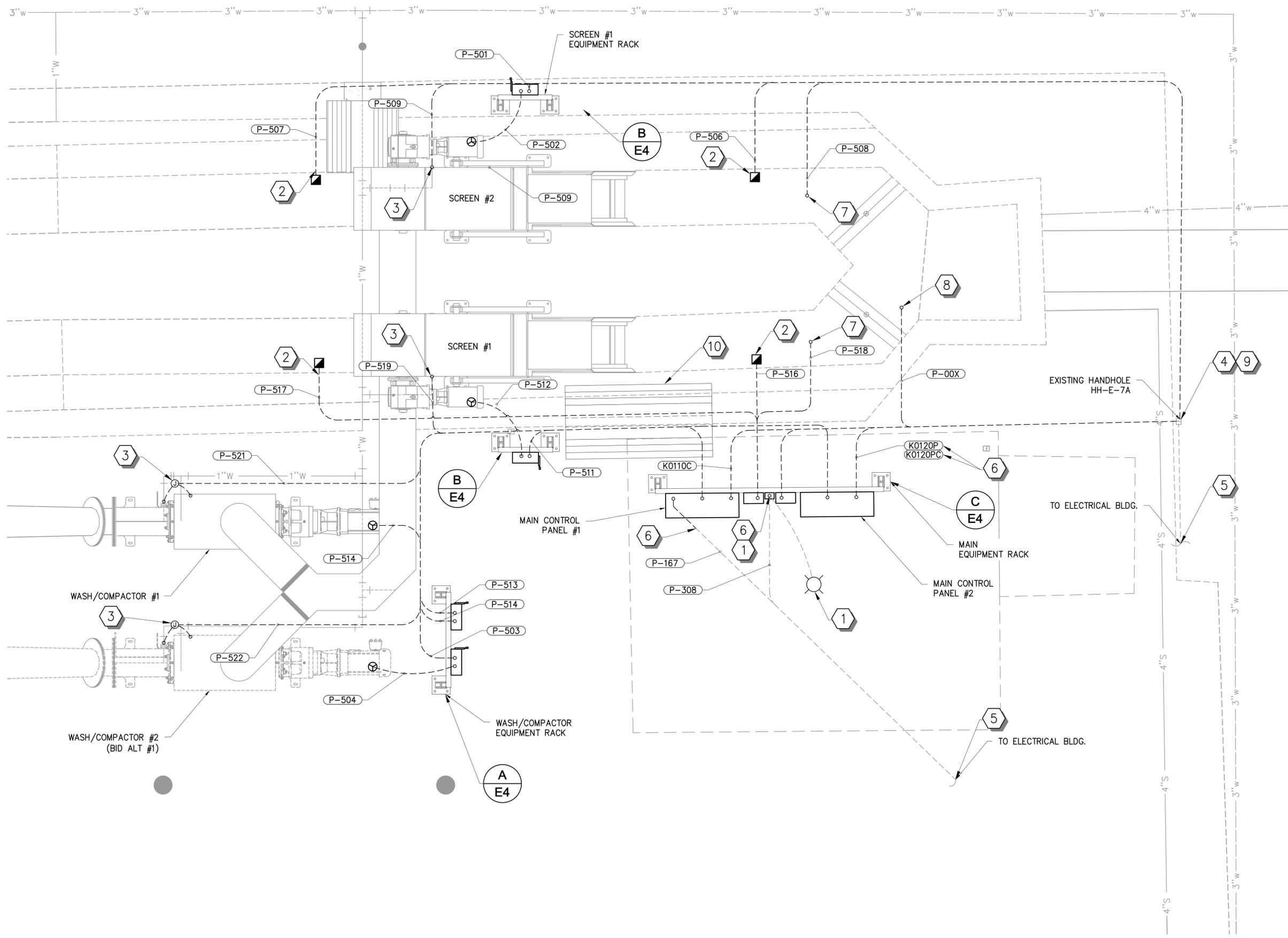
CONDUIT TAG	DESCRIPTION	ROUTING		CONDUIT		CONDUCTORS (CU) PER C.		VOLTAGE	REMARKS OR REFERENCE DRAWING
		FROM	TO	QTY	SIZE	(QTY) & SIZE	GND		
③ P-00X	HIGH CHANNEL ALARM	PLC CABINET #2	HIGH LEVEL FLOAT SWITCH	1		(2) #12 CU AWG	#12	CTRL	LOCATE AND REUSE EXISTING HIGH LEVEL SWITCH CONDUIT
P-167	POWER FEED TO MAIN CONTROL PANEL #1	MCC-3	MAIN CONTROL PANEL #1	1	3/4"	(3) #12 CU AWG	#12	480	EXISTING CONDUIT, REUSE FOR THIS PROJECT
C-132	POWER TO LIGHTING CIRCUIT	PANEL CA-2,4	BAR SCREEN CANOPY LIGHT FIXTURE	1	3/4"	(2) #12 CU AWG	#12	120	EXISTING CONDUIT AND CONDUCTOR.
K0110C	TELEMETRY FOR MAIN CONTROL PANEL #1	MAIN CONTROL PANEL #1	PLC CABINET #2	1	3/4"	(1) 6-STRAND FO		CTRL	CORNING 6-STRAND MULTIMODE SINGLE-ARMORED FO CABLE
K0120P	POWER FEED TO MAIN CONTROL PANEL #2	MCC-3	MAIN CONTROL PANEL #2	1	3/4"	(3) #12 CU AWG	#12	480	EXISTING CONDUIT, SIZE ASSUMED, REUSE FOR THIS PROJECT
K0120PC	TELEMETRY FOR MAIN CONTROL PANEL #2	MAIN CONTROL PANEL #2	PLC CABINET #1	1	3/4"	(1) 6-STRAND FO		CTRL	CORNING 6-STRAND MULTIMODE SINGLE-ARMORED FO CABLE
P-501	FEED TO SCREEN MOTOR #2	MAIN CONTROL PANEL #2	SCREEN #2 DISCONNECT SW.	1	3/4"	(3) #12 CU AWG	#12	480	
