# MONTEREY PENINSULA WATER MANAGEMENT DISTRICT SLEEPY HOLLOW STEELHEAD REARING FACILITY

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## INDEX OF DRAWINGS

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C-005	REARING POOL PLAN AND SECTION
C-006	CHANNEL PLAN AND SECTION

## PROJECT LOCATION:

SLEEPY HOLLOW
STEELHEAD REARING FACILITY

CLIENT INFORMATION:
MONTEREY PENINSULA
WATER MANAGEMENT DISTRICT
5 HARRIS COURT, BUILDING G
MONTEREY, CA 93940

## Tt PROJECT No.:

200-124674-21001

## CLIENT PROJECT No.:

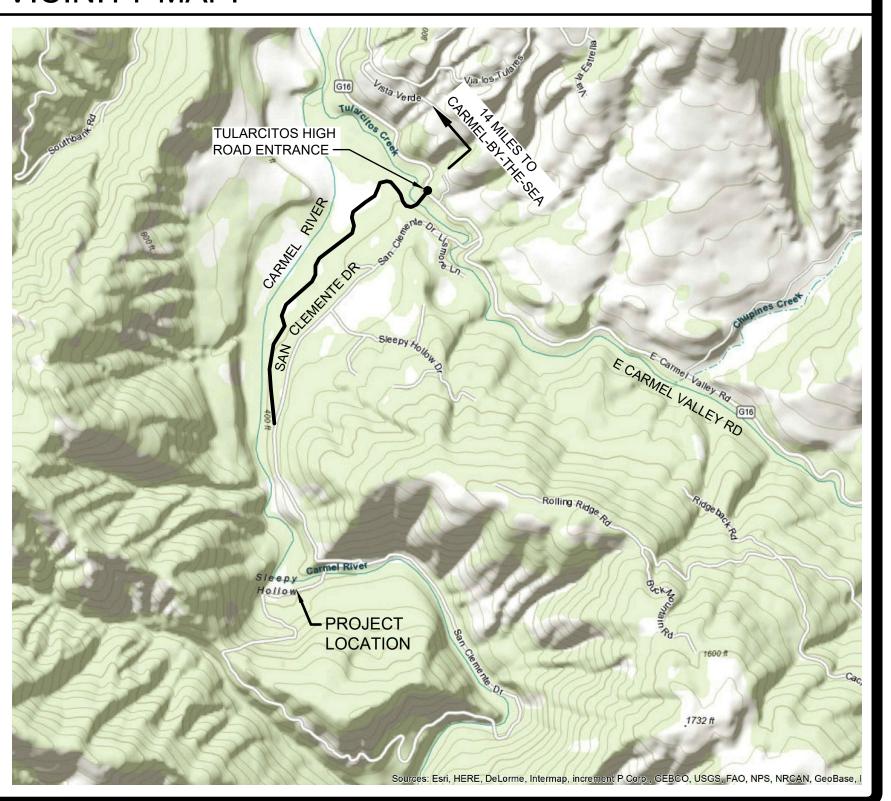
# PROJECT DESCRIPTION / NOTES:

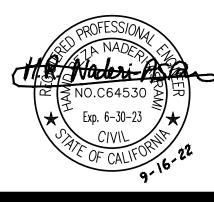
REARING POOL AND CHANNEL REHABILITATION AT THE SLEEPY HOLLOW STEELHEAD REARING FACILITY (SHSRF).

# ISSUED:

SEPTEMBER 16, 2022 - ISSUED FOR BID

# **VICINITY MAP:**





#### **UTILITY LOCATION NOTES**

- 1. CALIFORNIA STATE LAW REQUIRES CONTRACTORS TO LOCATE UTILITIES PRIOR TO BEGINNING ANY EXCAVATION. CONTRACTOR IS EXPECTED TO ABIDE BY ALL APPLICABLE LAWS AND REGULATIONS GOVERNED BY THE STATE OF CALIFORNIA.
- 2. EXCAVATORS MUST NOTIFY THE CENTER AT LEAST 2 BUSINESS DAYS, AND UP TO 14 BUSINESS DAYS IN REMOTE AREAS, BEFORE COMMENCING AN EXCAVATION. CALL 811.
- 3. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL EXISTING UTILITIES BOTH HORIZONTALLY AND VERTICALLY PRIOR TO STARTING CONSTRUCTION. THE 811 DIGLINE MAY NOT INCLUDE ALL UTILITIES IN THE AREA. CONTRACTOR IS RESPONSIBLE FOR ENSURING ALL UTILITES HAVE BEEN LOCATED. THIS INCLUDES POTHOLING ALL UTILITY CROSSINGS. THE OWNER AND ENGINEER SHALL BE CONTACTED 72 HOURS PRIOR TO POTHOLING OF ANY UTILITY

## SURVEY CONTROL DATA

SURVEY PERFORMED UNDER THE SUPERVISION OF DAN HELT LS 8925 SURVEY DATES: JUNE 22-25 2015

#### HORIZONTAL CONTROL

HORIZONTAL CONTROL FOR THIS PROJECT IS BASED ON THE CALIFORNIA COORDINATE SYSTEM, ZONE 4. NORTH AMERICAN DATUM OF 1983. DEFINED LOCALLY BY CORS STATION SANTA LUCIACN, 2004 P171. COORDINATES FOR LOCAL CONTROL WERE ESTABLISHED BY GPS AND ADJUSTED THROUGH POST PROCESSING.

#### BASIS OF BEARING

THE BEARING OF N54°45'15"W BETWEEN SET CONTROL MONUMENTS "3" AND "4" IS THE BASIS OF BEARING FOR THIS PROJECT

#### **CONTROL POINT NUMBER "3"**

N: 2055949.337 COMBINED FACTOR: 0.99993164 CONVERGENCE ANGLE: -1°37'13" E: 5762949.718 ELEV: 403.17

#### CONTROL POINT NUMBER "4"

N: 2056061.227 COMBINED FACTOR: 0.99993167 E: 5762791.373 CONVERGENCE ANGLE: -1°37'14" ELEV: 402.11

## VERTICAL CONTROL

VERTICAL CONTROL FOR THIS PROJECT IS BASED ON THE NATIONAL GEODETIC VERITCAL DATUM OF 1929 (NGVD 29) AND IS DEFINED LOCALLY BY NGS SURVEY MONUMENT F 704 PID: GU2842 ELEV = 408.50.

## BENCHMARK

THE BENCHMARK FOR THIS PROJECT IS SET CONTROL POINT NUMBER "3". SEE DRAWING C-003 FOR LOCATION. ELEVATION = 403.17 FEET (NGVD 29).

## REFERENCE

DENOTES SECTION NUMBER IDENTIFICATION —

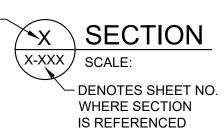


- DENOTES SHEET NO.

