



24001 Stevens Creek Blvd.
Cupertino, CA 95014
(408) 996-4000

November 8, 2017

Kirk Girard, Director
Department of Planning and Development
County of Santa Clara
70 W. Hedding Street, 7th Floor
San Jose, CA 95110

**Re: Permanente Quarry, Mine ID # 91-43-0004
Status Report on East Materials Storage Area**

Dear Mr. Girard:

The Planning Department has requested, in advance of the November 16, 2017 Planning Commission meeting, an update on the improvements being made to reduce discharges of storm water containing selenium from the East Materials Storage Area ("EMSA"), which is a part of Lehigh Southwest Cement Company's ("Lehigh") Permanente Quarry. This letter supplements our May 2017 report on this issue. Lehigh is pleased to inform the Planning Department that it is in the process of finalizing the installation of discharge controls at Pond 30 that aim to eliminate storm water discharges from Pond 30 until final reclamation of the EMSA is complete. The following describes the controls, the progress on the project execution, and provides a timetable to complete the installation. This letter also provides the Department with an update on the sediment testing performed at Pond 30 in summer 2017.

As background, Lehigh's May 2017 report proposed actions to reduce the concentrations of selenium in storm water discharges from the EMSA. These consisted of an extension to an interceptor drain and other improvements to enhance Lehigh's ability to prevent "seep" water, which tends to have higher concentrations of selenium, from entering Pond 30 where it might discharge to Permanente Creek. Since May 2017, however, Lehigh has continued to investigate other methods of controlling Pond 30 discharges. This is because an interceptor drain can only minimize, not prevent, elevated selenium from entering Pond 30. Lehigh has kept the Planning Department apprised of these efforts.

The outcome of this investigation is that Lehigh has developed plans for collecting and diverting Pond 30 discharges to the water treatment system at the Facility until final reclamation is achieved. This interim solution goes above and beyond previous commitments made by Lehigh. The intent of this system is to establish an interim reliable method for preventing discharges of selenium from the EMSA to Permanente Creek. This, in turn, will provide Lehigh with more flexibility to analyze the existing reclamation cover design for the EMSA and determine whether modifications to that design are needed to achieve final reclamation.

In brief, Lehigh would install a below-grade concrete vault along the existing culvert that discharges Pond 30 water to the creek. The vault would collect and detain flows through the culvert. A series of pumps attached to the vault would send the water to the onsite water treatment system via the water reclaim system. A complete description of the collection and transfer system is contained in the attached plans and specifications of **Attachment 1**.

Currently, Lehigh has installed the necessary conveying system to direct the water leaving Pond 30 to the water treatment system. As of today, Lehigh has completed the installation of 12" HDPE pipeline starting from Pond 30 area, connecting to East Material Storage Area's (EMSA) 30" corrugated HDPE pipeline. **Attachment 2** has pictures of the already installed pipeline infrastructure. The pumps and vault system have been ordered and are expected to be completely installed and functional before December 30, 2017. In the meantime, Lehigh is continuing its efforts to obtain permits to relocate the California Red-Legged Frog ("CRLF") in Pond 30 and the vicinity in order to be able to install a geomembrane (or similar) liner within Pond 30 and adjacent drainage swale. Lehigh intends to provide an update in May 2018 describing its progress on both fronts.

The existing drainage system to capture seepages and to prevent seep water from entering Pond 30 will remain in place. The collected water from this drainage will continue being sent for treatment to the on-site water treatment system.

As a related matter, this letter also provides the Planning Department with the results of Lehigh's sediment sampling in Pond 30. As background, in May 2017, the County requested that Lehigh sample the sediments in Pond 30 to determine if they contained elevated selenium that could adversely affect Pond 30 water quality. **Attachment 3** is a technical memorandum from Golder Associates with the results of those tests. Golder found only low concentrations of selenium in the sediments lining Pond 30 and the adjacent swale. In Golder's view, the low values indicate that accumulated sediments are probably not a primary factor causing elevated selenium in Pond 30.

Lehigh appreciates the opportunity to provide this update and to provide any further information that may be requested. Please do not hesitate to contact me at 408-257-7476 extension 106 if you have questions or comments.

Sincerely,

A handwritten signature in cursive script that reads "Erika Guerra".

Erika Guerra
Environmental Director
Lehigh Southwest Cement Company

Attachment 1

November 7, 2017

Subject: Lehigh Cupertino Pond 30 Outlet Improvements

Dear Ms. Erika Guerra,

The improvements at Pond 30 were designed to prevent the flow of storm water from Pond 30 to the adjacent creek during rain events, by diverting the storm water to the facility's water treatment system. The design of the system is configured to not impact the pond with all construction occurring outside of the pond. This will be accomplished by installing a new retention and pumping station in the existing outlet pipe between Pond 30 and the creek outfall. As the pond fills during a rain event, water will eventually rise and flow into the existing outlet pipe in the pond and begin to flow through the existing culvert. However, before getting to the creek, the water will now enter the new pump station and begin to fill the designed concrete vault. Level controls in the pump station will operate a set of pumps to divert the water into a pipeline connecting the pump station to Pond 11. The pump station includes provisions for an emergency backup pump in the event of a power or pump failure as well as a path of last resort through an overflow into the existing culvert

Sincerely,



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Erik Rutherford, PE M36487
Mechanical Engineer



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STORM WATER PIPELINE INSTALLATION

PHASE 3 - POND 30

LEHIGH CEMENT - CUPERTINO

PROJECT # _____

GENERAL NOTES

- ALL CONSTRUCTION WORK AND INSTALLATIONS SHALL CONFORM TO THESE APPROVED CONTRACT DOCUMENTS.THE CONTRACTOR SHALL HAVE COPIES OF THE APPROVED CONTRACT DOCUMENTS FOR THIS PROJECT ON SITE AT ALL TIMES AND SHALL BE FAMILIAR WITH ALL APPLICABLE STANDARDS AND SPECIFICATIONS.
- THE CONTRACTOR AGREES THAT HE SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE DURING THE COURSE OF THE 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 ENGINEER AND OWNER HARMLESS FROM ANY AND ALL LIABILITY, REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPT FOR LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER, OR THIRD PARTY IN VIOLATION OF THE LAW OR IN TRESPASS. THE CONTRACTOR SHALL PRACTICE SAFETY AT ALL TIMES AND SHALL FURNISH, ERECT, AND MAINTAIN, SUCH FENCES, BARRICADES, LIGHTS, AND SIGNS NECESSARY TO GIVE ADEQUATE PROTECTION AT ALL TIMES.
- INFORMATION PERTAINING TO EXISTING UNDERGROUND FACILITIES IS BASED ON OWNER KNOWLEDGE, AND WHERE INDICATED, POTHOLES WORK, AND IS SHOWN FOR INFORMATIONAL PURPOSES ONLY. UNDERGROUND FEATURES SHOWN ON THE PLANS ARE INDICATED WITH THEIR APPROXIMATE LOCATION AND EXTENT, AND MAY NOT APPEAR IN PROFILE OR SECTION VIEWS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING THE OWNER AND SHALL LOCATE ALL FACILITIES PRIOR TO EXCAVATION.
- THE CONTRACTOR SHALL CONTINUALLY REVIEW JOB SITE CONDITIONS. CONDITIONS REQUIRING CONSTRUCTION DIFFERENT FROM THAT SHOWN ON THE PLANS SHALL BE REPORTED TO THE ENGINEER PRIOR TO PROCEEDING WITH THE AFFECTED CONSTRUCTION.
- THESE DRAWINGS REPRESENT THE FINISHED CONDITION AND UNLESS OTHERWISE INDICATED, THEY DO NOT SHOW THE METHOD OF CONSTRUCTION.
- ALL IMPROVEMENTS SHOWN OR INDICATED ON THESE DRAWINGS ARE TO BE CONSTRUCTED AND/OR INSTALLED BY THE CONTRACTOR IN THIS PROJECT, UNLESS THEY ARE CALLED OUT AS: "EXISTING", "FUTURE", "NIC", NOT A PART; OR HAVE SOME OTHER EXCLUDING NOTATION.
- THE CONTRACTOR SHALL KEEP A SET OF PROJECT DRAWINGS ON WHICH RECORD INFORMATION SHALL BE PLACED NOTING DEVIATIONS FROM THE PLANS IN THE LOCATION, GRADE, SIZE, TYPE, AND SCOPE OF WORK WHICH IS CONSTRUCTED.
- OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA) REQUIREMENTS AND STANDARDS SHALL BE OBSERVED AT THE JOB SITE AT ALL TIMES.
- THE ENGINEER OF RECORD WILL PERFORM PERIODIC REVIEWS OF COMPLETED WORK TO DETERMINE CONFORMANCE WITH THE APPROVED PLANS.
- CONSTRUCTION ACTIVITY SHALL BE COORDINATED REGULARLY WITH THE OWNER.

NOTE REGARDING PIPELINE LAYOUT:

ANY COORDINATES, STATIONS, AND ELEVATIONS INDICATED IN THESE PLANS ARE INTENDED TO ASSIST IN THE LAYOUT OF PIPE AND EQUIPMENT. LOCATIONS MAY BE ADJUSTED TO MEET CONDITIONS IN THE FIELD. THE FOLLOWING FEATURES MAY NOT BE ADJUSTED WITHOUT ENGINEER APPROVAL:

- VENTS
- VALVES
- PRESSURE CLASS BOUNDARIES
- START/END POINTS
- BURIED SECTIONS OF PIPELINE

NOTE TO BIDDERS:

LEHIGH SOUTHWEST CEMENT COMPANY - CUPERTINO PLANT (OWNER) IS SOLICITING BIDS FOR THE FABRICATION AND INSTALLATION OF SEVERAL HDPE PIPELINES, AS SHOWN IN THE ENCLOSED DRAWINGS. OWNER WILL SUPPLY THE FOLLOWING:

- HDPE PIPE AND APPURTENANCES (ALL SIZES)
- PREFABRICATED STEEL PIPE SPOOLS AND BOLT UP KITS (STUDS, NUTS, GASKETS)
- PRECAST CONCRETE STRUCTURES
- PUMPS AND APPURTENANCES
- INSTRUMENTATION AND CONTROL DEVICES

CONTRACTOR TO SUPPLY ALL LABOR, EQUIPMENT, TRAINING, NECESSARY FOR THE FABRICATION AND INSTALLATION OF THE EQUIPMENT ONSITE.