P-502	FEED TO SCREEN MOTOR #2	SCREEN #2 DISCONNECT SW.	SCREEN #2	1	3/4"	(3) #12 CU AWG	#12	480	
① P-503	FEED TO WASHING COMPACTOR #2	MAIN CONTROL PANEL #2	WASH/COMPACTOR DISCONNECT SW.	1	3/4"	(3) #12 CU AWG	#12	480	
② P-504	FEED TO WASHING COMPACTOR #2	WASH/COMPACTOR DISCONNECT SW.	WASH/COMPACTOR	1	3/4"	(3) #12 CU AWG	#12	480	
P-505	LEVEL CONTROL	MAIN CONTROL PANEL #2	LEVEL CONTROL PANEL #2	1	3/4"	(10) #14 CU AWG	#14	CTRL	CONDUCTOR COUNT TO BE VERIFIED WITH SUPPLIER
P-506	LEVEL SENSOR 2-1	LEVEL CONTROL PANEL #2	CHANNEL 2 UPSTREAM SENSOR	1	3/4"			CTRL	INSTALL MFR. SUPPLIED CABLE, VERIFY CONDUIT SIZE REQ.
P-507	LEVEL SENSOR 2-2	LEVEL CONTROL PANEL #2	CHANNEL 2 DOWNSTREAM SENSOR	1	3/4"			CTRL	INSTALL MFR. SUPPLIED CABLE, VERIFY CONDUIT SIZE REQ.
P-508	CHANNEL 2 HIGH LEVEL SWITCH	LEVEL CONTROL PANEL #2	CHANNEL 2 LEVEL SWITCH	1	3/4"			CTRL	INSTALL MFR. SUPPLIED CABLE, VERIFY CONDUIT SIZE REQ.
P-509	SCREEN #2 SOLENOID CONTROL	VERIFY SOLENOID LOCATION							
P-510									
P-511	FEED TO SCREEN MOTOR #1	MAIN CONTROL PANEL #1	SCREEN #1 DISCONNECT SW.	1	3/4"	(3) #12 CU AWG	#12	480	
P-512	FEED TO SCREEN MOTOR #1	SCREEN #1 DISCONNECT SW.	SCREEN #1 DISCONNECT SW.	1	3/4"	(3) #12 CU AWG	#12	480	