IS REFERENCED

## SECTION REFERENCE

DENOTES SECTION NUMBER IDENTIFICATION -

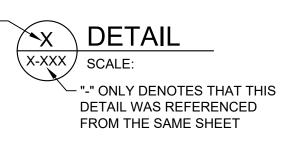


## SECTION TITLE

**DENOTES DETAIL** NUMBER IDENTIFICATION -X-XXX ─ "-" ONLY DENOTES THAT THIS DETAIL IS SHOWN ON THE SAME SHEET

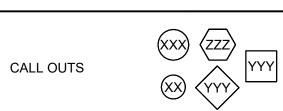
## DETAIL REFERENCE

**DENOTES DETAIL** NUMBER IDENTIFICATION -



## **DETAIL TITLE**

# **GENERAL**



BREAK KEYNOTE

REVISION



NORTH ARROWS



FD

FLOOR DRAIN

FFE FINISHED FLOOR ELEV

## **ABBREVIATIONS**

			ABBREVIATIONS		
Α	AIR	FG	FINISHED GRADE	PD	PERFORATED DRAIN
AFF	ABOVE FINISHED FLOOR	FLG	FLANGE	PE	PLAIN END
AB	ANCHOR BOLT	FM	FORCE MAIN	PNT	PAINT
ABV	ABOVE	FOC	FACE OF CONCRETE	PRV	PRESSURE REDUCING VALVE
ADD'L	ADDITIONAL	FOF	FACE OF FRAMING	PSIG	POUNDS PER SQUARE INCH GAGE
AHU	AIR HANDLING UNIT	FOS	FACE OF STUD	PT	PENSTOCK TAP
ALT	ALTERNATE	FRP	FIBER REINFORCED PLASTIC	PVC	POLYVINYL CHLORIDE
ALUM	ALUMINUM	FT	FEET	R	RADIUS
ARCH	ARCHITECTURAL	GA	GAUGE	RA	RETURN AIR
В	BYPASS	GAL	GALLONS	RPBP	REDUCED PRESSURE BACKFLOW
BD	BOARD	GI	GALVANIZED IRON		PREVENTER
BLDG	BUILDING	GPD	GALLONS PER DAY	RECIRC	RECIRCULATION
BLK	BLOCK	GPM	GALLONS PER MINUTE	REINF	REINFORCING
ВО	BOTTOM OF	GS	GRAVITY SEWER	REQ'D	REQUIRED
BV	BUTTERFLY VALVE	GV	GATE VALVE	RO	ROUGH OPENING
CD	CHEMICAL DRAIN	GWB	GYPSUM WALL BOARD	SCFM	STD CUBIC FEET PER MINUTE
CFM	CUBIC FEET PER MINUTE	GYP	GYPSUM	SD	STORM DRAIN
CI	CAST IRON	HAS	HEADED ANCHOR STUD	SHT	SHEET
CIP	CAST IN PLACE	HDPE	HIGH DENSITY POLYETHELENE	SF	SQUARE FEET/SUPPLY FAN
CL	CENTER LINE	HDWR	HARDWARE	SIM	SIMILAR
CLR	CLEAR	HGL	HYDRAULIC GRADE LINE	SL	SLOPE
CMP	CORRUGATED METAL PIPE	НМ	HOLLOW METAL	SQ	SQUARE
CMU	CONCRETE MASONRY UNIT	HORIZ	HORIZONTAL	SS/SST	STAINLESS STEEL
СО	CLEAN OUT, CLEAR OPENING	HR	HOUR	STE	SEPTIC TANK EFFLUENT
CONC	CONCRETE	HRT	HYDRAULIC DETENTION TIME	STEP	SEPTIC TANK EFFLUENT PUMP
CONN	CONNECTION	HP	HORSEPOWER/HIGH POINT	TC	TOP OF CURB
COORD	COORDINATE	HW	HEADWORKS/HIGH WATER	TDC	TOP DEAD CENTER
CPL	COUPLING	ID	INSIDE DIAMETER	TO	TOP OF
CU	CUBIC	ΙE	INVERT ELEVATION	TOC	TOP OF CONCRETE
D	DRAIN	INF	INFLUENT	TOW	TOP OF WALL
DG	DIGESTER GAS	INV	INVERT	TRT	TAILRACE TAP
DI	DUCTILE IRON	LBS	POUNDS	TS	TUBE STEEL
DIA	DIAMETER	LF	LINEAR FOOT	TYP	TYPICAL
DN	DOWN	LL	LIVE LOAD	UD	UNDERDRAIN
DR	DRAIN	LHO	LOW HEAD OXYGENATOR	UH	UNIT HEATER
DS	DOWNSPOUT	LOC	LOCATION	UV	ULTRA VIOLET RADIATION
DTL	DETAIL	LP	LOW POINT	V	VENT
DWG	DRAWING	MAV	MOTORIZED AIR VALVE	VFD	VARIABLE FREQUENCY DRIVE
EA	EACH	MAX	MAXIMUM	VA	VACUUM
EF	EACH FACE/EXHAUST FAN	MECH	MECHANICAL	VIN	VINYL
EFF	EFFLUENT	MFR	MANUFACTURER	VERT	VERTICAL
EG	EXHAUST GRILL	MG	MILLION GALLONS	VTR	VENT THROUGH ROOF
EL	ELEVATION	MG/L	MILLIGRAMS PER LITER	W/	WITH
ELEC	ELECTRIC	MGD	MILLION GALLONS PER DAY	WH	WATER HEATER
EOS	EDGE OF SLAB	MH	MANHOLE	WN	NON-POTABLE WATER
EP	EDGE OF PAVEMENT	MIN	MINIMUM	WNH	NON-POTABLE HOT WATER
EQ	EQUAL		MECHANICAL JOINT	WP	POTABLE WATER
EQUIP			MOUNTED	WPH	POTABLE HOT WATER
EW	EACH WAY	MTL	METAL	WS	WATER SURFACE
EXIST	EXISTING	NIC	NOT IN CONTRACT	WWF	WELDED WIRE FABRIC
F	FAHRENHEIT	OA	OUTSIDE AIR	YCO	YARD CLEAN OUT
FCO	FLOOR CLEAN OUT	OC	ON CENTER		
-D	EL COD DDAIN	011	OVER LANG		

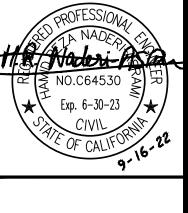
OH

OPP

OVERHANG

OPPOSITE





Project No.: 200-124674-2100 Designed By: Drawn By:

Checked By:

#### GENERAL GEOTECHNICAL NOTES

SEE GEOTECHNICAL INVESTIGATION BY PACIFIC CREST ENGINEERING INC. DATED APRIL 2018 FOR INFORMATION REGARDING EXPECTED SUBSURFACE CONDITIONS INCLUDING BUT NOT LIMITED TO AREAS OF EXPECTED DIFFICULT EXCAVATION AND GROUNDWATER CONDITIONS AS WELL AS OTHER CRITERIA NOT IDENTIFIED ON THE DRAWINGS.

#### **CLEARING AND STRIPPING**

THE INITIAL PREPARATION OF THE SITE MAY CONSIST OF REMOVAL OF ANY DESIGNATED TREES AND DEBRIS. TREE REMOVAL, IF NEEDED, SHOULD INCLUDE THE ENTIRE STUMP AND ROOT BALL. ANY VOIDS CREATED BY THE REMOVAL OF TREE AND ROOT BALLS MUST BE BACKFILLED WITH PROPERLY COMPACTED ENGINEERED FILL. SURFACE VEGETATION, TREE ROOTS AND ORGANICALLY CONTAMINATED TOPSOIL SHOULD THEN BE REMOVED ("STRIPPED") FROM THE AREA TO BE GRADED. IN ADDITION, ANY REMAINING DEBRIS OR LARGE ROCKS MUST ALSO BE REMOVED (THIS INCLUDES CONCRETE OR ROCKS GREATER THAN 2 INCHES IN GREATEST DIMENSION). LARGE ROCKS MIXED WITH CLEAN SOIL CAN BE USED FOR FILL WHERE DESIGNATED.

#### GENERAL SUBGRADE PREPARATION

AREAS OF MAN-MADE FILL, IF ENCOUNTERED, ARE TO BE COMPLETELY EXCAVATED TO UNDISTURBED NATIVE MATERIAL. EXPOSED SOILS IN AREAS TO RECEIVE CONCRETE SLABS-ON-GRADE SHOULD BE SUBEXCAVATED TO A MINIMUM DEPTH SHOWN BELOW BOTTOM OF ALL FOUNDATIONS. SUBEXCAVATIONS SHOULD EXTEND AT LEAST 5 FEET HORIZONTALLY BEYOND FOUNDATIONS, UNLESS DIMENSIONED OTHERWISE ON THE DRAWINGS. FOLLOWING CLEARING, STRIPPING AND ANY NECESSARY SUBEXCAVATIONS, THE EXPOSED SUBGRADE SOIL THAT IS TO SUPPORT CONCRETE SLABS-ON-GRADE, AND FOUNDATIONS SHOULD THEN BE SCARIFIED 8 INCHES, AND THE SOIL MOISTURE CONDITIONED AND COMPACTED. FOLLOWING THE SUBEXCAVATION AND SUBGRADE PREPARATION. AREAS SHOULD BE BROUGHT UP TO DESIGN GRADES WITH ENGINEERED FILL THAT IS MOISTURE CONDITIONED AND COMPACTED.