SHEET INDEX

Sheet Number	Sheet Title
PH3-C1	COVER
PH3-C2	YARD PIPING
PH3-CD1	DETAILS
PH3-CD2	PRECAST CONCRETE WET WELL
PH3-CD3	DISCHARGE PIPING ARRANGEMENT
PH3-PS1	DISCHARGE PIPING SPOOL

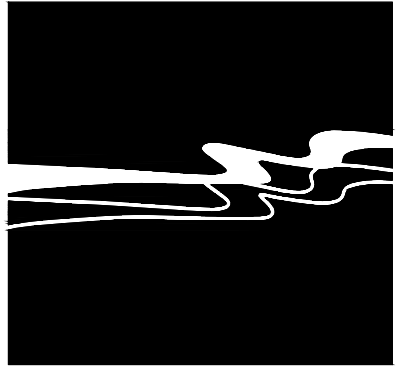
PIPELINE POND 30 TO POND 17 - DESIGN BASIS

SERVICE	STORM WATER
PIPELINE SIZE	12" IPS
PIPELINE CONSTRUCTION	4710 HDPE, BUTT-FUSED JOINTS, LAID ON GRADE
PIPELINE CLASS	DR 11
DESIGN FLOW	1800 GPM @ 298-FT TDH

BILL OF MATERIALS PHASE 3

PART #	SIZE	QTY	UNIT	DESCRIPTION
9-POND-30-LT	1/2	1	EA	SUBMERSIBLE HYDROSTATIC LEVEL TRANSMITTER, STAINLESS STEEL BODY WITH CAGE, 1/2" NPT CONNECTION, 0-10PSIG RANGE, 40' MINIMUM CABLE LENGTH, 4-20mA OUTPUT. PROSENSE SLT2-010-L40 OR EQUAL
9-POND-30-LSL	N/A	1	EA	FLOAT SWITCH. PROSENSE OR EQUAL
9-POND-30-LSH	N/A	1	EA	FLOAT SWITCH. PROSENSE OR EQUAL
9-POND-30-LSHH	N/A	1	EA	FLOAT SWITCH. PROSENSE OR EQUAL
PP30C	30	30	FT	PIPE, IPS, 4710 HDPE, DR 17
SXXX10	N/A	2	EA	COUPLING DISSIMILAR MATERIALS. MAR MAC OR EQUAL

NOTE: FOR METAL PIPE, FITTINGS, VALVES, AND INSTRUMENTS; REFER TO SPOOL DRAWING PH3-PS1



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LEHIGH CEMENT
LEHIGH CEMENT YARD PIPING - PHASE 3
POND 30
COVER

JOB #: 1384-0001

DESIGNERS: TKZ

DRAWN BY: ESR

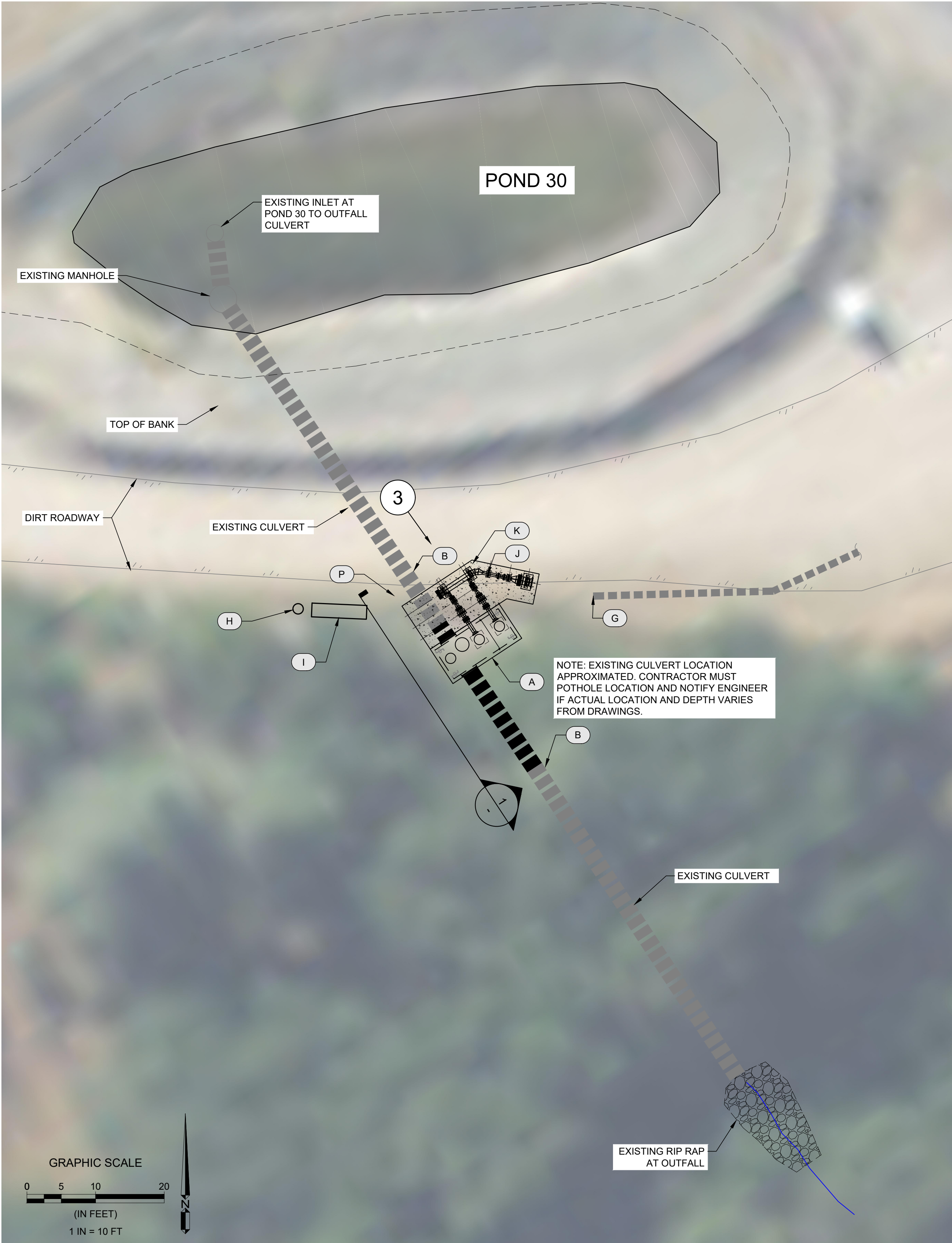
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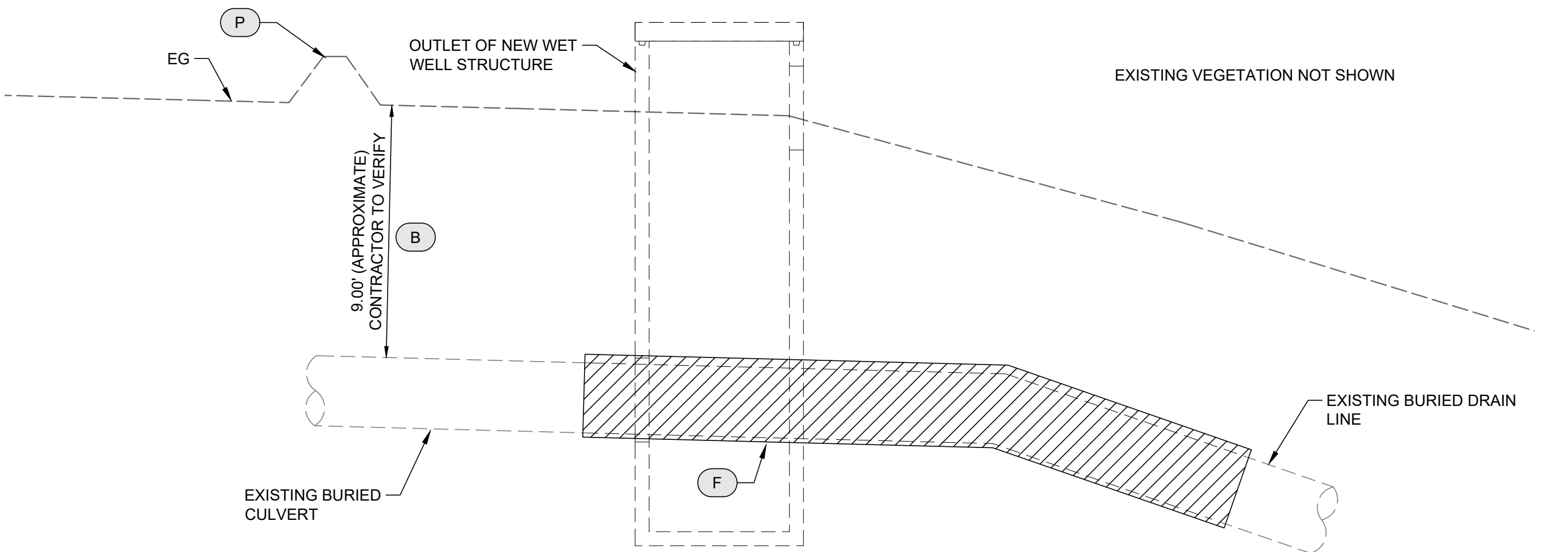
PH3-C1

1 OF 6 SHEETS

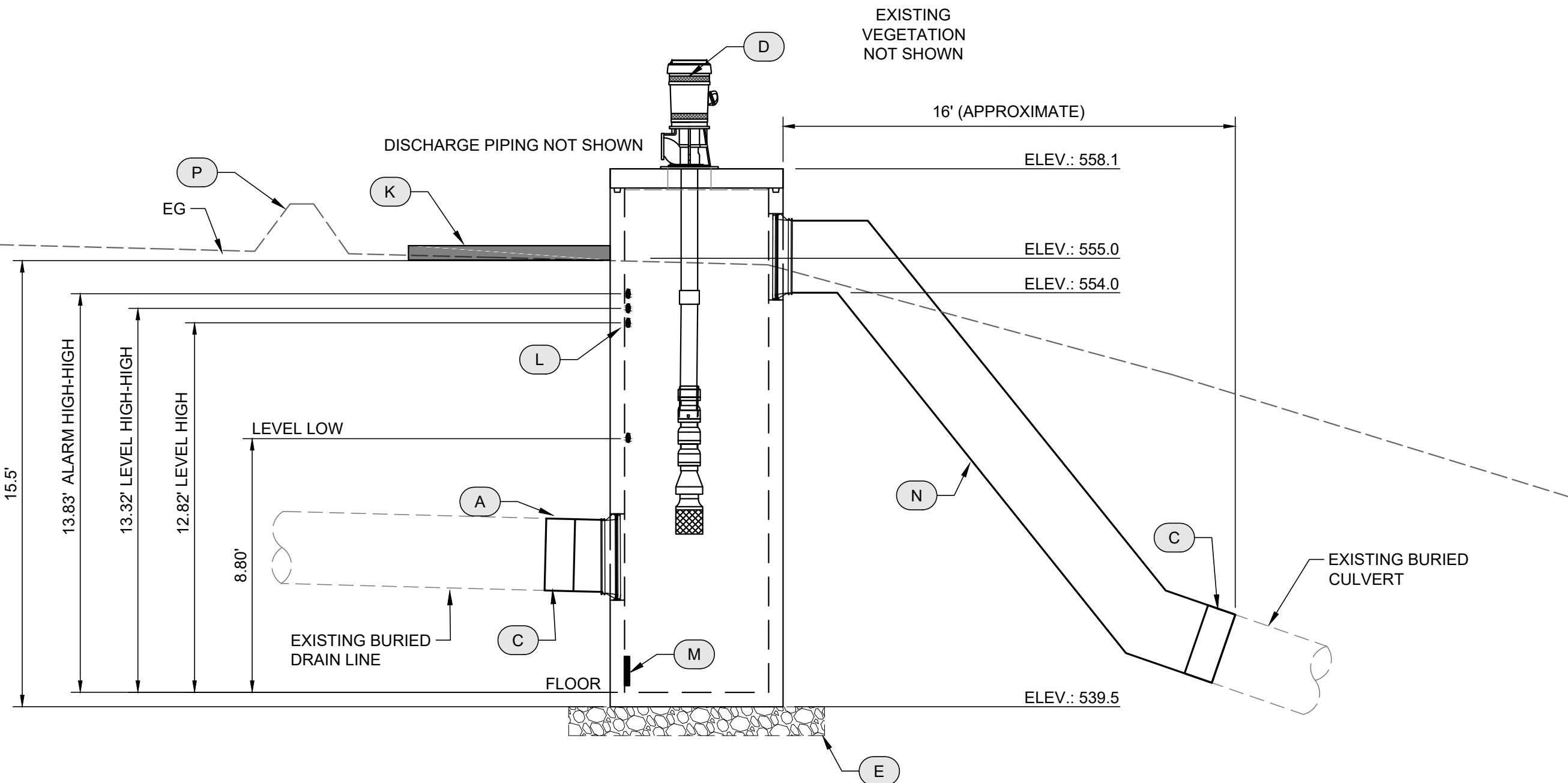
0	9/22/2017	ISSUED FOR CONSTRUCTION	TKZ
A	9/20/2017	ISSUED FOR REVIEW	TKZ
Rev.	Date	Description of Revisions	By