P-513	FEED TO WASHING COMPACTOR #1	MAIN CONTROL PANEL #1	WASH/COMPACTOR DISCONNECT SW.	1	3/4"	(3) #12 CU AWG	#12	480	INSTALL MANUFACTURER SUPPLIED CABLE
P-514	FEED TO WASHING COMPACTOR #1	WASH/COMPACTOR DISCONNECT SW.	WASH/COMPACTOR	1	3/4"	(3) #12 CU AWG	#12	480	
P-515	LEVEL CONTROL	MAIN CONTROL PANEL #1	LEVEL CONTROL PANEL #1	1	3/4"	(10) #14 CU AWG	#14	CTRL	CONDUCTOR COUNT TO BE VERIFIED WITH SUPPLIER
P-516	LEVEL SENSOR 1-1	LEVEL CONTROL PANEL #1	CHANNEL 1 UPSTREAM SENSOR	1	3/4"			CTRL	INSTALL MFR. SUPPLIED CABLE, VERIFY CONDUIT SIZE REQ.
P-517	LEVEL SENSOR 1-2	LEVEL CONTROL PANEL #1	CHANNEL 1 DOWNSTREAM SENSOR	1	3/4"			CTRL	INSTALL MFR. SUPPLIED CABLE, VERIFY CONDUIT SIZE REQ.
P-518	CHANNEL 1 LEVEL SWITCH	LEVEL CONTROL PANEL #1	CHANNEL 1 LEVEL SWITCH	1	3/4"			CTRL	INSTALL MFR. SUPPLIED CABLE, VERIFY CONDUIT SIZE REQ.
P-519	SCREEN #1 SOLENOID CONTROL	MAIN CONTROL PANEL #1	SCREEN #1 SOLENOID	1	3/4"	(2) #14 CU AWG	#14	120	VERIFY SOLENOID LOCATION
P-520									
P-521	WASHING COMPACTOR #1 SOLENOID CONTROL	MAIN CONTROL PANEL #1	WASH/COMPACTOR #1 SOLENOID 1&2	1	3/4"	(4) #14 CU AWG	#14	120	VERIFY SOLENOID LOCATION
② P-522	WASHING COMPACTOR #2 SOLENOID CONTROL	MAIN CONTROL PANEL #2	WASH/COMPACTOR #2 SOLENOID 1&2	1	3/4"	(4) #14 CU AWG	#14	120	VERIFY SOLENOID LOCATION