#### ENGINEERED FILL

NATIVE OR IMPORTED SOIL PROPOSED FOR USE AS ENGINEERED FILL SHOULD MEET THE FOLLOWING REQUIREMENTS:

- A. FREE OF ORGANICS, DEBRIS, AND OTHER DELETERIOUS MATERIALS.
- B. FREE OF "RECYCLED" MATERIALS SUCH AS ASPHALTIC CONCRETE, CONCRETE, BRICK, ETC. C. GRANULAR IN NATURE, WELL GRADED, AND CONTAIN SUFFICIENT BINDER TO ALLOW UTILITY TRENCHES TO STAND OPEN.
- D. FREE OF ROCKS IN EXCESS OF 2 INCHES IN SIZE.
- E. A PLASTICITY INDEX BETWEEN 4 AND 12 AND A MINIMUM RESISTANCE "R" VALUE OF 30. F. NON-EXPANSIVE.

#### ENGINEERED FILL PLACEMENT, COMPACTION, AND MOISTURE CONDITIONING

ENGINEERED FILL SHOULD BE PLACED IN MAXIMUM 8 INCH LIFTS, BEFORE COMPACTION, AT A WATER CONTENT WHICH IS WITHIN 1 TO 3 PERCENT OF THE LABORATORY OPTIMUM VALUE. FILL SHALL BE COMPACTED TO A MINIMUM OF 90% OF ITS MAXIMUM DRY DENSITY. MAXIMUM DRY DENSITY WILL BE OBTAINED FROM A LABORATORY COMPACTION CURVE RUN IN ACCORDANCE WITH ASTM PROCEDURE D1557. THIS TEST WILL ALSO ESTABLISH THE OPTIMUM MOISTURE CONTENT OF THE MATERIAL. FIELD DENSITY TESTING WILL BE PERFORMED IN ACCORDANCE WITH ASTM TEST D6938 (NUCLEAR METHOD). PERFORM FIELD DENSITY TESTING IN ACCORDANCE WITH THE GEOTECHNICAL INVESTIGATION.

## UTILITY TRENCH BACKFILL

ANY PIPES WITHIN THE TOP 24 INCHES OF A FINISHED SURFACE THAT WILL HAVE VEHICLE TRAFFIC SHALL BE CONCRETE ENCASED. PIPES SHALL BE BEDDED AND BACKFILLED AS SHOWN ON THE DRAWINGS AND DEFINED IN THE SPECIFICATIONS.

BACKFILL IS DEFINED AS MATERIAL PLACED IN A TRENCH STARTING ONE FOOT ABOVE THE PIPE, AND BEDDING IS ALL MATERIAL PLACED IN A TRENCH BELOW THE BACKFILL.

UNLESS SHOWN OTHERWISE, BEDDING AROUND UTILITY PIPES SHALL BE FREE-DRAINING CLEAN SAND FOR PIPES LESS THAN 6 INCHES DIAMETER. SAND BEDDING SHOULD BE COMPACTED TO AT LEAST 95 PERCENT RELATIVE COMPACTION. CLEAN SAND IS DEFINED AS 100 PERCENT PASSING THE #4 SIEVE, AND LESS THAN 5 PERCENT PASSING THE #200 SIEVE, APPROVED IMPORTED CLEAN SAND OR APPROVED NATIVE SOIL SHOULD BE USED AS UTILITY TRENCH BEDDING AND BACKFILL. BACKFILL IN TRENCHES LOCATED UNDER AND ADJACENT TO STRUCTURAL FILL, FOUNDATIONS, CONCRETE SLABS AND PAVEMENTS SHOULD BE PLACED IN HORIZONTAL LAYERS NO MORE THAN 8 INCHES THICK. EACH LAYER OF TRENCH BACKFILL SHOULD BE WATER CONDITIONED AND COMPACTED TO AT LEAST 95 PERCENT RELATIVE COMPACTION. UTILITY TRENCHES WHICH CARRY "NESTED" CONDUITS (STACKED VERTICALLY) SHOULD BE BACKFILLED WITH A CONTROL DENSITY FILL (SUCH AS 2-SACK SAND\CEMENT SLURRY) TO AN ELEVATION ONE FOOT ABOVE THE NESTED CONDUIT STACK.

## PROCESS WATER CONSTRUCTION NOTES

- 1. PIPE SHALL BE SOLVENT WELD SCHEDULE 40 PVC UNLESS NOTED OTHERWISE.
- CLEAN PIPE OF ALL DEBRIS DURING INSTALLATION. DO NOT RELY ONLY ON FLUSHING TO CLEAN THE PIPE. REMOVE GRINDINGS, FILINGS, SLAG, ETC. DURING INSTALLATION.
- ELBOWS AND ANGLE POINTS ARE SHOWN ON THE DRAWINGS TO ACHIEVE THE DESIRED LOCATION AND ALIGNMENT FOR THE PIPE. CONTRACTOR SHALL USE ELBOWS THAT ARE FABRICATED AND MITERED IN COMPLIANCE WITH APPLICABLE PIPE STANDARDS. WHERE NECESSARY AND UPON REVIEW BY THE ENGINEER DEFLECTIONS OTHER THAN WHAT ARE SHOWN ON THE DRAWINGS MAY BE USED.
- SOME PIPE TYPES MAY ALLOW FOR ANGLES TO BE MADE BY DEFLECTING OR BENDING THE PIPE. CONTRACTOR SHALL NOT EXCEED MANUFACTURES MAXIMUM DEFLECTION OR MINIMUM RADIUS.
- PRESSURE TEST ALL PIPES. IF TEST PRESSURE IS NOT SPECIFIED ELSEWHERE IN THE CONTRACT DOCUMENTS, THEN TEST TO 1.5 TIMES THE RATED PRESSURE. DO NOT EXCEED MANUFACTURE MAXIMUM PRESSURE FOR PIPE, FITTINGS, VALVES OR EQUIPMENT. TEST PROCEDURE TO BE IN ACCORDANCE WITH APPLICABLE ASTM STANDARD AND AS APPROVED BY THE ENGINEER.
- CONTRACTOR TO VERIFY FITTINGS AND CONNECTIONS BETWEEN DIFFERENT MATERIAL TYPES ARE COMPATIBLE AND PROVIDE ADAPTERS WHERE NECESSARY.
- INSTALL STEEL PIPE IN ACCORDANCE WITH AWWA MANUAL M11 AND FIELD WELD IN ACCORDANCE WITH AWWA C206. INSTALL HDPE PIPE IN ACCORDANCE WITH THE PLASTIC PIPE INSTITUTE (PPI) POLYETHYLENE PIPE HANDBOOK, APPLICABLE PPI GUIDELINES, AWWA C906, AND ASTM D 2321.

#### CONCRETE NOTES

#### C1 APPLICABLE CODE

CONCRETE DESIGN AND CONSTRUCTION SHALL CONFORM TO THE 2014 EDITION OF THE ACI BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE, ACI 318, AND THE 2016 EDITION OF THE SPECIFICATIONS FOR STRUCTURAL CONCRETE, ACI 301.