POND 30 TO OUTFALL PIPING



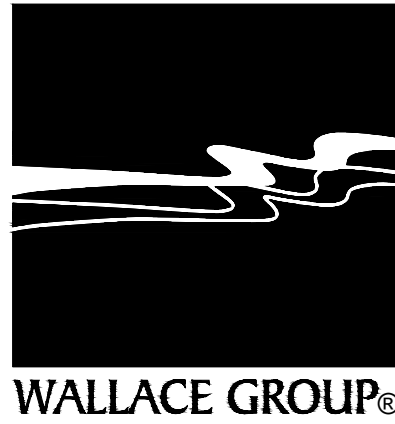
CULVERT DEMOLITION



REFERENCE NOTES:

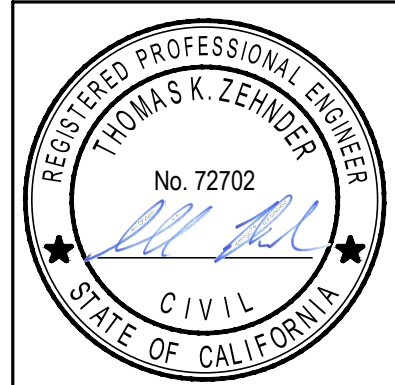
DESCRIPTION
A NEW PRECAST CONCRETE WET WELL. WET WELL TO BE FURNISHED BY OWNER. SEE SHEET PH3-CD2 FOR WET WELL DETAILS.
B CONTRACTOR TO POTHOLE AND VERIFY EXISTING CULVERT LOCATION, DEPTH, SIZE, AND MATERIAL.
C COUPLING WILL DEPEND ON EXISTING CULVERT MATERIAL. FOR METAL CMP OR CORRUGATED HDPE/PVC, PART# SXXX10
D INSTALL VERTICAL PUMPS IN WET WELL, WITH DISCHARGE CONNECTION ORIENTED AS SHOWN. PUMPS FURNISHED BY OWNER.
E SET PRECAST CONCRETE STRUCTURE ON A MINIMUM OF 12" OF COMPACTED CLASS II BASE COMPACTED TO 90% RELATIVE COMPACTION.
F REMOVE ENOUGH EXISTING CULVERT TO FACILITATE INSTALLATION OF NEW WET WELL AND INTERCONNECTING PIPING.
G NEW 12" PIPELINE INSTALLED BY OWNER (APPROXIMATE LOCATION SHOWN). EXTEND PIPELINE AS NEEDED TO CONNECT TO PUMP DISCHARGE PIPING SPOOL.
H NEW POWER POLE, REFER TO ELECTRICAL PLANS
I NEW SWITCHBOARD, REFER TO ELECTRICAL PLANS
J PREFABRICATED DISCHARGE PIPING FURNISHED BY OWNER. CONTRACTOR TO INSTALL AND BOLT UP AND CONNECT TO HDPE PIPELINE. SEE SHEET PH3-CD2 FOR DISCHARGE PIPING ARRANGEMENT
K 6" CONCRETE PAD AT DISCHARGE PIPING. SEE SHEET PH3-CD1
L INSTALL FLOAT SWITCHES AT THE HEIGHTS SHOWN. PART#S 9-POND-30-LSL, 9-POND-30-LSH, 9-POND-30-LSHH
M INSTALL LEVEL TRANSMITTER AT STILL WELL FLOOR. PART# 9-POND-30-LT
N 30" PIPE CONNECTION TO BOOT, TRANSITION AS NEEDED TO MATCH SIZE OF EXISTING CULVERT PIPE
P REMOVE BERM AS NEEDED FOR INSTALLATION

0	9/22/2017	ISSUED FOR CONSTRUCTION	TKZ
A	9/20/2017	ISSUED FOR REVIEW	TKZ
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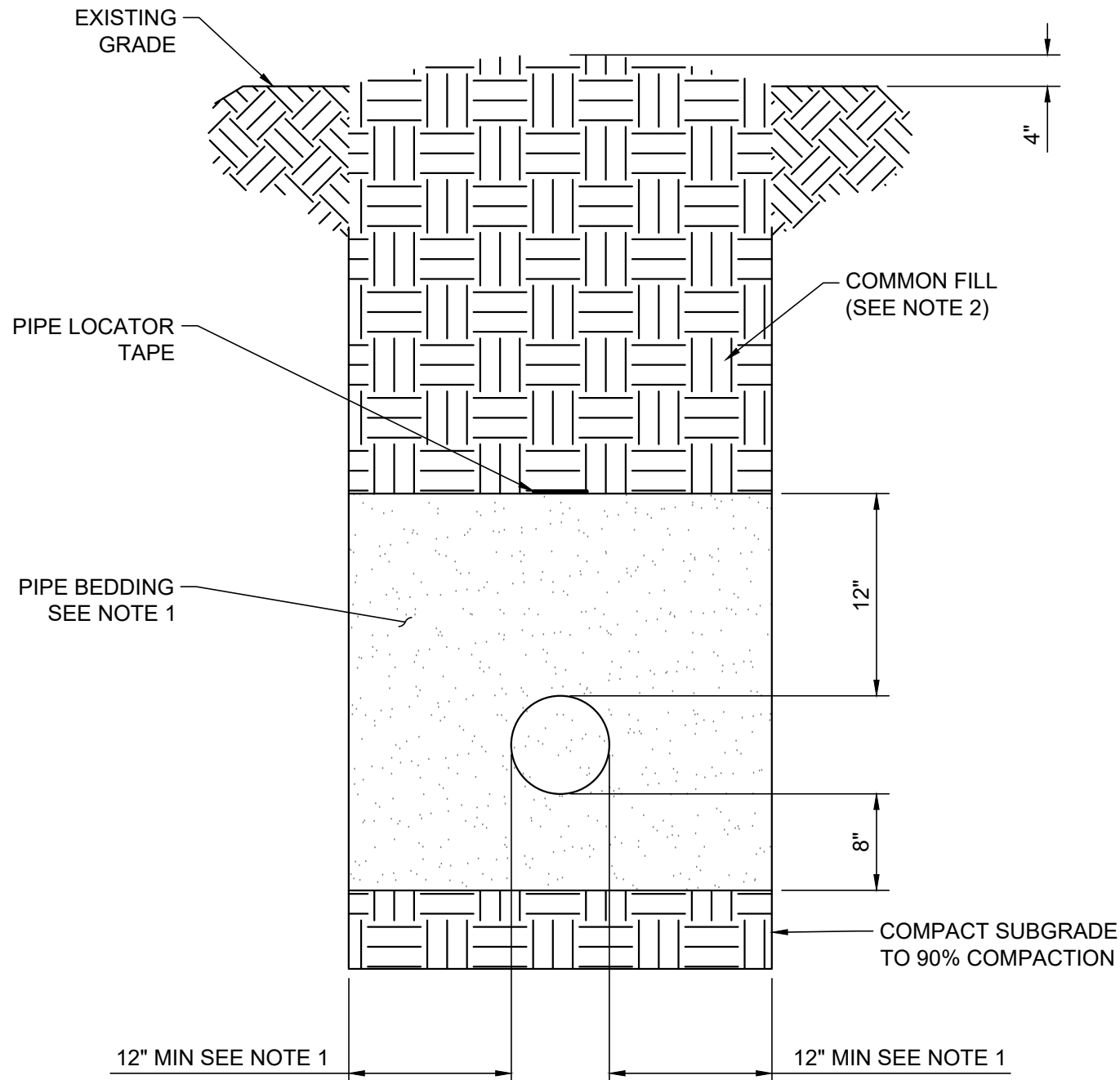
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LEHIGH CEMENT
LEHIGH CEMENT YARD PIPING - PHASE 3 POND 30
YARD PIPING

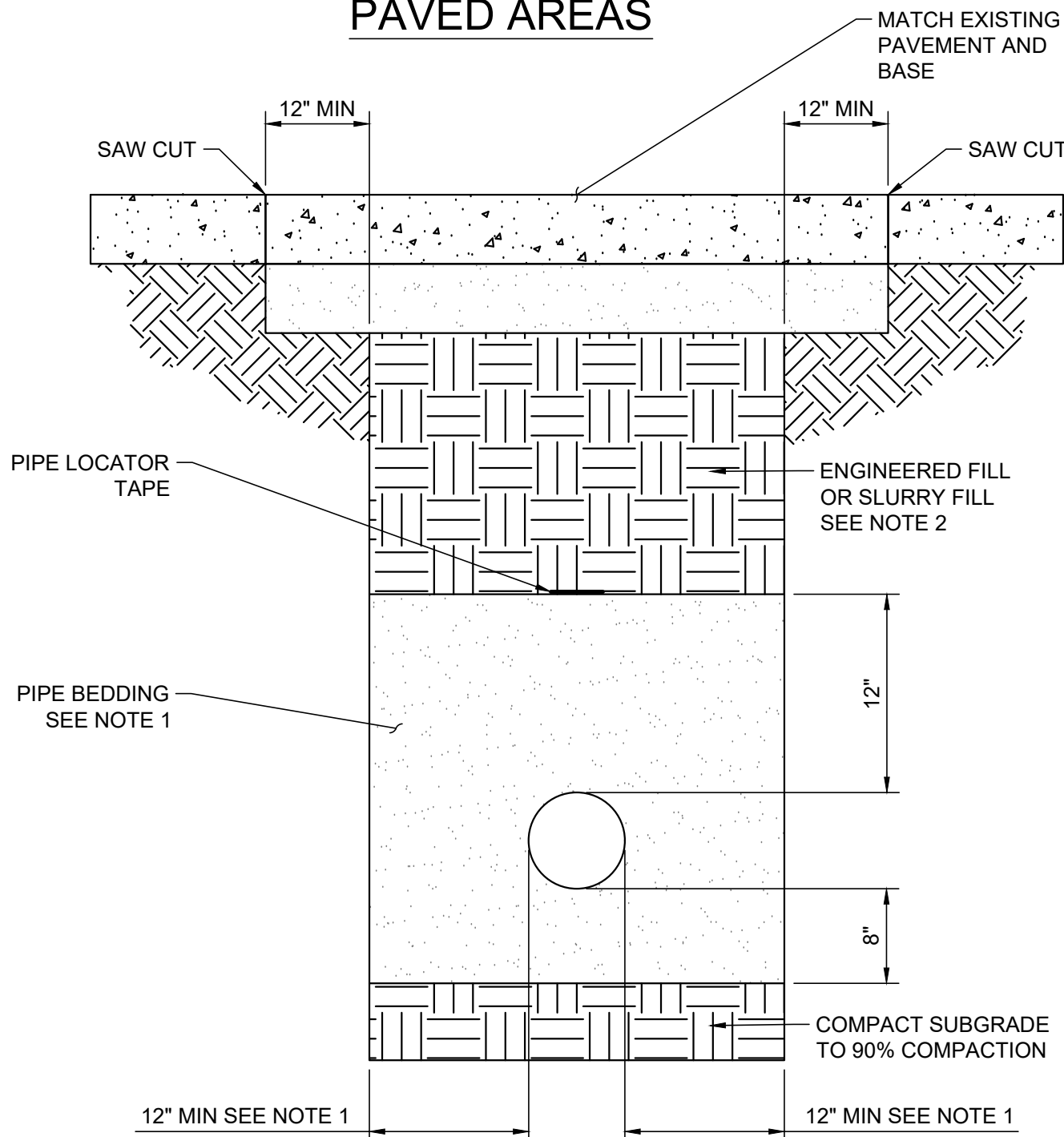
JOB #: 1384-0001
DESIGNERS: TKZ
DRAWN BY: ESR
DATE: 9-22-17