KEY NOTES

- ① CONDUIT IS FOR BID ALT #1 EQUIPMENT. INSTALL CONDUIT ONLY FOR FUTURE USE IF BID ALT #1 IS NOT CONSTRUCTED.
- ② CONDUIT IS FOR BID ALT #1 EQUIPMENT. DO NOT PROVIDE OR INSTALL FOR THIS PROJECT IF BID ALT #1 IS NOT CONSTRUCTED.
- ③ LOCATE CONDUIT TO EXISTING HIGH LEVEL FLOAT SWITCH. INSPECT EXISTING CONDUIT TO ENSURE SUITABILITY FOR REUSE AND INSTALL NEW CONDUCTOR TO NEW HIGH LEVEL FLOAT SWITCH.



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CITY OF SEDONA		
SEDONA WWRP HEADWORKS BAR SCREEN REPLACEMENT ELECTRICAL CONDUIT SCHEDULE		
SEI NO. S05623	DESIGNED JRK	DRAWN ----
CHECKED JRK	SHEET NO. 10 of 12	<b>E2.2</b>



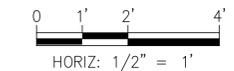
- SHEET NOTES:**
1. THE CONTRACTOR WILL BE RESPONSIBLE TO LOCATE ALL EXISTING UNDERGROUND UTILITIES BEFORE ANY EXCAVATION IS PERFORMED. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED TO NEW CONDITION OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
  2. NOT ALL CONDUITS ARE SHOWN. REFER TO CONDUIT AND CONDUCTOR SCHEDULE FOR INDIVIDUAL CONDUIT FILL REQUIREMENTS. CONDUIT LAYOUT SHOWN IS DIAGRAMMATIC ONLY. CONTRACTOR SHALL FIELD ROUTE AS NECESSARY TO ACCOMMODATE FIELD CONDITIONS AND AVOID OTHER STRUCTURES AS REQUIRED.
  3. REFER TO DRAWING E2.2 FOR CONDUIT IDENTIFICATION.
  4. REFER TO DRAWING E4 FOR EQUIPMENT SCHEDULE.

- KEY NOTES**
- 1 RECONNECT EXISTING LIGHT FIXTURE. EXISTING SWITCH IS LOCATED ON EXISTING CONTROL PANEL THAT IS TO BE REMOVED. RELOCATE SWITCH TO NEW EQUIPMENT RACK AND PROVIDE ALL CONDUIT, FITTINGS, AND HARDWARE TO RESTORE FIXTURE IN GOOD WORKING CONDITION.
  - 2 ULTRASONIC SENSOR LOCATION. HYDRORANGER 200 CONTROLLER AND TRANSDUCERS WILL BE PROVIDED BY SCREEN EQUIPMENT SUPPLIER AND SHALL BE INSTALLED BY CONTRACTOR. CONTRACTOR SHALL COORDINATE WITH SUPPLIER TO DETERMINE EXACT LOCATION FOR NEW EQUIPMENT AND SHALL PROVIDE ALL CONDUIT, FITTINGS AND MOUNTING HARDWARE FOR A WORKING SYSTEM.
  - 3 SOLENOID VALVE. LOCATION SHOWN IS APPROXIMATE. CONTRACTOR SHALL COORDINATE EXACT LOCATION WITH EQUIPMENT SUPPLIER.
  - 4 LOCATE EXISTING HAND HOLE HH-3-7A. INSTALL NEW CONDUCTORS IN EXISTING CONDUIT THROUGH THIS LOCATION. COORDINATE WITH OWNER TO DETERMINE THE COMPLETE PATH TO ELECTRICAL ROOM AND PLANT SCADA SYSTEM.
  - 5 INSTALL NEW CONDUCTORS IN EXISTING CONDUIT WHERE POSSIBLE. SAWCUT CONCRETE AS NECESSARY TO LOCATE EXISTING CONDUIT AND TO INSTALL NEW CONDUIT WHERE REQUIRED. ALL DAMAGED AREAS SHALL BE RESTORED BY CONTRACTOR.
  - 6 INTERCEPT EXISTING CONDUIT AND TIE INTO NEW CONDUIT SYSTEM.
  - 7 CHANNEL LEVEL SWITCH. LEVEL SWITCH AND CABLE PROVIDED BY EQUIPMENT SUPPLIER AND INSTALLED BY CONTRACTOR. PROVIDE CONDUIT, AND ALL MOUNTING HARDWARE FOR A COMPLETE INSTALLATION. COORDINATE WITH EQUIPMENT SUPPLIER FOR DETAILS.
  - 8 REPLACE EXISTING FLOAT SWITCH WITH APG, FT-300A. PROVIDE ALL CONDUIT, CABLE AND MOUNTING HARDWARE FOR A COMPLETE INSTALLATION.
  - 9 INSPECT AND SEAL ALL CONDUITS ENTERING AND LEAVING ELECTRICAL PULL BOXES TO PREVENT RODENT ENTRY INTO CONDUIT SYSTEM.
  - 10 21" X 48" CONDUIT CROSSOVER RAMP WITH USABLE SPAN 4-1/2" X 3-9/16" PER VESTIL MANUFACTURING CORP., XHCR-48-YB OR APPROVED EQUAL.