#### C2 REINFORCING STEEL DETAILS

DETAILING, FABRICATION AND ERECTION OF REINFORCING STEEL, UNLESS OTHERWISE NOTED, SHALL BE IN ACCORDANCE WITH DETAILS AND DETAILING OF CONCRETE **REINFORCEMENT ACI 315.** 

#### C3 DESIGN STRENGTHS

- A. CAST-IN-PLACE CONCRETE
- (1) GENERAL USE f'c = 4500 psi @ 28 DAYS
- B. MAX WATER TO CEMENTITIOUS MATERIAL RATIO = 0.42 C. MINIMUM CEMENTITIOUS MATERIAL FOR MAXIMUM AGGREGATE SIZE OF 3/4" = 560 LBS/CY MINIMUM CEMENTITIOUS MATERIAL FOR MAXIMUM AGGREGATE SIZE OF 1" = 535 LBS/CY
- MINIMUM CEMENTITIOUS MATERIAL FOR MAXIMUM AGGREGATE SIZE OF 1 1/2" = 515 LBS/CY D. FOR NOMINAL MAXIMUM AGGREGATE SIZE OF 3/4" OR 1", AIR CONTENT = 6%
- FOR NOMINAL MAXIMUM AGGREGATE SIZE OF 1 1/2", AIR CONTENT = 5.5% REINFORCING STEEL SHALL BE ASTM A 615, GRADE 60.
- GROUT SHALL BE ASTM C 1107 WITH f'c = 7000 psi @ 28 DAYS
- CONCRETE SHALL BE PROPORTIONED TO MEET THE AVERAGE COMPRESSIVE STRENGTH REQUIREMENTS IN ACI 301.

#### C4 CONCRETE COVER

CONCRETE COVER FOR REINFORCING BARS SHALL BE AS FOLLOWS:

- A. FOOTINGS AND FOUNDATION MATS CAST ON GROUND 3"
- B. FORMED OR FINISHED SURFACES 2"

#### C5 DOWELS

DOWELS SHALL BE AT LEAST THE SAME SIZE AND SPACING AS BARS WITH WHICH THEY ARE LAPPED. THE LAP EMBEDMENT SHALL BE AS RECOMMENDED BY ACI 318 OR AS NOTED

#### C6 BAR SPLICES

SPLICES OF REINFORCING STEEL BAR SHALL BE IN ACCORDANCE WITH SCHEDULE SHOWN ON CONCRETE DETAILS AND ACI 318 AND SHALL BE CLASS B UNLESS OTHERWISE NOTED. THE LENGTH OF LAP SPLICE OF BARS OF DIFFERENT DIAMETER SHALL BE BASED ON THE SMALLER DIAMETER. BAR SPLICES MAY ALSO BE MADE BY WELDING IN ACCORDANCE WITH AWS SPEC D 1.4 IF APPROVED BY THE ENGINEER.

#### C7 RESTRICTED BAR ANCHORAGE

IN CASES WHERE REINFORCING BARS CANNOT BE EXTENDED AS FAR AS REQUIRED DUE TO THE LIMITED EXTENT OF THE ADJACENT CONCRETE STRUCTURE, THE BARS SHALL EXTEND AS FAR AS POSSIBLE AND END IN STANDARD HOOKS.

#### C8 STANDARD HOOKS

BARS ENDING IN RIGHT ANGLE BENDS OR HOOKS SHALL CONFORM TO THE REQUIREMENTS OF

#### C9 CHAMFERS

EXCEPT AS OTHERWISE REQUIRED, EXPOSED CONCRETE CORNERS AND EDGES SHALL HAVE 3/4" CHAMFERS. RE-ENTRANT CORNERS SHALL NOT HAVE FILLETS.

#### C10 CAST-IN-PLACE CONCRETE ANCHORS

ANCHORS SHALL BE HEADED BOLTS OF ASTM F1554 GRADE 55 (WITH SUPPLEMENT S1) WITH ASTM A563 HEAVY HEXAGONAL NUTS AND ASTM A36 PLATE WASHERS WITH MINIMUM SIZE CONFORMING TO TABLE 14-2 OF THE CURRENT AISC STEEL CONSTRUCTION MANUAL, UNLESS NOTED OTHERWISE. ALTERNATELY, ANCHORS SHALL BE THREADED AND NUTTED ROD CONFORMING TO ASTM F1554 GRADE 55 (WITH SUPPLEMENT S1). ALL MATERIALS SHALL BE HOT DIP GALVANIZED.

## C11 POST-INSTALLED ADHESIVE ANCHORS

ADHESIVE ANCHORS AND THEIR PROPERTIES SUCH AS DIAMETER, SPACING, EDGE DISTANCE, EMBEDMENT AND MATERIAL/FINSH SHALL CONFORM TO THE DETAILS IN THESE DRAWINGS ADHESIVE SHALL BE HILTI HIT-HY 200 OR APPROVED EQUAL. THREADED ROD SHALL BE F1554 GRADE 55 (WITH SUPPLEMENT S1) HOT DIP GALVANIZED.

## C12 INSTALLATION OF POST-INSTALLED ANCHORS

ALL ADHESIVE ANCHORS SHALL BE INSTALLED IN STRICT CONFORMANCE TO MANUFACTURER'S DIRECTIONS. ALL HOLES SHALL BE HAMMER DRILLED WITH A CARBIDE BIT

## C13 SPECIAL WEATHER CONCRETING

COLD WEATHER CONCRETE PLACEMENT SHALL COMPLY WITH ACI 301 AND ACI 306.1. HOT WEATHER CONCRETE PLACEMENT SHALL COMPLY WITH ACI 301 AND ACI 305.1.

## C14 CURING

CONCRETE SHALL BE CURED IN ACCORDANCE WITH ACI 308.1.

## C15 CONSTRUCTION JOINTS

LOCATION OF CONSTRUCTION JOINTS SHALL HAVE THE APPROVAL OF THE ENGINEER. CONSTRUCTION JOINTS SHALL BE DETAILED AS SHOWN ON THE DRAWINGS. UNLESS A METAL KEYED FORM IS USED, ALL CONSTRUCTION JOINTS SHALL BE ROUGHENED TO A MINIMUM 1/4" AMPLITUDE. ALL JOINT SURFACES SHALL BE THOROUGHLY CLEANED TO REMOVE GREASE, LOOSE CONCRETE, AND LAITANCE OR OTHER BOND REDUCING MATERIAL. SURFACES SHALL BE SATURATED SURFACE DRY PRIOR TO PLACING FRESH CONCRETE.

## C16 CRACK CONTROL JOINTS

UNLESS SHOWN OTHERWISE, CCJ INDICATES A 1/8" WIDE CONTINUOUS SAW CUT CRACK CONTROL JOINT FILLED WITH ELASTOMERIC JOINT SEALANT. SAW CUT DEPTH SHALL BE 1/4 OF THE CONCRETE DEPTH. THE ELASTOMERIC JOINT SEALANT SHALL CONFORM TO ASTM C920. TYPE S OR M, GRADE NS, CLASS 50.

## C17 WATERSTOP

PVC WATERSTOPS SHALL BE FLEXIBLE PVC MEETING THE REQUIREMENTS OF U.S. ARMY CORP OF ENGINEERS CRD-C 572. FACTORY FABRICATE ALL CORNERS INTERSECTIONS, AND DIRECTIONAL CHANGES. PVC WATERSTOP SHALL BE SIKA GREENSTREAK OR APPROVED EQUAL, 4" HEIGHT, 3/16" THICKNESS, RIBBED WITH CENTER BULB.

HYDROPHILIC WATERSTOP SHALL BE SELF-EXPANDING, BENTONITE-FREE HYDROPHILIC POLYMER-MODIFIED CHLOROPRENE RUBBER FOR ADHESIVE BONDING TO CONCRETE. HYDROPHILIC WATERSTOP SHALL BE SIKA HYDROTITE OR APPROVED EQUAL, 3/8" BY 3/4".

## C18 EXISTING CONCRETE SURFACES

EXISTING CONCRETE SURFACES TO BE JOINED WITH NEW CONCRETE SHALL BE THOROUGHLY CLEANED AND ROUGHENED TO MIN 1/4 INCH AMPLITUDE AND SATURATED SURFACE DRY JUST PRIOR TO PLACEMENT OF NEW CONCRETE. PROVIDE HYDROPHILIC WATERSTOP BETWEEN EXISTING AND NEW CONCRETE WHERE WATERTIGHT CONSTRUCTION IS REQUIRED.