DRAWING NO.
PH3-C2
2 OF 6 SHEETS

UNSURFACED AREAS



PAVED AREAS



TRENCH NOTES

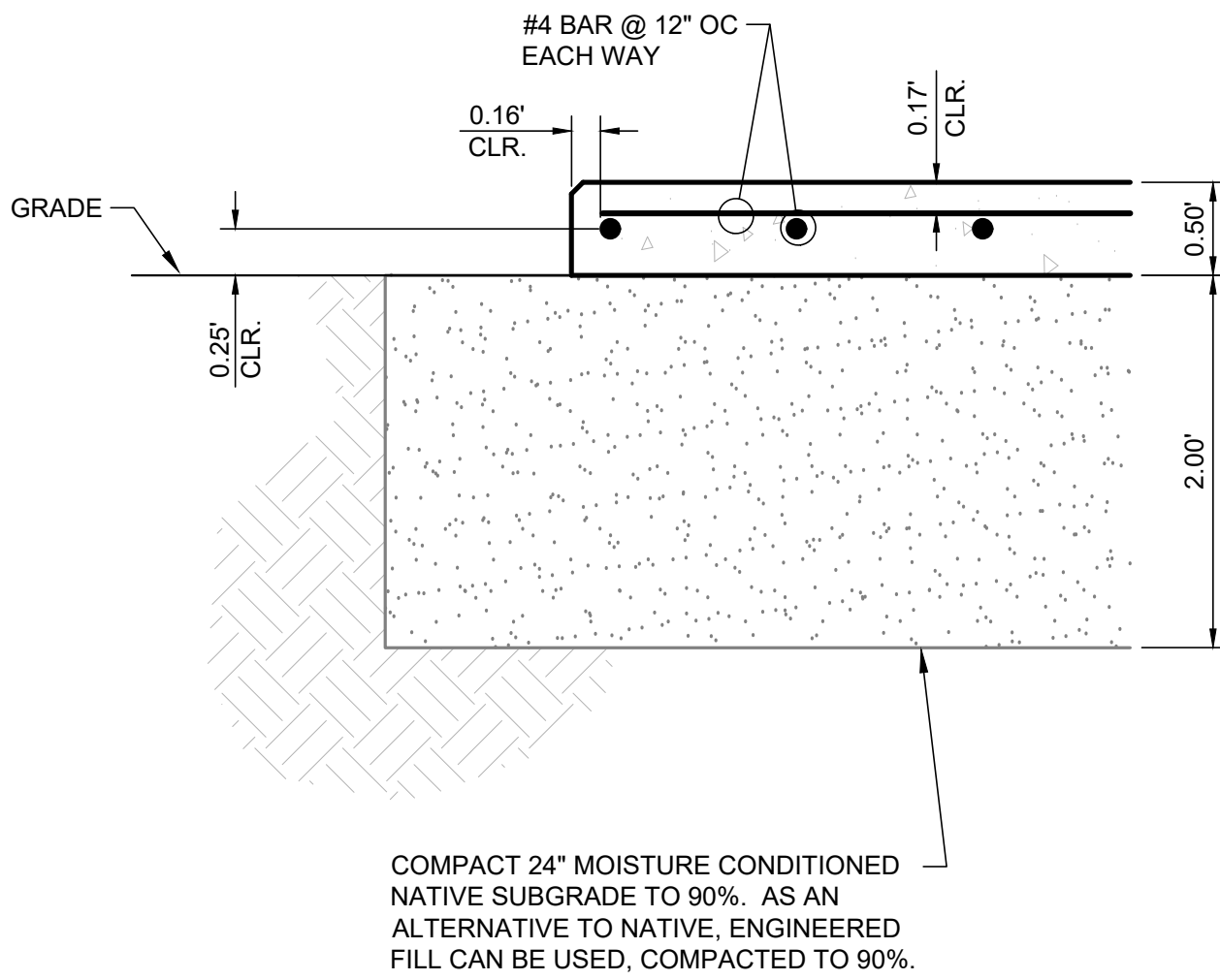
1	PIPE BEDDING SHALL BE SAND. COMPACT TO 90% RELATIVE COMPACTION. ALTERNATIVELY, SLURRY FILL MAY BE USED FOR PIPE BEDDING. IF SLURRY FILL IS USED, TAKE PRECAUTION TO PREVENT PIPE FLOATING. ALSO, IF SLURRY FILL IS USED, TRENCH WIDTH CAN BE NARROWED TO 6-INCHES OUTSIDE OF PIPE WALL ON EACH SIDE.
2	COMPACT ALL TRENCH BACK FILL (COMMON FILL AND ENGINEERED FEEL) TO 90% COMPACTION MORE THAN 2-FEET BELOW GRADE; 95% COMPACTION LESS THAN 2-FEET BELOW GRADE.
3	UNLESS NOTIFIED OTHERWISE, PROVIDE MINIMUM 3-FEET OF COVER OVER ALL BURIED PIPELINES.

TYPICAL TRENCH SECTION

Scale: NONE

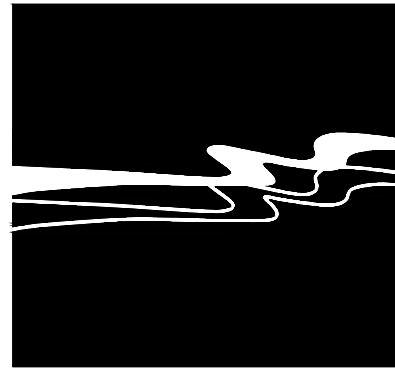
CONCRETE:

- ALL CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE ACI BUILDING CODE (ACI 318) AND THE LATEST EDITION OF THE ACI MANUALS OF CONCRETE PRACTICE.
- SUBMIT CONCRETE MIX DESIGNS TO ENGINEER FOR REVIEW AND APPROVAL FIVE WORKING DAYS PRIOR TO PLACEMENT. MIX DESIGNS SHALL BE PREPARED UNDER THE SUPERVISION OF A CIVIL ENGINEER REGISTERED IN THE STATE OF CALIFORNIA AND BEAR HIS/HER SIGNATURE.
- CONCRETE STRENGTH: 4000 PSI @ 28 DAYS.
- SUBGRADE SHALL BE IN A SATURATED SURFACE DRY CONDITION PRIOR TO PLACEMENT OF CONCRETE.
- MINIMUM CEMENT CONTENT: 6.0 SACKS PER YARD.
- MAXIMUM WATER-CEMENT RATIO: W/C = 0.50.
- AGGREGATE SIZE: 3/4" MAXIMUM. PROVIDE THE MAXIMUM RATIO OF COARSE AGGREGATE TO FINE AGGREGATE CONSISTENT WITH PLACING REQUIREMENTS. MINIMUM 60% COARSE AGGREGATE. 3/4" COURSE AGGREGATE MAY BE BLENDED WITH A MAXIMUM OF 15% 3/8" COURSE AGGREGATE AS REQUIRED FOR PUMPING.
- SLUMP SHALL BE 4" +/- 1", PER ASTM C143.
- CONCRETE MATERIALS:
 - CEMENT: PORTLAND TYPE II, ASTM C150.
 - COARSE AGGREGATE: ASTM C33.
 - FINE AGGREGATE: ASTM C33. REACTIVITY RATIO SC/RC SHALL NOT EXCEED ONE (1) PER ASTM C289.
 - WATER: POTABLE.
 - READY MIXED CONCRETE: ASTM C94.
 - WATER REDUCING ADMIXTURE (OPTIONAL): DARACEM 55 AT THE RATE OF 8 OZ. PER SACK OR POLYHEED AT THE RATE OF 10 OZ. PER SACK.
- REINFORCING MATERIAL:
 - #3 BARS AND SMALLER: ASTM A615 GRADE 40 OR GRADE 60.
 - #4 BARS AND LARGER: ASTM A615 GRADE 60.
- CURING COMPOUNDS: WATER BASED LIQUID MEMBRANES CONFORMING TO ASTM C309 WHEN TESTED IN ACCORDANCE WITH ASTM C156: EUCO AQUA-CURE OR APPROVED EQUAL. APPLY CURING COMPOUND IN STRICT ACCORDANCE WITH MANUFACTURER'S PRINTED INSTRUCTIONS.
- WELDING OF REINFORCING STEEL SHALL NOT BE ALLOWED.
- LAP SPLICES: 60 BAR DIAMETERS OR 2'-0", WHICHEVER IS GREATER.
- COVER TO BARS:
 - WHEN CONCRETE IS PLACED AGAINST GROUND: 3".
 - WHEN CONCRETE IS EXPOSED TO ATMOSPHERE: 2".
- SHOP DRAWINGS: SUBMIT TO THE ENGINEER FOR REVIEW. NO REINFORCING SHALL BE PLACED UNTIL REVIEWED SHOP DRAWINGS HAVE BEEN RECEIVED ON THE JOB. SHOP DRAWINGS SHALL CONSIST OF BOTH CUT AND PLACING SHEETS. PLACING SHEETS SHALL CONTAIN ALL INFORMATION REQUIRED TO POSITION ALL REINFORCING STEEL WITHOUT HAVING TO REFER TO THE STRUCTURAL DRAWINGS.
- VIBRATION: VIBRATE ALL CONCRETE IN PLACE WITH A MECHANICAL VIBRATOR USED BY EXPERIENCED PERSONNEL.
- FORM REMOVAL: REMOVE FORMS IN ACCORDANCE WITH THE FOLLOWING SCHEDULE:
 - SIDE FORMS OF FOOTINGS: MINIMUM 2 DAYS.
 - EDGE FORMS OF SLAB ON GRADE STRIPS: MINIMUM 1 DAY.
- TESTING:
 - LABORATORY: THE OWNER SHALL RETAIN AND PAY FOR THE SERVICES OF A TESTING LABORATORY WHERE SAMPLES WILL BE TESTED IN ACCORDANCE WITH THESE STRUCTURAL NOTES AND THE APPLICABLE STANDARDS OF THE ASTM. WORK UNDER THIS DIVISION (TO BE PERFORMED BY THE CONTRACTOR) INCLUDES THE TAKING AND STORAGE OF SAMPLES AND THEIR DELIVERY TO THE LABORATORY.
 - SAMPLES: MAKE 3 TEST CYLINDERS FOR EACH DAY'S POUR.
 - TESTING OF SAMPLES: TEST EACH BATCH OF 3 CYLINDERS AS FOLLOWS: 1 AT 7 DAYS, AND 2 AT 28 DAYS.
 - TEST REPORTS: A COPY OF ALL TEST REPORTS SHALL BE SUBMITTED TO THE ENGINEER FOR ACCEPTANCE OF CONCRETE POUR.
- EXPOSED CONCRETE SURFACES SHALL HAVE A STEEL TROWEL FINISH.
- INSTALL HAND TOOLED, GROOVED CONTRACTION JOINTS IN THE HOUSEKEEPING PADS AND EQUIPMENT FOUNDATION. JOINTS SHALL BE INSTALLED AT 15'-0" (MAX) ON CENTER.
- FABRICATE A 3/4" CHAMFER ON ALL EXPOSED CORNERS OF THE TRANSFORMER FOUNDATION.
- THE TRANSFORMER SHALL BE ANCHORED TO THE FOUNDATION USING HILTI 5/8" DIA HAS RODS, 12" LONG, GALVANIZED WITH HILTI HIT-RE 100 INJECTABLE MORTAR. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH ALL MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS AND RECOMMENDATIONS.