REV. NO.	COMMENT	DATE

	<p><b>SUNRISE ENGINEERING</b></p> <p>2152 SOUTH VINEYARD, SUITE 123          MESA, ARIZONA 85210          TEL 480.768.8600 • FAX 480.768.8609          www.sunrise-eng.com</p>

**A** ELECTRICAL SITE PLAN  
 3/4" = 1' AT FULL SCALE (22"x34")



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 1-800-782-5348

SEI NO. S05623	DESIGNED JRK	DRAWN ---	CHECKED JRK	SHEET NO. 11 of 12	<b>E3</b>
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**SHEET NOTES:**

1. THE CONTRACTOR WILL BE RESPONSIBLE TO LOCATE ALL EXISTING UNDERGROUND UTILITIES BEFORE ANY EXCAVATION IS PERFORMED. ANY DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED TO NEW CONDITION OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
2. NOT ALL CONDUITS ARE SHOWN. REFER TO CONDUIT AND CONDUCTOR SCHEDULE FOR INDIVIDUAL CONDUIT FILL REQUIREMENTS. CONDUIT LAYOUT SHOWN IS DIAGRAMMATIC ONLY. CONTRACTOR SHALL FIELD ROUTE AS NECESSARY TO ACCOMMODATE FIELD CONDITIONS AND AVOID OTHER STRUCTURES AS REQUIRED.
3. EQUIPMENT LAYOUT AND SIZE SHOWN IS TYPICAL ONLY. CONTRACTOR SHALL COORDINATE WITH EQUIPMENT SUPPLIER AND REFER TO EQUIPMENT SHOP DRAWINGS TO VERIFY SIZE, LOCATION AND CONDUIT STUB UP REQUIREMENTS.