#### LEGEND

**ASPHALT** 

PIPE BEND

**GATE VALVE** 

WATER VALVE

HOSE BIB

PIPE CAP

**HYDRANT** 

SEWER CLEANOUT

STORM MANHOLE

**ELECTRIC METER** 

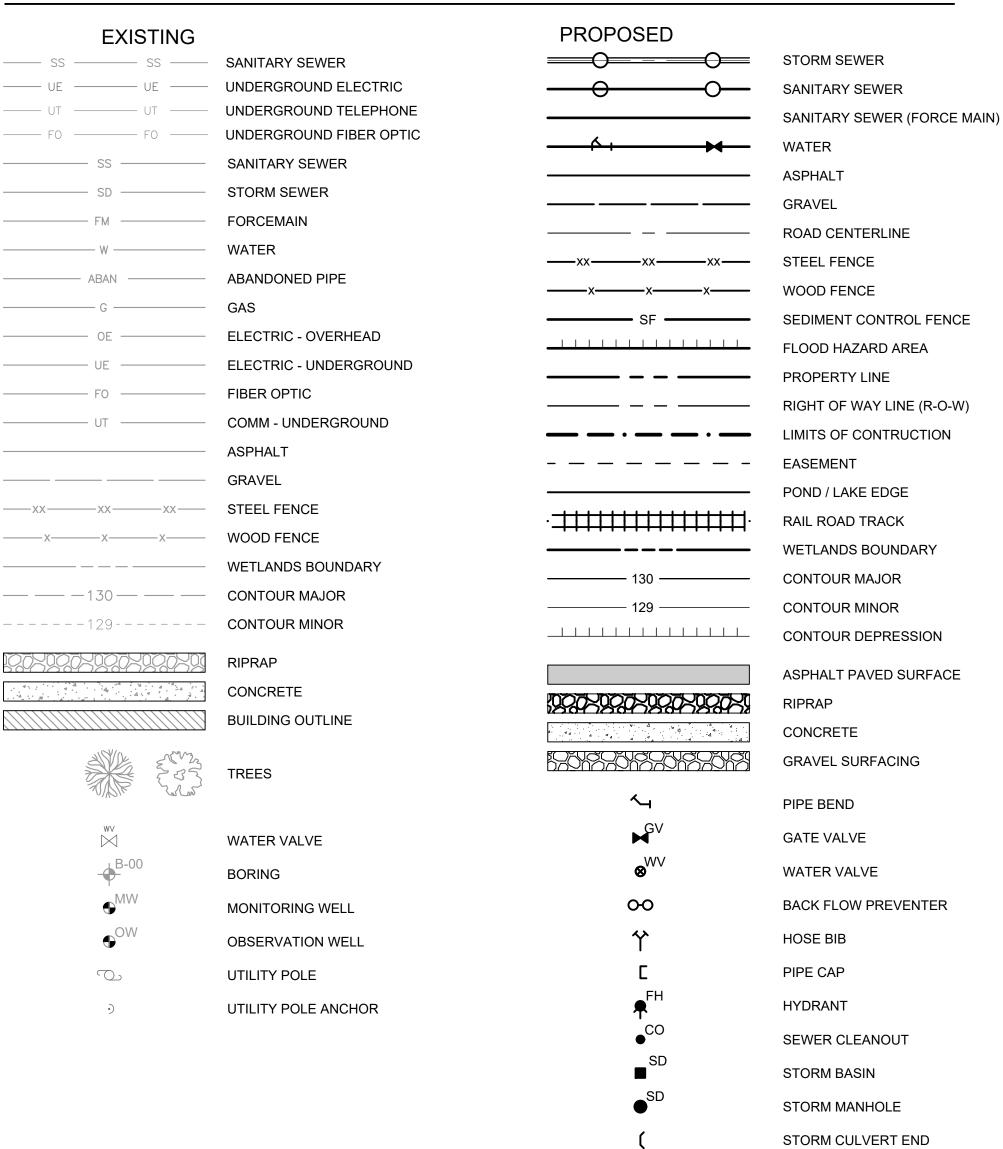
SPOT ELEVATION

**BUTTERFLY VALVE** 

**×**000.00

TRANSFORMER PAD

**BACK FLOW PREVENTER** 



## K. SUBMITTALS

- K1 REINFORCING STEEL
- SUBMIT SHOP DRAWINGS FOR REINFORCING STEEL FABRICATION.
- K2 CONCRETE

SUBMIT CONCRETE MIX DESIGN AND CONCRETE CYLINDER TEST RESULTS IN ACCORDANCE WITH ACI 301.

Noderi-PS

NO.C64530

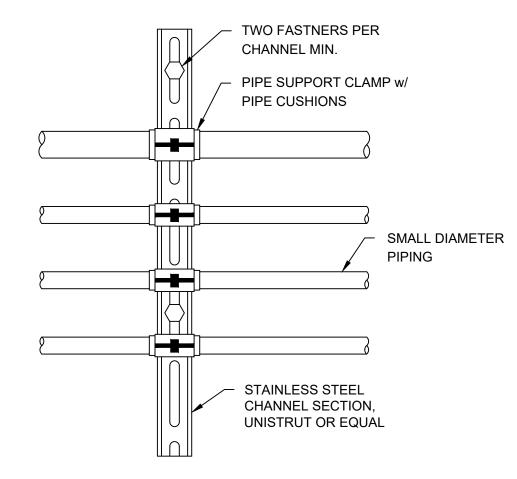
GE

Project No.: 200-124674-2100 Designed By: Drawn By:

hecked By:

Bar Measures 1 inch

TYPICAL TRENCH SECTION NO SCALE

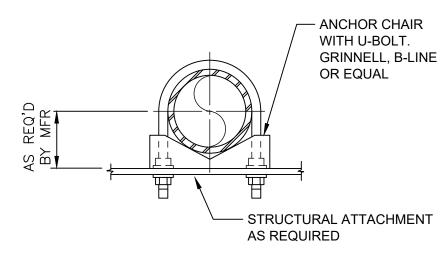


## 1/2" THROUGH 3" PIPE

## NOTES:

1. SECURE CHANNEL SECTION TO WOOD STUD, DECKING, OR CONCRETE SLAB AS APPROPRIATE. FURNISH WOOD FASTENERS OR EPOXY ANCHORS AS APPLICABLE.

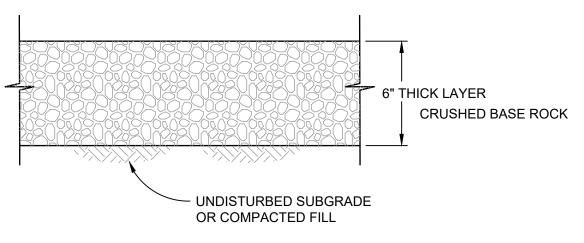




## 4" THROUGH 24" PIPE

1. ALL INSTALLATIONS OF THIS ANCHOR MUST HAVE CALCULATIONS TO CONFIRM THE ADEQUACY OF THE COMPONENT SIZES. THESE CALCULATIONS SHALL BE SUBMITTED FOR APPROVAL.



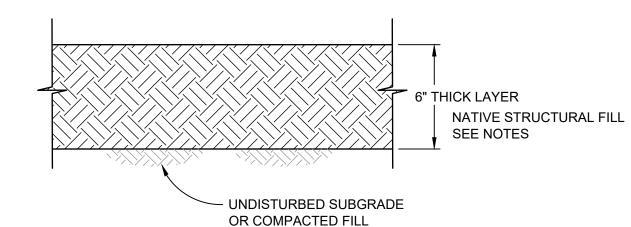


NOTES:

1. STRIP TOPSOIL AND REMOVE ALL ORGANICS PRIOR TO PLACING FILL.

2. COMPACT TO 95% MAX DRY DENSITY.

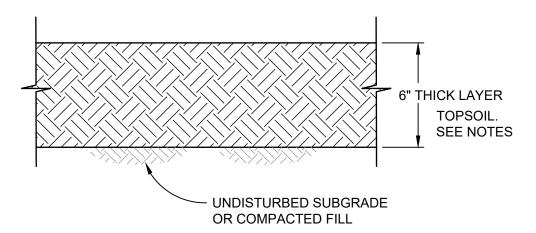




1. NATIVE BACKFILL SHALL MEET REQUIREMENTS OF STRUCTURAL FILL. IF REQUIREMENTS CANNOT BE ACHIEVED THEN CONTRACTOR SHALL FURNISH IMPORTED FILL.