TYPICAL HOUSEKEEPING SLAB

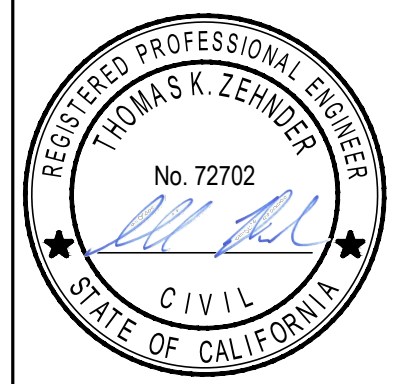
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LEHIGH CEMENT
LEHIGH CEMENT YARD PIPING - PHASE 3 POND
30
DETAILS

JOB #: 1384-0001
DESIGNERS: TKZ
DRAWN BY: ESR
DATE: 9-22-17

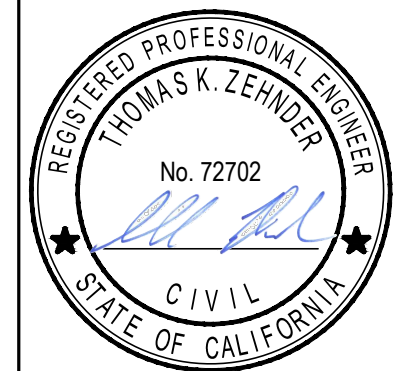
DRAWING NO.
PH3-CD1
3 OF 6 SHEETS

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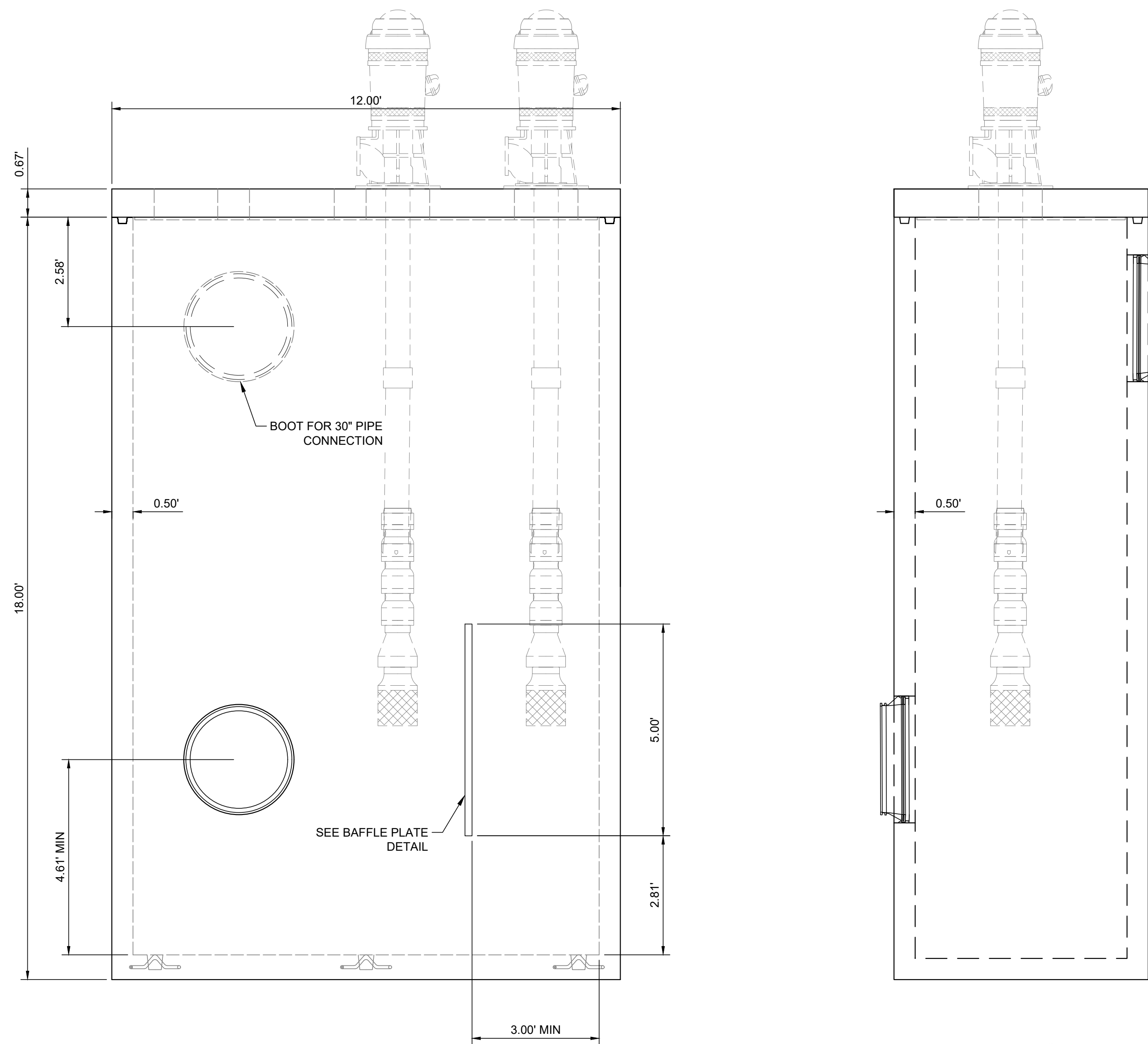
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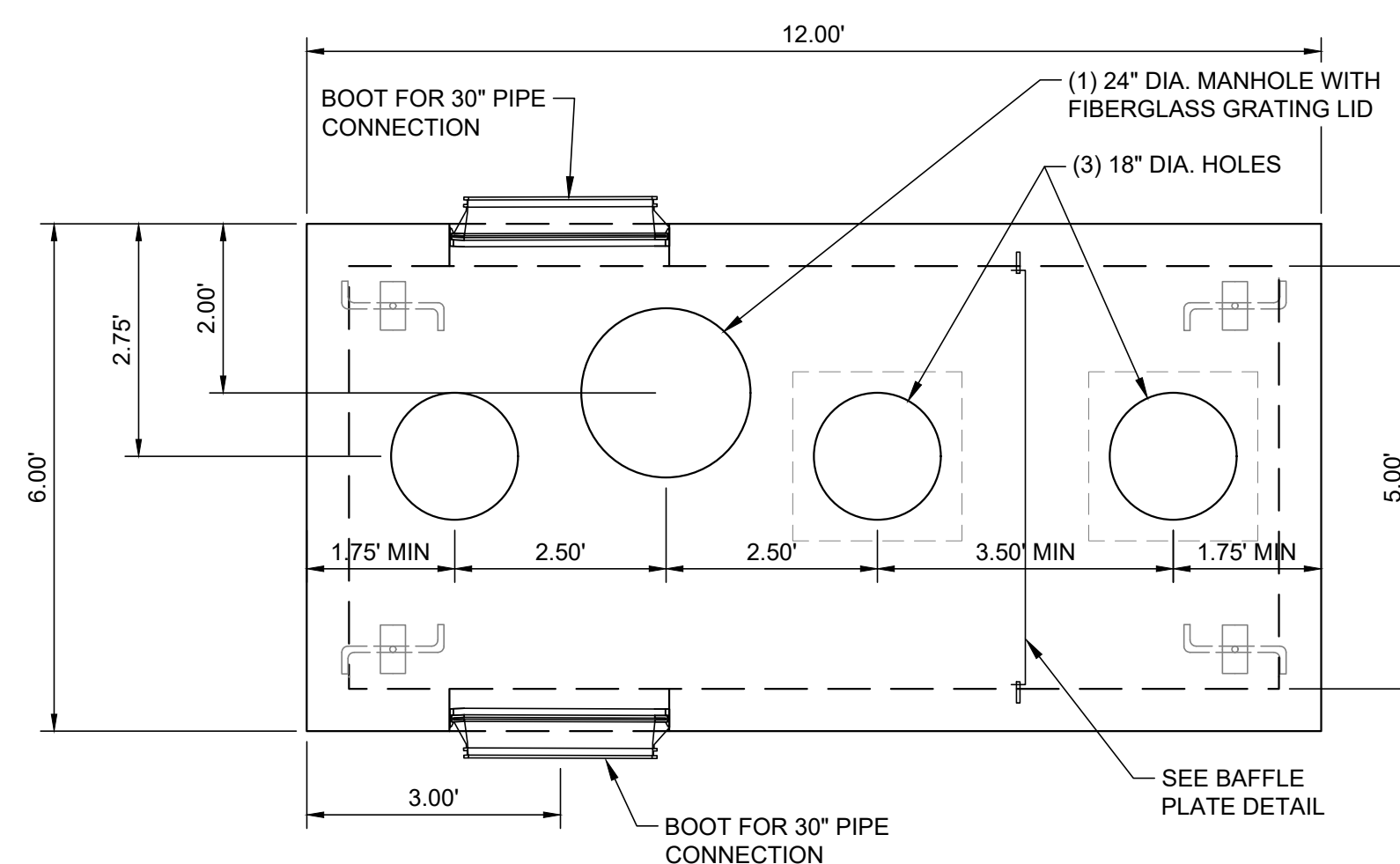
LEHIGH CEMENT
LEHIGH CEMENT YARD PIPING - PHASE 3
POND 30
PRECAST CONCRETE WET WELL

JOB #: 1384-0001
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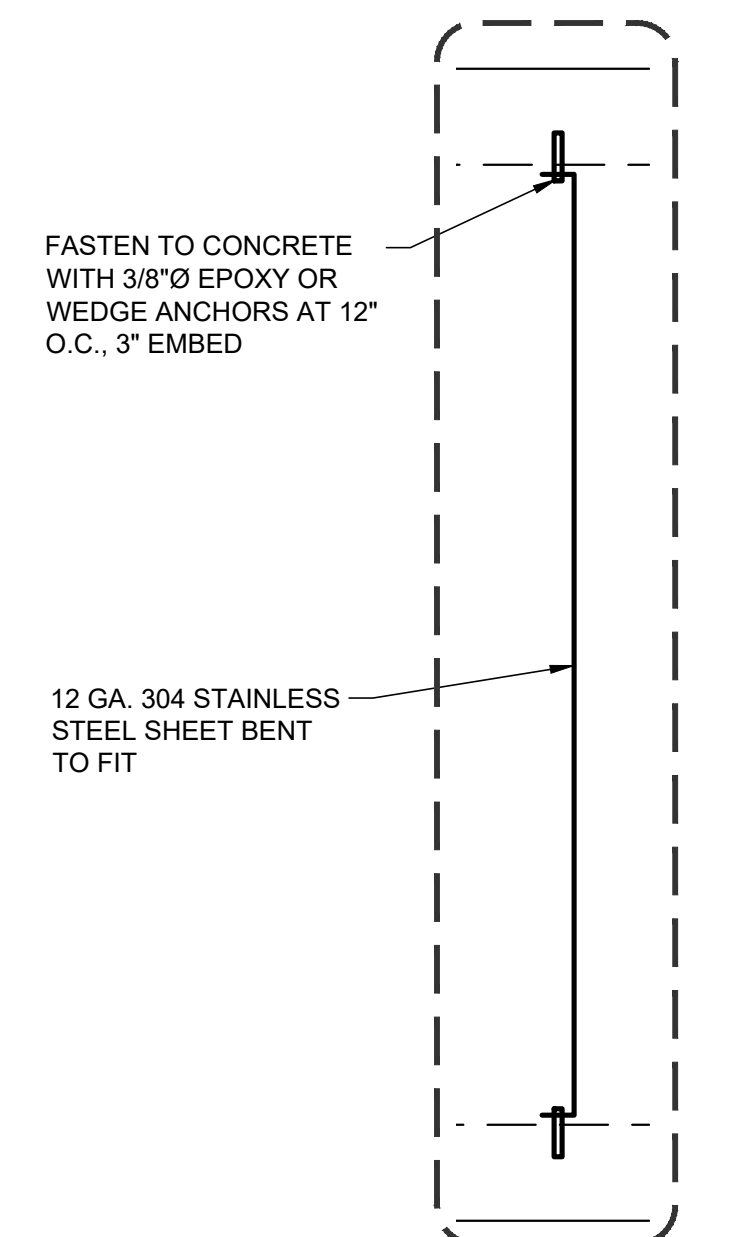
DRAWING NO.
PH3-CD2
4 OF 6 SHEETS