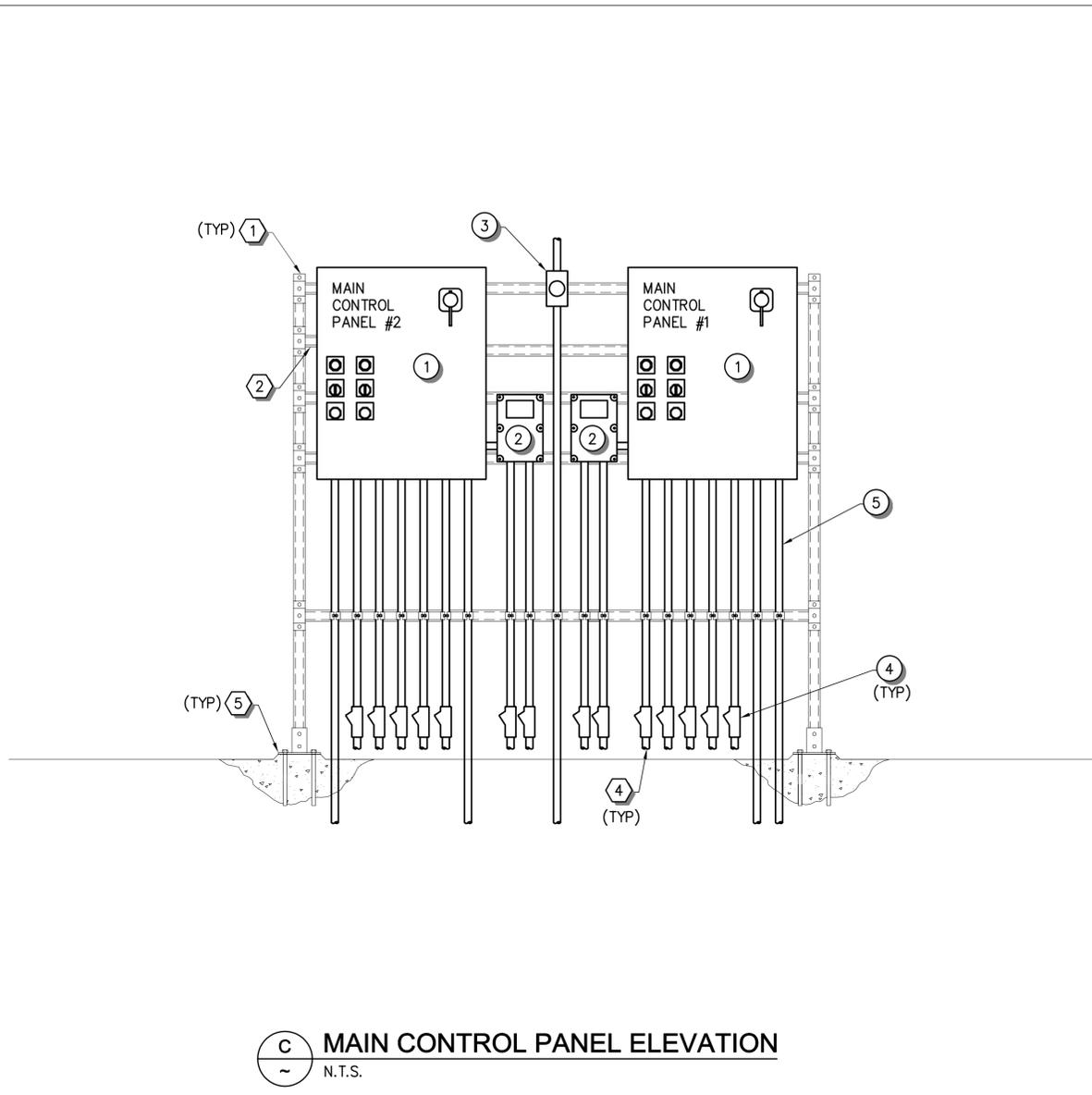
**KEY NOTES**

- 1 1-5/8" CHANNEL. PROVIDE BACK TO BACK CHANNEL FOR VERTICAL SUPPORTS. PROVIDE ALL MOUNTING HARDWARE REQUIRED FOR A COMPLETE AND OPERABLE SYSTEM.
- 2 PROVIDE 1-5/8" STAINLESS STEEL CHANNEL FOR HORIZONTAL CROSS MEMBERS. PROVIDE SECTIONS AS NECESSARY, WITH A MINIMUM OF TWO (2).
- 3 CONTRACTOR SHALL SAWCUT EXISTING CONCRETE WHERE CONDUIT IS REQUIRED TO BE INSTALLED UNDER SLAB. CONTRACTOR SHALL RESTORE CONCRETE SURFACE AFTER CONDUIT INSTALLATION AND BACKFILL.
- 4 SURFACE MOUNT CONDUIT TO HEADWORKS EQUIPMENT WHERE POSSIBLE. PROVIDE ALL MOUNTING AND SUPPORT HARDWARE. WHERE SURFACE MOUNTING WOULD CREATE A HAZARD, CONTRACTOR SHALL INSTALL NEW CONDUIT UNDER SLAB.
- 5 ANCHOR EQUIPMENT RACK TO CONCRETE SURFACE WITH 1/2" DIAMETER STAINLESS STEEL EPOXY BOLTS MIN. 7" EMBEDMENT. INSTALL 1" CONCRETE PAD AT BASE OF RACK SUPPORT.

REV. NO.	COMMENT	DATE

	<p><b>SUNRISE ENGINEERING</b></p> <p>2152 SOUTH VINEYARD, SUITE 123          MESA, ARIZONA 85210          TEL 480.768.8600 • FAX 480.768.8609          www.sunrise-eng.com</p>