- 2. STRIP TOPSOIL AND REMOVE ALL ORGANICS PRIOR TO PLACING FILL.
- 3. COMPACT TO 95% MAX DRY DENSITY.



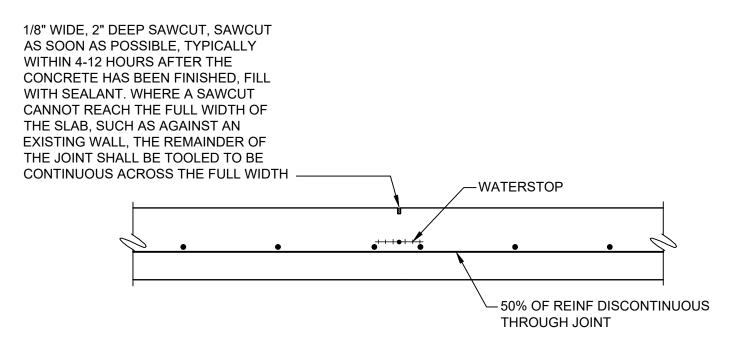


NOTES:

1. PRIOR TO EXCAVATION, TOPSOIL SHALL BE STRIPPED AND STOCKPILED ONSITE.

- 2. UTILIZE STOCKPILED TOPSOIL FOR FINAL RESTORATION.
- 3. COMPACT WITH ROLLER EQUIPMENT
- 4. RESEED WITH NATIVE GRASS MIX WHEN INSTRUCTED BY THE OWNER.