FRONT ELEVATION



PLAN VIEW



BAFFLE PLATE

MATERIAL REQUIREMENTS

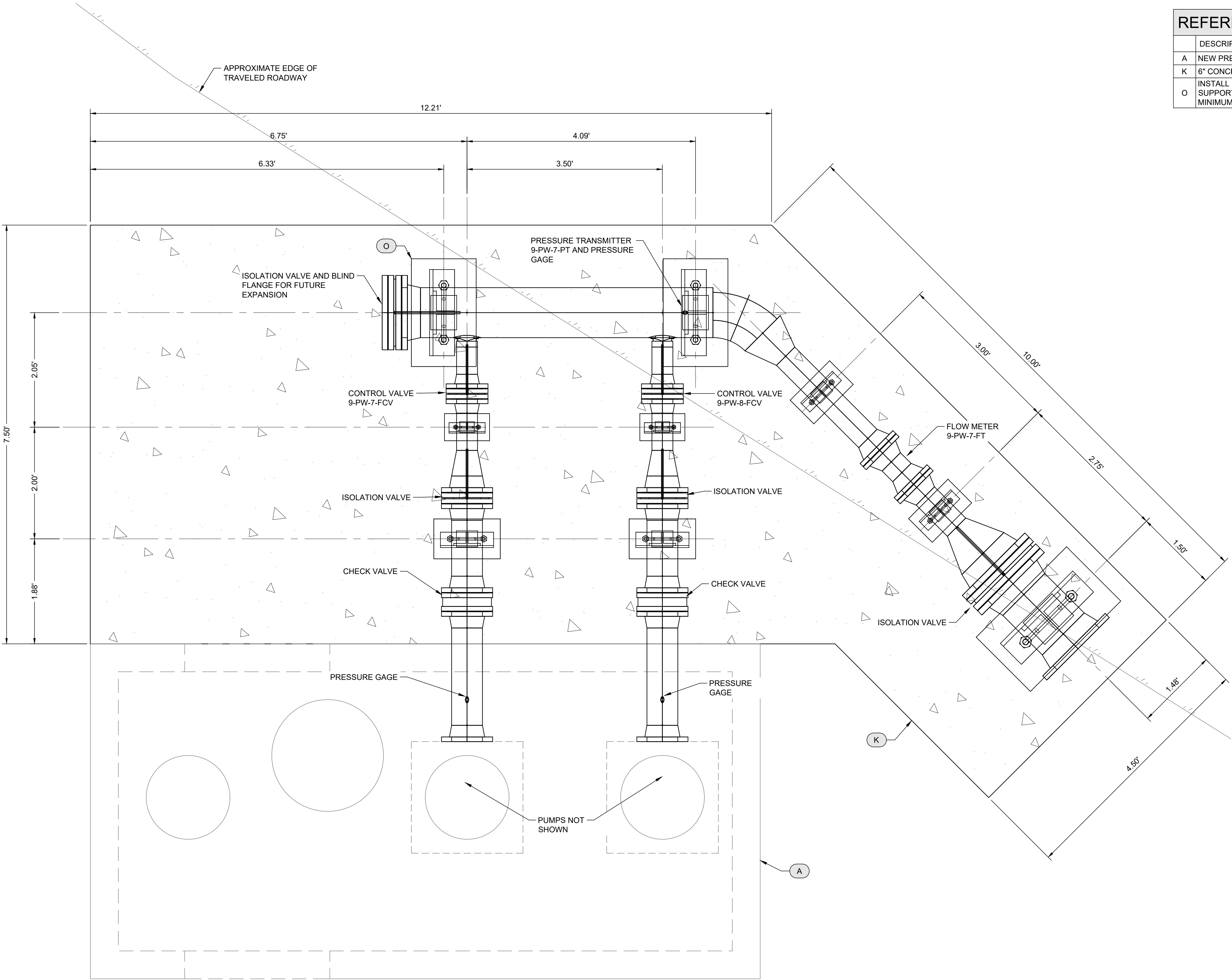
CONCRETE: PORTLAND TYPE 2 CEMENT, 28-DAY COMPRESSIVE STRENGTH $f_c = 5000$ PSI
REINFORCING: GRADE 60 ($f_y = 60,000$ psi) PER ASTM A615, A706
THIS STRUCTURE SHALL BE DESIGNED TO ACI 318, ASTM C857, ASTM C478 STANDARDS

WET WELL - PUMP VAULT

Scale: 1" = 2'

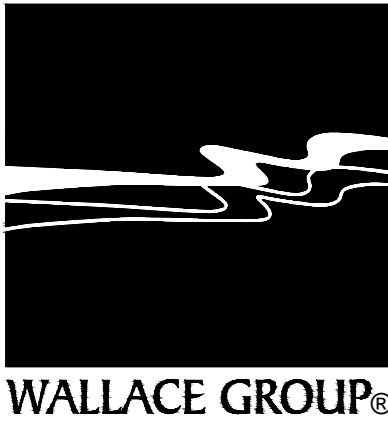
0	9/22/2017	ISSUED FOR CONSTRUCTION	TKZ
A	9/20/2017	ISSUED FOR REVIEW	TKZ
Rev.	Date	Description of Revisions	By

REFERENCE NOTES:	
	DESCRIPTION
A	NEW PRECAST CONCRETE WET WELL. WET WELL TO BE FURNISHED BY OWNER. SEE SHEET PH3-CD2 FOR WET WELL DETAILS.
K	6" CONCRETE PAD AT DISCHARGE PIPING. SEE SHEET PH3-CD1
O	INSTALL PIPE SUPPORTS IN LOCATIONS SHOWN, OR AS NECESSARY TO MEET FIELD CONDITIONS. CLAMPED STANCHION SUPPORTS FURNISHED BY OWNER. ANCHOR SUPPORTS TO CONCRETE WITH 1/2" DIAMETER WEDGE OR EPOXY ANCHORS, 2-3" MINIMUM EMBEDMENT



DISCHARGE PIPING ARRANGMENT AT WET WELL

Scale: N.T.S.



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THOMAS K. ZENNER
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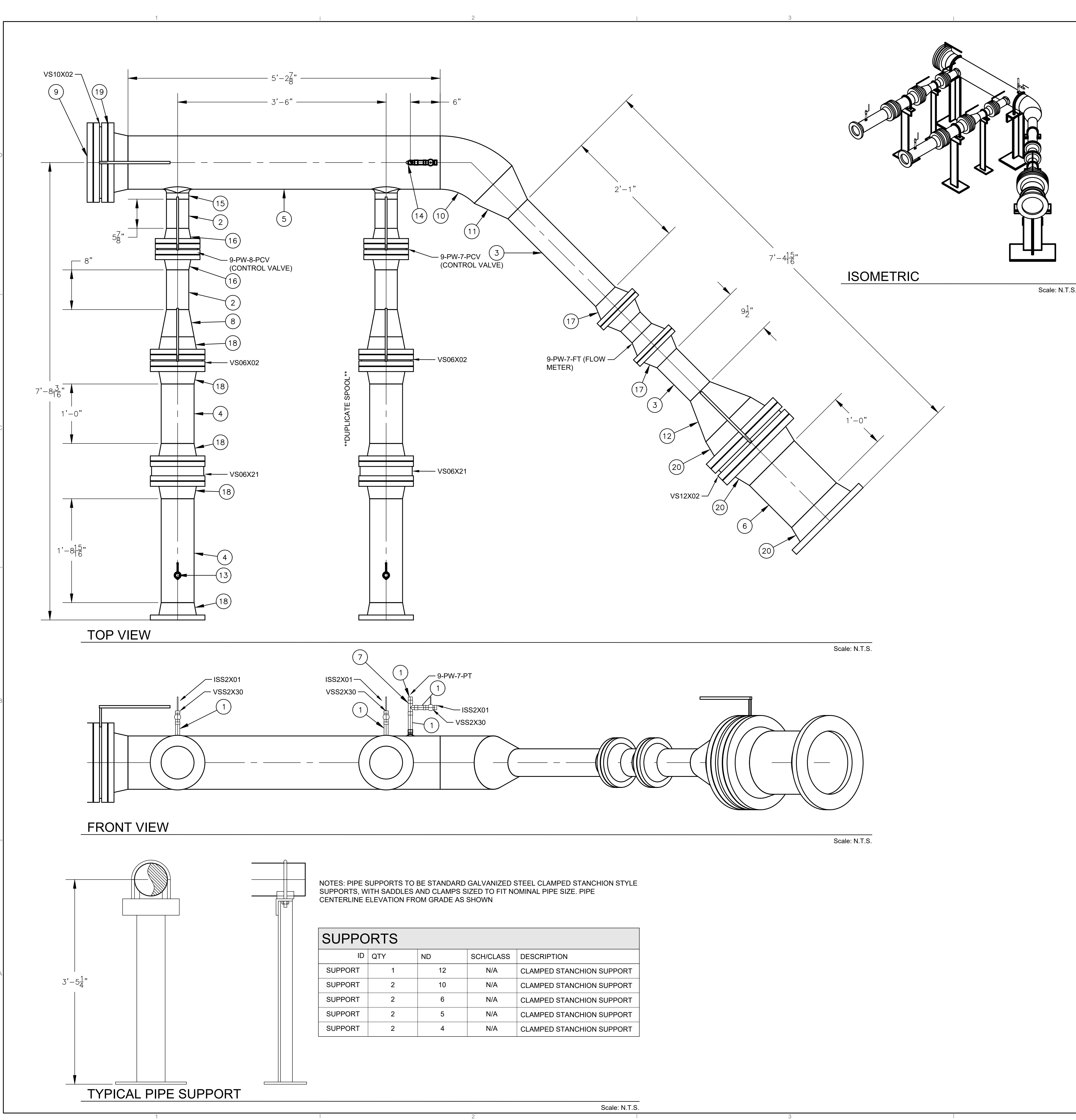
SIGNATURE
9-22-17
DATE SIGNED

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LEHIGH CEMENT
LEHIGH CEMENT YARD PIPING - PHASE 3 POND
30
DISCHARGE PIPING ARRANGEMENT

JOB #: 1384-0001
DESIGNERS: TKZ
DRAWN BY: ESR
DATE: 9-22-17
DRAWING NO.
PH3-CD3
5 OF 6 SHEETS

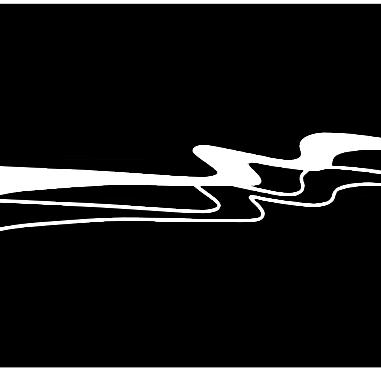
0	9/22/2017	ISSUED FOR CONSTRUCTION	TKZ
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Rev.	Date	Description of Revisions	By