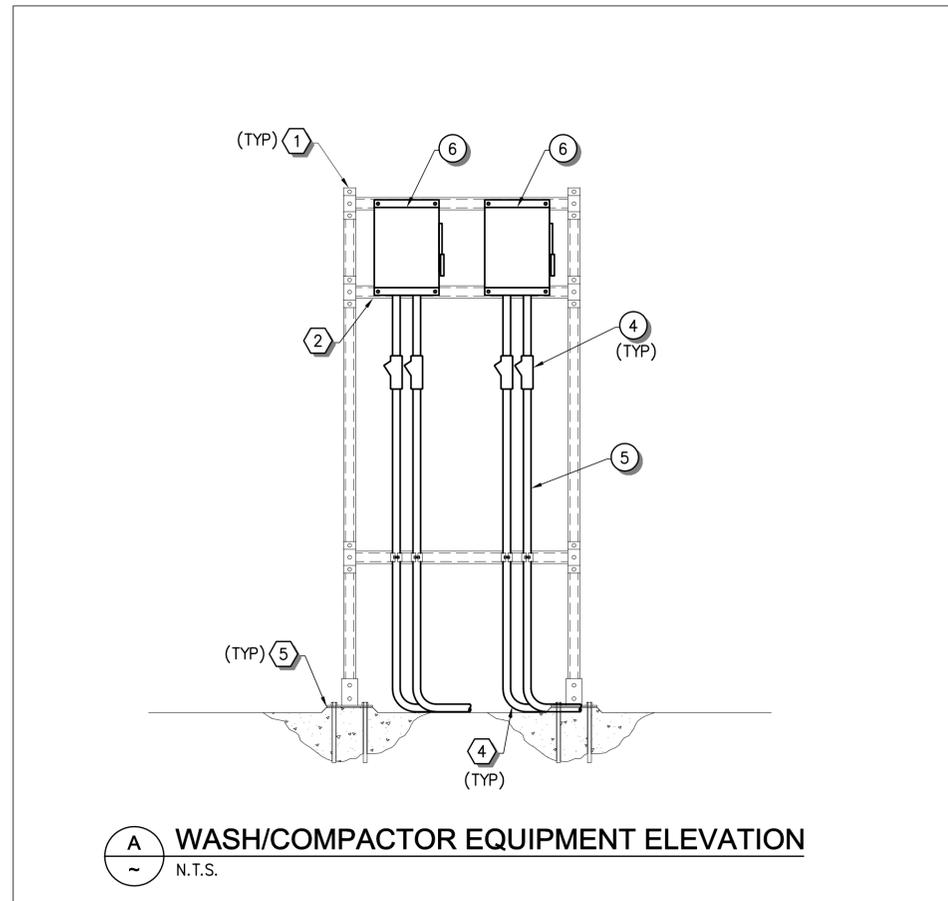
<p>SEDONA WWRP HEADWORKS          BAR SCREEN REPLACEMENT          ELECTRICAL ELEVATIONS</p>				
SEI NO. S05623	DESIGNED JRK	DRAWN ----	CHECKED JRK	SHEET NO. 12 of 12
<p>811 Know what's below. Call before you dig. 1-800-782-5348</p>				<p><b>E4</b></p>



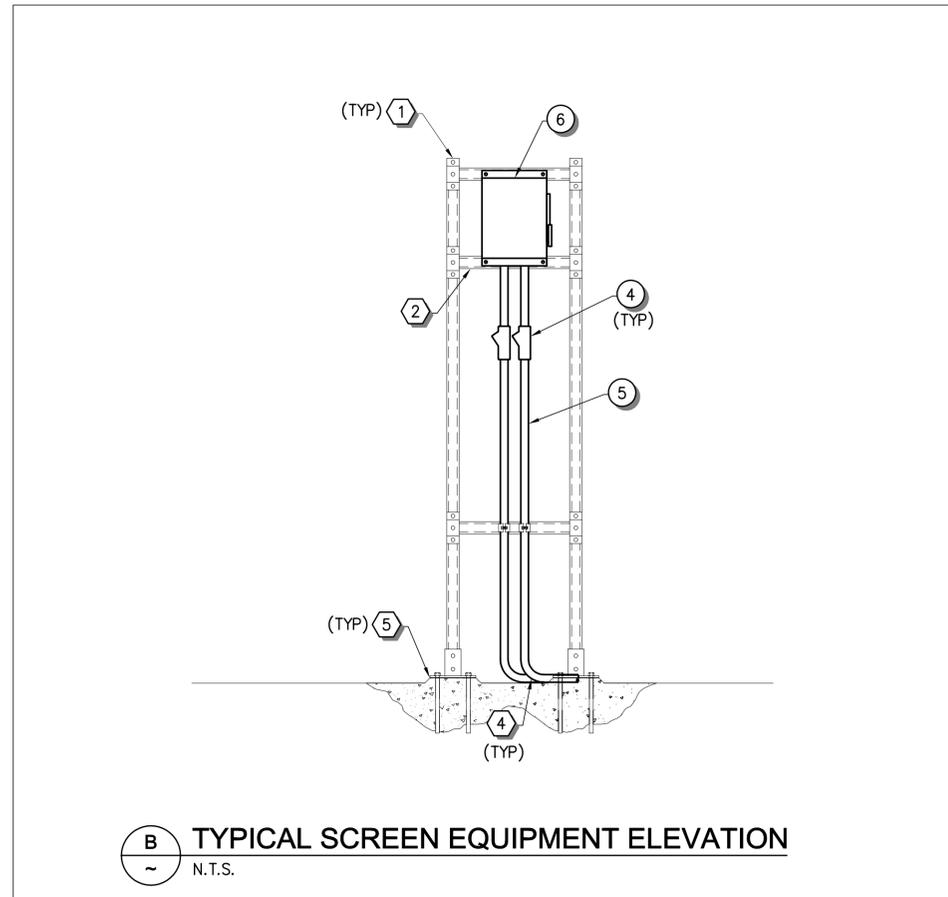
**C MAIN CONTROL PANEL ELEVATION**  
N.T.S.