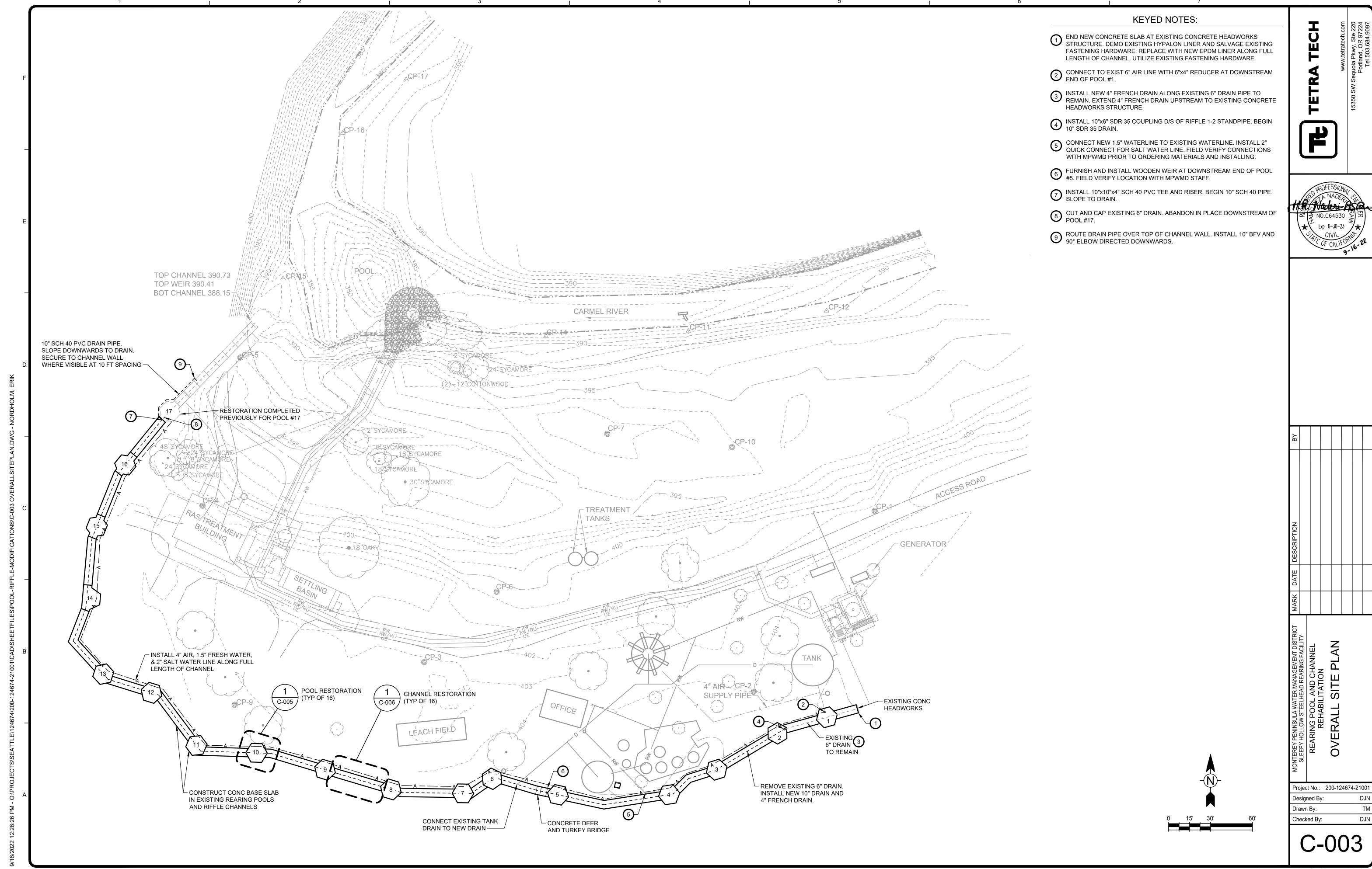
## SLAB CONTROL JOINT



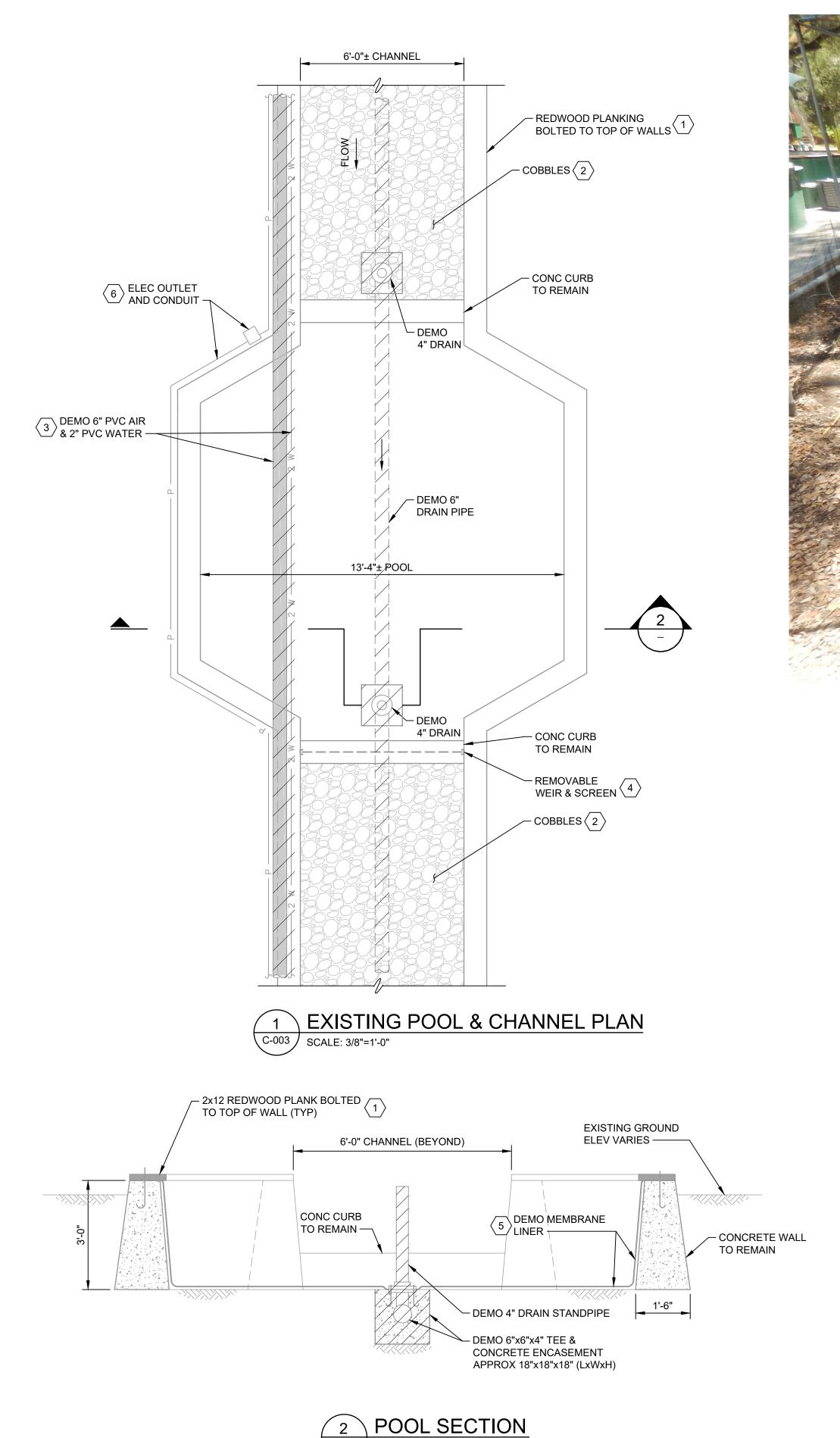
Project No.: 200-124674-2100

Drawn By: Checked By:

Designed By:



Bar Measures 1 inc



SCALE: 1/2"=1'-0"



3 EXISTING POOL PHOTO

NO SCALE

## GENERAL NOTES

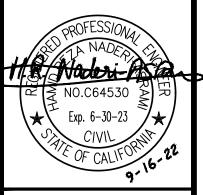
- ALL EXCAVATION SHALL BE HAND DUG TO AVOID DAMAGE TO EXISTING PIPE, CONCRETE, AND NET SYSTEM. EXCESS EXCAVATED MATERIAL CAN BE SPREAD ON SITE. ALL OTHER MATERIAL DESIGNATED FOR DEMOLITION SHALL BE REMOVED AND DISPOSED OFFSITE.
- DRAWING AND DIMENSIONS ARE BASED ON ORIGINAL 1994 DESIGN DRAWINGS AT ONE POOL LOCATION. FIELD VERIFY ALL DIMENSIONS AND ADJUST AS REQUIRED.

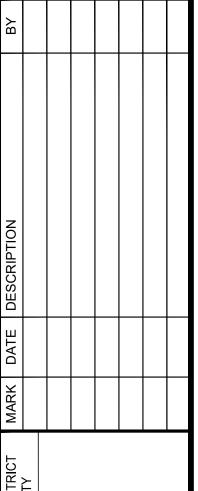
## **KEY NOTES**

- REMOVE AND SALVAGE EXISTING REDWOOD PLANKING. NUMBER ACCORDING TO POOL AND LOCATION. AVOID DAMAGE DURING REMOVAL. STORE IN PROTECTED AREA AND REINSTALL IN ORIGINAL LOCATION FOLLOWING CONSTRUCTION.
- $\overline{2}$  REMOVE COBBLES FROM CHANNELS AND STOCKPILE ONSITE.
- DEMO 6" AIR AND 2" WATER PIPING. SALVAGE EXISTING BRACKETS AND MOUNTING HARDWARE.
- REMOVE AND SALVAGE EXISTING WOODEN WEIR, WEIR GUIDES, AND HARDWARE. NUMBER EACH WEIR WITH INDIVIDUAL POOL LOCATION. STORE IN PROTECTED AREA AND REINSTALL IN ORIGINAL LOCATION FOLLOWING CONSTRUCTION.
- 5 SALVAGE EXISTING LINER ATTACHMENT HARDWARE FOR USE WITH NEW LINER.
- PROTECT 120V OUTLETS, CONDUIT AND WIRING. (LOCATION VARIES ALONG CHANNEL.

RA TEC







RING POOL AND CHANNEL
REHABILITATION

EXISTING POOL
AND CHANNEL

Project No.: 200-124674-2100

Designed By: DJN

Drawn By: TM

Checked By:

C-004

Bar Measures 1 inch

CRUSHED ROCK

4" PERF DRAIN

10" x 10" x 4" TEE

SECTION

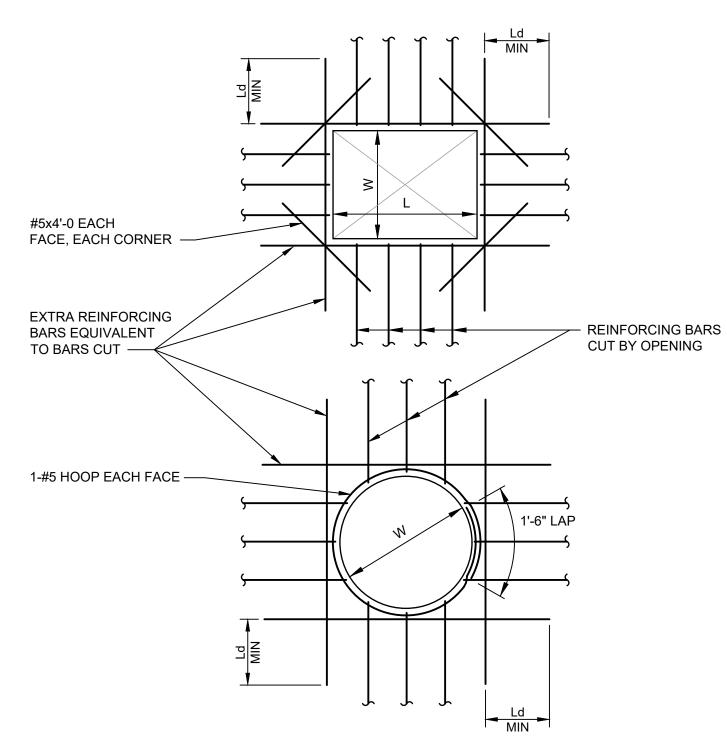
SCALE: 3/4"=1'-0"

#### GENERAL NOTES

- 1. ALL EXCAVATION SHALL BE HAND DUG TO AVOID DAMAGE TO EXISTING PIPE, CONCRETE, AND NET SYSTEM. EXCESS EXCAVATED MATERIAL CAN BE SPREAD ON SITE.
- 2. SUBGRADE SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR. EXCAVATED MATERIAL MAY BE SUBSTITUTED FOR CRUSHED ROCK IF COMPACTION CAN BE MET.
- 3. DRAWING AND DIMENSIONS ARE BASED ON ORIGINAL 1994 DESIGN DRAWINGS AT ONE POOL LOCATION. FIELD VERIFY ALL DIMENSIONS AND ADJUST AS REQUIRED.