BILL OF MATERIALS				
ID	QTY	ND	SCH/CLASS	DESCRIPTION
1	1'-6"	1/2"	160	PIPE, SEAMLESS, 160, PE, ASTM A106
2	2'-3 3/4"	4"	40	PIPE, SEAMLESS, 40, PE, ASTM A106
3	3'-1 3/4"	5"	40	PIPE, SEAMLESS, 40, PE, ASTM A106
4	5'-5 7/8"	6"	40	PIPE, SEAMLESS, 40, PE, ASTM A106
5	5'-2 7/8"	10"	40	PIPE, SEAMLESS, 40, PE, ASTM A106
6	1'-0"	12"	40	PIPE, SEAMLESS, 40, PE, ASTM A106
7	1	1/2"	6000	TEE, 6000 LB, FPT, ASME B16.11
8	2	6"x4"	STD	REDUCER (CONC), SCH STD, BW, ASME B16.9
9	1	10"	150	FLANGE BLIND, 150 LB, RF, ASME B16.5, ASTM A234 Gr WPB
10	1	10"	STD	ELL 45 LR, BW, ASME B16.9, ASTM A234 Gr WPB SMLS, Sch 40
11	1	10"x5"	STD	REDUCER (CONC), SCH STD, BW, ASME B16.9
12	1	12"x5"	STD	REDUCER (CONC), SCH STD, BW, ASME B16.9
13	2	6"x1/2"	6000	THREADOLET, 6000 LB, BWXFPT, 3/4" LG, ASME B16.11
14	1	10"x1/2"	6000	THREADOLET, 6000 LB, BWXFPT, 3/4" LG, ASME B16.11
15	2	10"x4"	STD	WELDOLET, BW, STD, 2" LG, MSS-SP-97
16	4	4"	150	FLANGE WN, 150 LB, RF, ASME B16.5, ASTM A234 Gr WPB
17	4	5"	150	PH IMPERIAL Flange
18	10	6"	150	FLANGE WN, 150 LB, RF, ASME B16.5, ASTM A234 Gr WPB
19	1	10"	150	FLANGE WN, 150 LB, RF, ASME B16.5, ASTM A234 Gr WPB
20	3	12"	150	FLANGE WN, 150 LB, RF, ASME B16.5, ASTM A234 Gr WPB
21	4	4"	150	BOLT SET, RF, 150 LB, LUG BOLT
22	4	4"	150	GASKET, SWG, 1/8" THK, RF, 150 LB, ASME B16.20, CS/PTFE
23	2	5"	150	PH IMPERIAL Stud Bolt
24	2	5"	150	PH IMPERIAL Gasket
25	4	6"	150	BOLT SET, RF, 150 LB, LUG BOLT
26	2	6"	150	BOLT SET, RF, 150 LB, STUD BOLT
27	8	6"	150	GASKET, SWG, 1/8" THK, RF, 150 LB, ASME B16.20, CS/PTFE
28	2	10"	150	BOLT SET, RF, 150 LB, LUG BOLT
29	2	10"	150	GASKET, SWG, 1/8" THK, RF, 150 LB, ASME B16.20, CS/PTFE
30	2	12"	150	BOLT SET, RF, 150 LB, LUG BOLT
31	2	12"	150	GASKET, SWG, 1/8" THK, RF, 150 LB, ASME B16.20, CS/PTFE

SPECIALTIES				
ID	QTY	ND	SCH/CLASS	DESCRIPTION
9-PW-7-FT	1	5	150	FLOW BODY DESCRIPTION: (5" FLOW BODY - 400 TO 2000 GPM PUMP(S) - POND 30 PS TO POND 11) [32.1 FPS W/ TEMP PUMP, 12.83 FPS NORMALLY] MAGNETIC FLOWMETER FLANGED SENSORS, 5"-ANSI B16.5 150# CS FLANGED BODY, TEFLON SEALS, DUAL SS ELECTRODES, ROSEMOUNT 8705-T-S-A-050-C-W0-NH-B3-Q4 OR EQUIVALENT, TO BE INTEGRALLY MOUNTED AT THE FACTORY TO ELECTRONIC TRANSMITTER (F/N 601). DESIGN FLOW = 800 GPM, MIN FLOW = 400 GPM, EMERGENCY FLOW = 1800 GPM. ELECTRONICS DESCRIPTION: ELECTRONIC FLOW TRANSMITTER (MAGNETIC METER), AC POWER, 4-20MA OUTPUT (HART PROTOCOL), UNCLASSIFIED AREA, LOCAL INTERFACE, ROSEMOUNT 8732E-S-T-1-A-1-NH-M4 OR EQUIVALENT. NOTE: IT IS RECOMMENDED TO CONSULT WITH SCADA INTEGRATOR TO ENSURE COMPATIBILITY PRIOR TO ORDERING.
9-PW-7-PCV	1	4	150	4" FIG K-LOK FIG 362-CSS1TSG HIGH PERFORMANCE BUTTERFLY VALVE, ASME CLASS 150 LUG CS BODY, SS DISC AND SHAFT, RTFE SEAT, WITH KEYSTONE ELECTRIC ACTUATOR, EPI2-013 AH W1-P6, NEMA 4/4X/6, 120-240 VAC, AND OM1 I/O FOR MODULATING CONTROL
9-PW-7-PT	1	1/2	150	PRESSURE TRANSMITTER, 316L SS, 4-10MA HART OUTPUT, FM APPROVED, DWYER 3200G-2-FM-1-1 OR APPROVED EQUAL
9-PW-8-PCV	1	4	150	4" FIG K-LOK FIG 362-CSS1TSG HIGH PERFORMANCE BUTTERFLY VALVE, ASME CLASS 150 LUG CS BODY, SS DISC AND SHAFT, RTFE SEAT, WITH KEYSTONE ELECTRIC ACTUATOR, EPI2-013 AH W1-P6, NEMA 4/4X/6, 120-240 VAC, AND OM1 I/O FOR MODULATING CONTROL
ISS2X01	3	1/2	200	PRESSURE GAUGE, 316SS, 0-200 PSIG, ASHCROFT 1259 OR EQUIVALENT
VS06X02	2	6	150	BUTTERFLY VALVE, DUCTILE IRON, LUG BODY, 200 PSI RATING, 316 SS DISC, EPDM SEAT, GEAR OPERATOR
VS06X21	2	6	125	CHECK VALVE, WAFER BODY, DUAL PLATE, DUCTILE IRON, CL125 FLANGE, 300 WOG RATING
VS12X02	1	12	150	BUTTERFLY VALVE, DUCTILE IRON, LUG BODY, 200 PSI RATING, 316 SS DISC, EPDM SEAT, GEAR OPERATOR
VS10X02	1	10	150	BUTTERFLY VALVE, DUCTILE IRON, LUG BODY, 200 PSI RATING, 316 SS DISC, EPDM SEAT, GEAR OPERATOR
VSS2X30	3	1/2	1000	BALL VALVE, STAINLESS STEEL FULL BORE, TWO PIECE BODY, FPT, 1000 CWP

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SIGNATURE
9-22-17
DATE SIGNED

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LEHIGH CEMENT
LEHIGH CEMENT YARD PIPING - PHASE 3
POND 30
COVER

LEHIGH CEMENT
LEHIGH CEMENT YARD PIPING - PHASE 3
POND 30
COVER

JOB #: 1384-0001
DESIGNERS: TKZ
DRAWN BY: ESR
DATE: 9-22-17

DRAWING NO.

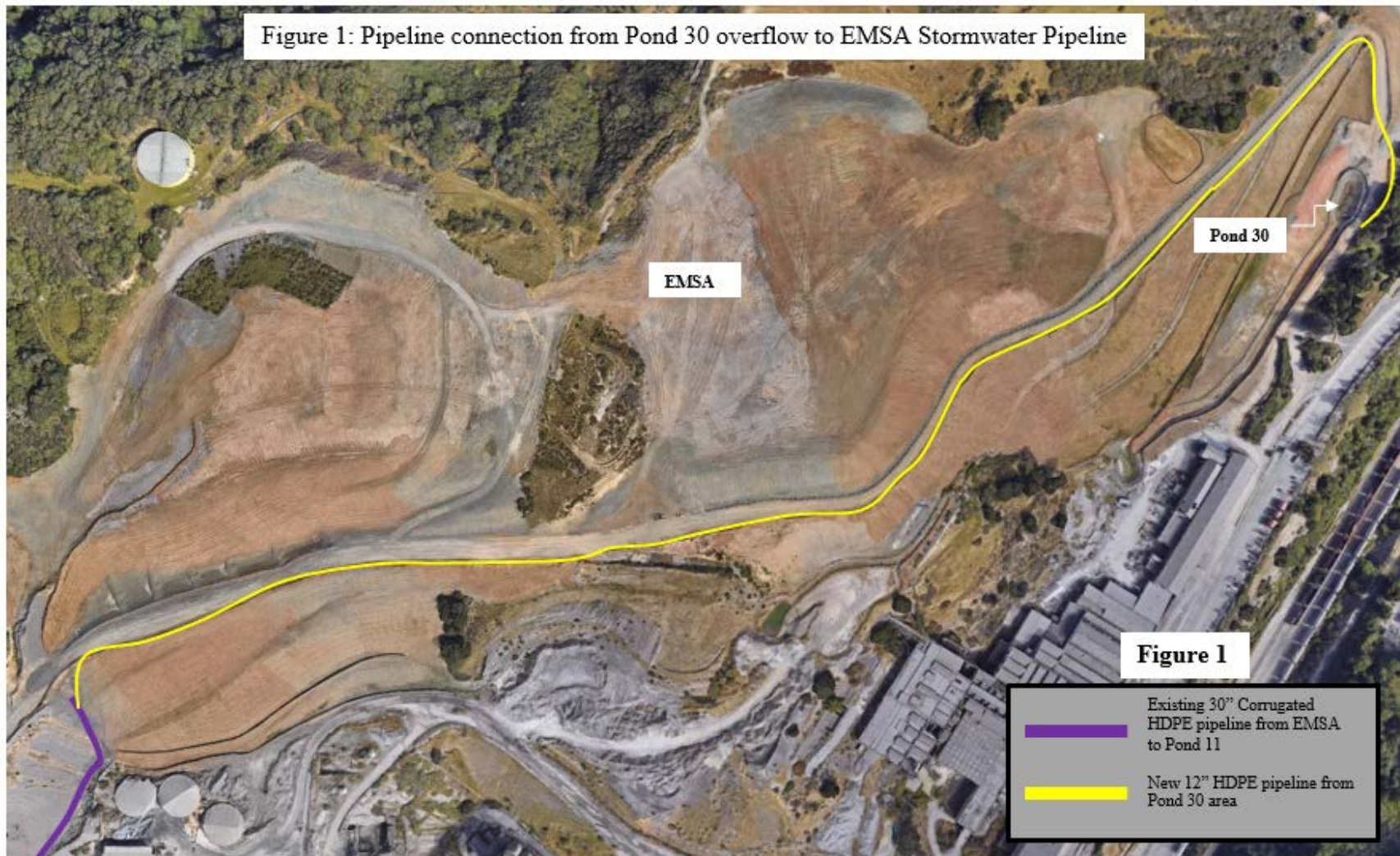
PH3-PS1

6 OF 6 SHEETS

0	9/22/2017	ISSUED FOR CONSTRUCTION	TKZ
A	9/20/2017	ISSUED FOR REVIEW	TKZ
Rev.	Date	Description of Revisions	By

Attachment 2

Figure 1: Pipeline connection from Pond 30 overflow to EMSA Stormwater Pipeline



Picture 1: Showing Pond 30 on the left and the new 12" HDPE pipeline on the right of the road



Picture 2: New 12" HDPE pipeline on the right at Pond 30 area



Picture 3: New 12" pipeline on the right going underground entering EMSA



Picture 4: New 12" pipeline going up EMSA road; covered under the berm on the left



Picture 5: Exposed new 12" pipeline in EMSA by D10 ditch to allow Stormwater drainage



Picture 6: Exposed new 12" pipeline connecting 30" corrugated pipeline



Picture 7: Close-up picture of the exposed new 12" pipeline from pond 30 area connecting 30" corrugated pipeline



Attachment 3

TECHNICAL MEMORANDUM

Date:	11/3/17	Project No.:	1655230-01
To:	Erika Guerra	Company:	Lehigh Southwest Cement Company
From:	George Wegmann, PG Bill Fowler, PG, CEG		
cc:	Sean Hungerford	Email:	Erika.Guerra@LehighHanson.com
RE:	EMSA Sediment Sampling, Lehigh Permanente Facility		

1.0 INTRODUCTION

Golder Associates (Golder) has prepared this technical memorandum to summarize the sediment sampling activities completed at the East Material Storage Area (EMSA) of Lehigh Southwest Cement Company's Permanente facility located at 24001 Stevens Creek Boulevard, Santa Clara County. The sediment sampling was conducted based on the Santa Clara County Planning Commission staff's recommendations to determine the selenium concentration within Pond 30 sediment and evaluate to what degree the sediment is contributing to the elevated concentrations in the Pond 30 discharge water.