**PARTIAL EQUIPMENT LIST**

- 1 MAIN CONTROL PANEL PROVIDED BY EQUIPMENT SUPPLIER AND INSTALLED BY CONTRACTOR. CONTRACTOR SHALL INSTALL PER MANUFACTURERS INSTRUCTIONS AND SHALL PROVIDE ALL MATERIALS NECESSARY TO COMPLETE INSTALLATION.  
  
CONTRACTOR SHALL PROVIDE FIBER TO ETHERNET CONVERTER TO BE MOUNTED INSIDE MAIN CONTROL PANEL. ONE CONVERTER SHALL ALSO BE PROVIDED TO MOUNT IN PLANT PLC CABINET TO FACILITATE ETHERNET COMMUNICATIONS BETWEEN SCREEN/WASHER EQUIPMENT AND PLANT SCADA SYSTEM. FIBER TO ETHERNET CONVERTER SHALL BE NTRON 102MC-SC-MDR OR APPROVED EQUAL.
- 2 HYDRORANGER 200 LEVEL CONTROLLER PROVIDED BY SCREEN EQUIPMENT SUPPLIER AND INSTALLED BY CONTRACTOR PER MANUFACTURER'S INSTRUCTIONS. COORDINATE ALL WORK WITH EQUIPMENT SUPPLIER.
- 3 LIGHT SWITCH FOR EXISTING CANOPY FIXTURE. REUSE EXISTING EQUIPMENT IF POSSIBLE. PROVIDE NEW WEATHERPROOF SWITCH AND CONDUIT IF EXISTING IS DAMAGED OR OTHERWISE NOT SERVICEABLE. EXISTING SWITCH TO BE REMOVED FROM EXISTING PANEL AND LOCATED ON NEW EQUIPMENT RACK.
- 4 CONTRACTOR SHALL PROVIDE CONDUIT SEAL-OFFS RATED FOR HAZARDOUS LOCATIONS PER NEC. CHANNEL SHALL BE CONSIDERED CLASS I DIV 1, AND 10' ENVELOPE AROUND CHANNEL SHALL BE CONSIDERED CLASS I DIV 2.
- 5 ALL EXPOSED CONDUIT AND FITTINGS SHALL BE PVC COATED RIGID. ALL FITTINGS SHALL BE APPROPRIATE FOR HAZARDOUS CLASSIFICATION.
- 6 DISCONNECT SWITCH - 480V, 3-POLE, NEMA 4X PROVIDED AND INSTALLED BY CONTRACTOR.



**A WASH/COMPACTOR EQUIPMENT ELEVATION**  
N.T.S.



**B TYPICAL SCREEN EQUIPMENT ELEVATION**  
N.T.S.