#### **KEY NOTES**

- (1) NEW CONCRETE 8" THICK CONCRETE SLAB.
- EXISTING HYPALON LINER IN POOL TO BE REMOVED AND REPLACED WITH EPDM LINER. OVERLAP & FUSE TO NEW CHANNEL LINER AND ATTACH TO CONCRETE CURB AT EACH END OF POOL WITH SALVAGED HARDWARE.
- $\langle$  3  $\rangle$  NEW CONC SLAB TO EXTEND APPROX 4" BENEATH EXISTING WALL.
- INSTALL NEW 4" PVC FLANGE FLUSH WITH TOP OF CONC SLAB. FURNISH 3/8" SST BACKUP RING AND GASKET FOR ATTACHING EPDM LINER AT THE DRAIN OPENING. BACKUP RING SHALL HAVE CL 150 FLANGE DRILLING PATTERN
- REINSTALL EXISTING 2X12 REDWOOD PLANKIN ON TOP OF EXISTING WALL, SECURE EPDM LINER.
- 6 PROVIDE AND INSTALL HYDROPHILIC WATERSTOP ALONG EXISTING WALLS, FOR EXISTING WALL LENGTH.
- NEW CONCRETE SURFACES AND EXISTING SURFACES IN CONTACT WITH NEW CONCRETE SHALL BE TREATED WITH WATERPROOFING, XYPEX OR EQUIVALENT.
- FABRICATED SST UNISTRUT SUPPORT STAND LOCATED AT MID POINT OF EACH POOL. ATTACH TO BASE SLAB WITH 2-BOLT POST BASE AND SST ADHESIVE ANCHORS EMBEDDED 4". FURNISH MIN 1" THICK NON-SHRINK GROUT LEVELING PADS BENEATH POST BASES. ATTACH PIPES TO STAND WITH SST CUSHIONED CLAMPS.
- (9) 4"x4"x2" PVC SCH 40 FEMALE THREADED TEE AND 2" THREADED PLUG.
- PLACE SLAB DIRECTLY AGAINST EXISTING CONCRETE WALLS AND CURB. PROVIDE HYDROPHILIC WATERSTOP TO CREATE CONTINUOUS BARRIER. PREP EXISTING CONCRETE SURFACES IN ACCORDANCE WITH NOTE C18 ON C-001



## NOTES:

- 1. REINFORCEMENT IN OTHER DIRECTION SHALL BE TREATED IN A SIMILAR MANNER.
- 2. "W" AND "L" = DIMENSION OF OPENING. FOR CIRCULAR OPENINGS, "W"= DIAMETER.
- 3. ALL OPENINGS IN WALLS AND SLABS SHALL CONFORM TO DETAILS.
- 4. OPENING DETAILS SHOWN ARE TYPICAL UNLESS NOTED OTHERWISE.
- 5. THE NUMBER OF ADDITIONAL BARS AT EACH SIDE OF THE OPENING EQUALS HALF THE NUMBER OF TYPICAL REINFORCING BARS THAT ARE INTERRUPTED BY THE OPENING.

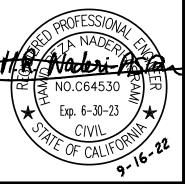
## REINFORCING AT WALL AND SLAB OPENINGS

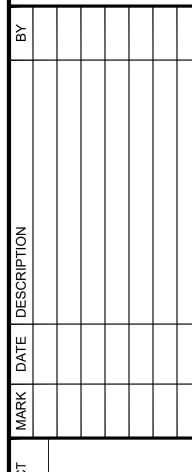


RA TECH

TETRA







AN AND SECTION

SLEEPY HOLLOW ST REARING PC REHA REARI PLAN AN

Project No.: 200-124674-2100:

Designed By: DJN

Drawn By: Checked By:

C-005

- EXISTING 2x12 BOLTED TO TOP OF WALL (TYP) 5

6'-0" ±

- SST ADHESIVE ANCHORS

4" MIN EMBED

6" OF 3/4"-0

CRUSHED ROCK -

5/8" x 6" SST J-BOLT (8 PER FLANGE) -

TRENCH

SECTION (

C-002

10" x 10" x 4" TEE -

**SECTION** 

SCALE: 3/4"=1'-0"

 $\vdash$  EPDM LINER $\langle 2 \rangle$ 

- 4" REMOVABLE STANDPIPE

─#4 @ 12" EW

MID DEPTH

─ 4" PERF DRAIN

FURNISHED BY OWNER

C-005

- EXISTING PIPE, CONCRETE, AND NET SYSTEM. EXCESS EXCAVATED
- DRAWINGS AT ONE POOL LOCATION. FIELD VERIFY ALL DIMENSIONS AND ADJUST AS REQUIRED.

- NEW CONCRETE 8" THICK CONCRETE SLAB. SLOPE PARALLEL TO EXISTING
- EXISTING HYPALON LINER IN CHANNEL TO BE REMOVED AND REPLACED WITH EPDM LINER. OVERLAP & FUSE TO NEW POOL LINER AND ATTACH TO CONCRETE CURB AT EACH END OF CHANNEL WITH SALVAGED HARDWARE.
- (3) NEW CONC SLAB TO EXTEND APPROX 4" BENEATH EXISTING WALL.
- INSTALL NEW 4" PVC FLANGE FLUSH WITH TOP OF CONC SLAB. FURNISH INSTALL NEW 4" PVC FLANGE FLOSTI WITH TOLOGOUS SELECTION 3/8" SST BACKUP RING AND GASKET FOR ATTACHING EPDM LINER AT THE DRAIN OPENING. BACKUP RING SHALL HAVE CL 150 FLANGE DRILLING
- REINSTALL EXISTING 2X12 REDWOOD PLANKIN ON TOP OF EXISTING WALL, SECURE EPDM LINER.
- PROVIDE AND INSTALL HYDROPHILIC WATERSTOP ALONG EXISTING WALLS, FOR EXISTING WALL LENGTH.
- EQUIVALENT.
- SST PIPE SUPPORT AT MAX 6'-0" SPACING. ATTACH TO EXTERIOR OF CHANNEL WALL. FURNISH MIN 1" THICK NON-SHRINK GROUT PAD TO CREATE VERTICAL MOUNTING FACE. ATTACH PIPES TO SUPPORT WITH SST CUSHIONED CLAMPS.
- UPWARDS AT 45 DEGREES FROM HORIZONTAL.
- PREP EXISTING CONCRETE SURFACES IN ACCORDANCE WITH NOTE C18 ON C-001.



- 1. ALL EXCAVATION SHALL BE HAND DUG TO AVOID DAMAGE TO MATERIAL CAN BE SPREAD ON SITE.
- 2. SUBGRADE SHALL BE COMPACTED TO 95% OF MODIFIED PROCTOR. EXCAVATED MATERIAL MAY BE SUBSTITUTED FOR CRUSHED ROCK IF COMPACTION CAN BE MET.
- 3. DRAWING AND DIMENSIONS ARE BASED ON ORIGINAL 1994 DESIGN



- CHANNEL WALLS (ABOUT 0.5%).

- NEW CONCRETE SURFACES AND EXISTING SURFACES IN CONTACT WITH NEW CONCRETE SHALL BE TREATED WITH WATERPROOFING, XYPEX OR
- 9 2"x2"x2" PVC SCH 40 TEE WITH FEMALE THREADED OUTLET. ORIENT TEE VERTICALLY UPWARDS.
- 1.5"x1.5x3/4" PVC SCH 40 TEE AND 3/4" BRASS HOSE BIBB. LOCATE TEE APPROXIMATELY 1/2-WAY BETWEEN UPSTREAM AND DOWNSTREAM CURBS. POINT TEE OUTWARDS FROM CHANNEL WALL AND ROTATE
- REUSE EXISTING STOCKPILED COBBLES. SPAWNING GRAVEL SHALL BE IMPORTED NEW BY CONTRACTOR. TAPER DEPTH OF BOTH LAYERS AT EACH END OF CHANNEL TO MATCH TOP OF EXISTING CONCRETE CURBS.
- PLACE SLAB DIRECTLY AGAINST EXISTING CONCRETE WALLS AND CURB. PROVIDE HYDROPHILIC WATERSTOP TO CREATE CONTINUOUS BARRIER.

Project No.: 200-124674-2100 Designed By: Drawn By:

Checked By:

2" SALT WATER

1.5" WATER -

SST SUPPORT BRACKET

NON-SHRINK GROUT LEVELING PAD ---

UNISTRUT OR EQUAL -

Bar Measures 1 inch