2.0 SEDIMENT SAMPLING

Lehigh planned to complete the lining of Pond 30 and the drainage swale directly upgradient of Pond 30 prior to the start of the 2016/2017 wet season, and perform routine maintenance activities including sediment removal from the pond and swale throughout the wet season. The work was delayed due to the presence of the California Red-Legged Frog (CRLF) in Pond 30. Lehigh has requested the necessary permits from federal wildlife officials to relocate the CRLF to a newly established habitat; however, the permits have not been granted. Therefore, the sediments present within Pond 30 and the drainage swale have accumulated over several years.

2.1 Sampling Procedure

Under the direction of a California Professional Geologist, Golder field staff collected a total of ten sediment samples from five locations on May 19, 2017. The sample locations are shown on the attached Figure 1. Three locations were from within Pond 30 and two locations were from the drainage swale west of Pond 30. At each location, Golder collected a surficial sample and then a deeper sample from one foot below ground surface (bgs). The deeper sample was collected to evaluate potential differences with depth.

The samples were collected with a hand auger and plastic scoops and placed in laboratory provided 8-ounce jars. Samples were transported to a certified analytical laboratory in a chilled cooler under chain of custody documentation. The laboratory analyzed the samples for total selenium by EPA method 6020.

tech memo_emsa_1nov2017_final.docx

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Based on the total results, three samples were analyzed for selenium via the Soluble Threshold Limit Concentration (STLC) CAM Extraction Test (WET) using deionized water to determine the solubility of selenium.

2.2 Sampling Results

The results of the sediment sampling are summarized below and illustrated on Figure 1. Figure 1 also contains the cover runoff sampling results from 2016 and 2017.

Table 1: Sediment Sampling Results

Sample Location	Sample ID	Sample Depth (ft)	Date	Total Selenium (mg/kg)	STLC Selenium (mg/L)
PD-30-SD1	PD-30-SD1-0	0	5/19/17	ND<0.11	
PD-30-SD1	PD-30-SD1-1	1	5/19/17	ND<0.11	
PD-30-SD2	PD-30-SD2-0	0	5/19/17	0.23 J	0.0011 J
PD-30-SD2	PD-30-SD2-1	1	5/19/17	0.87	0.00079 J
PD-30-SD3	PD-30-SD3-0	0	5/19/17	ND<0.11	
PD-30-SD3	PD-30-SD3-1	1	5/19/17	0.50	
SWALE-SD1	SWALE-SD1-0	0	5/19/17	0.85	0.0019 J
SWALE-SD1	SWALE-SD1-1	1	5/19/17	0.29 J	
SWALE-SD2	SWALE-SD2-0	0	5/19/17	ND<0.11	
SWALE-SD2	SWALE-SD2-1	1	5/19/17	ND<0.11	

The total selenium concentrations ranges from non-detect to 0.87 milligram per kilogram (mg/kg). From within Pond 30, the higher concentrations were noted from sample location PD-30-SD2, which is from the bottom of the pond by the outlet pipe, and from the deeper samples collected at 1 ft bgs. Selenium was not detected at PD-30-1, which is located along the western portion of the pond by the drainage swale. For the drainage swale, selenium was detected up to 0.85 mg/kg in the upgradient sample location (SWALE-SD1) and not detected above the laboratory method detection limit from the downgradient swale sample (SWALE-SD2). The surficial sample from SWALE-SD1 had a higher selenium concentration than the sample from 1 ft bgs. For comparison purposes, the California TTLC regulated hazardous waste threshold is 100 mg/kg for selenium and the San Francisco Bay Regional Water Quality Control Board Tier 1 Environmental Screening Level (ESL) is 390 mg/kg for selenium in soil.

Even though the total results were low, STLC analysis was conducted to determine the leachability of selenium as a potential contributor to the water quality of the Pond 30 discharge. Three samples with higher total selenium results from different locations and depths were selected for STLC analysis. STLC selenium was detected at estimated values below the laboratory reporting limit, but above the method detection limit. The estimated STLC selenium concentrations ranged from 0.00079 mg/L to 0.0019 mg/L (0.79 µg/L to 1.9

µg/L). The STLC results are below the 5 µg/L water quality objective and suggest that the sediment is not a primary source of selenium in the Pond 30 discharge.

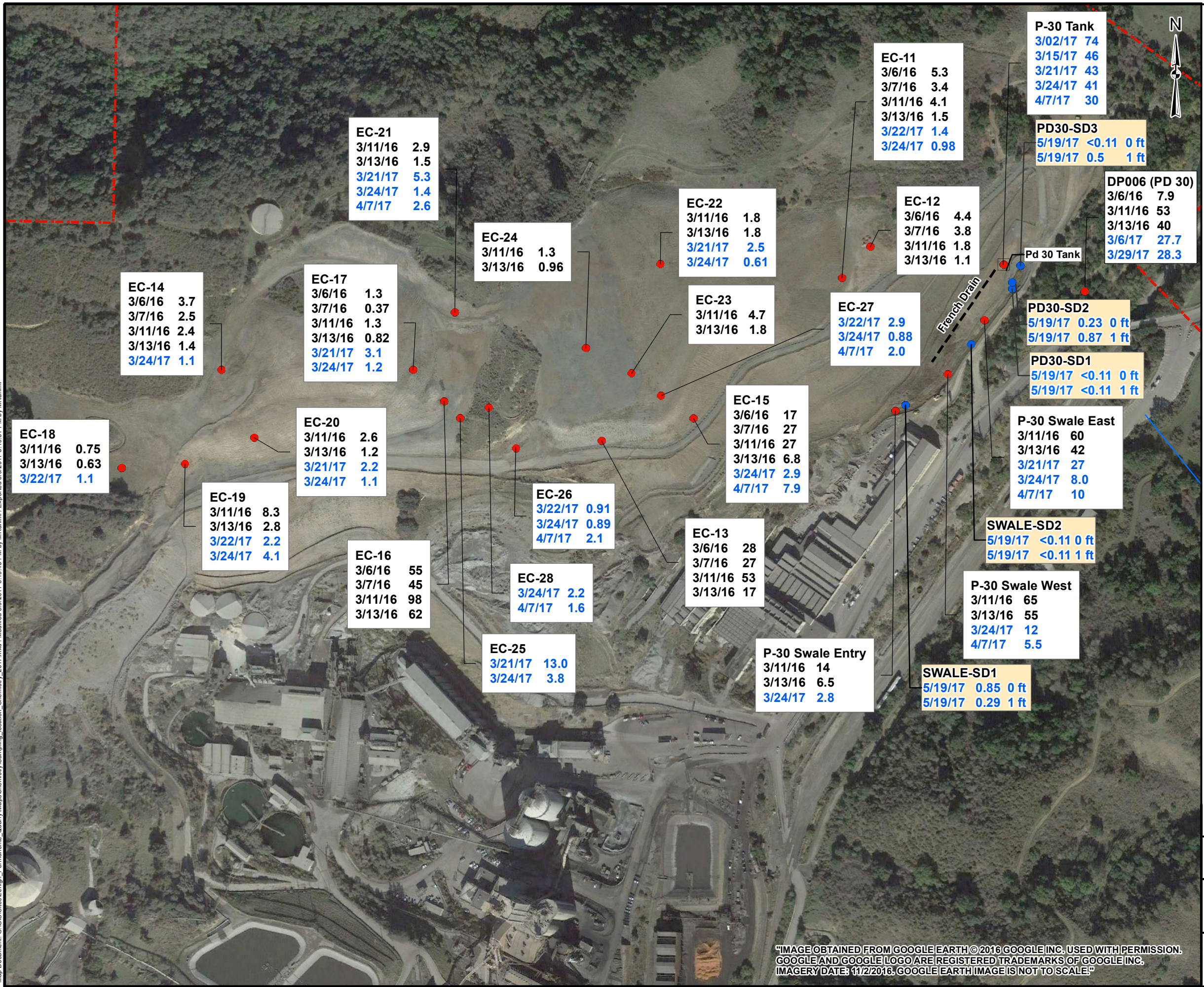
3.0 SUMMARY AND RECOMMENDATIONS

Non-detect to low levels of total selenium were detected in the sediment accumulated in Pond 30 and the drainage swale. The STLC results suggest that the accumulated sediment is not the primary factor in contributing to the selenium concentrations observed in the Pond 30 discharge water. These findings are consistent with the results from the previous EMSA monitoring program, which indicated that elevated selenium concentrations are confined to specific seepage areas along the bases of certain slopes. However, routine removal of accumulated sediment within Pond 30 and the drainage swale will help reduce the residence time of water in contact with any selenium-containing sediments and reduce the potential for sediments to contribute selenium to the Pond 30 discharge water. Golder recommends sediment removal is completed as planned once the approval is obtained from federal wildlife officials. Golder also recommends performing monitoring during the 2017/2018 wet season focused on water quality of seeps and storm water runoff along the main drainage conveyance system.

Attachments:

Figure 1 – EMSA Sediment Sampling

Map Document: G:\GIS\Site\Lehigh_Permanente Quarry\Maps\Chemistry\Sampling_location_Chemistry_2017.mxd / Modified 6/9/2017 5:19:43 PM by M.Rahimi / Exported 6/9/2017 5:19:51 PM by M.Rahimi



LEGEND

- Water Samples
- Date Selenium (ug/L)
- Sediment Samples
- Date Total Selenium (mg/kg) Depth (ft)
- Property Boundary

REFERENCES

- USGS 1/9th Arc NED DEM based off of 2006 LIDAR Survey
- Service Layer Credits:
- Coordinate System: NAD 1983 StatePlane California III FIPS 0403 Feet
- Former Ridgecrest created from 1952 Cupertino and 1955 Mindego Hills Quadrangle USGS Topographic Maps.

300 0 300
1 in = 308 feet

PROJECT PERMANENTE QUARRY
SANTA CLARA COUNTY, CA

TITLE
EMSA SEDIMENT SAMPLING



PROJECT No.	063-7109-914	FILE Name	Sampling_location_Chemistry_2017.mxd
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GIS	MR	6/9/2017	REV: 0
CHECK	GW	6/9/2017	
REVIEW	GW	6/9/2017	

FIGURE 1

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