

REDONDO WASTEWATER TREATMENT PLANT

PRIMARY AND SECONDARY CLARIFIER REHABILITATION

ISSUED FOR BID



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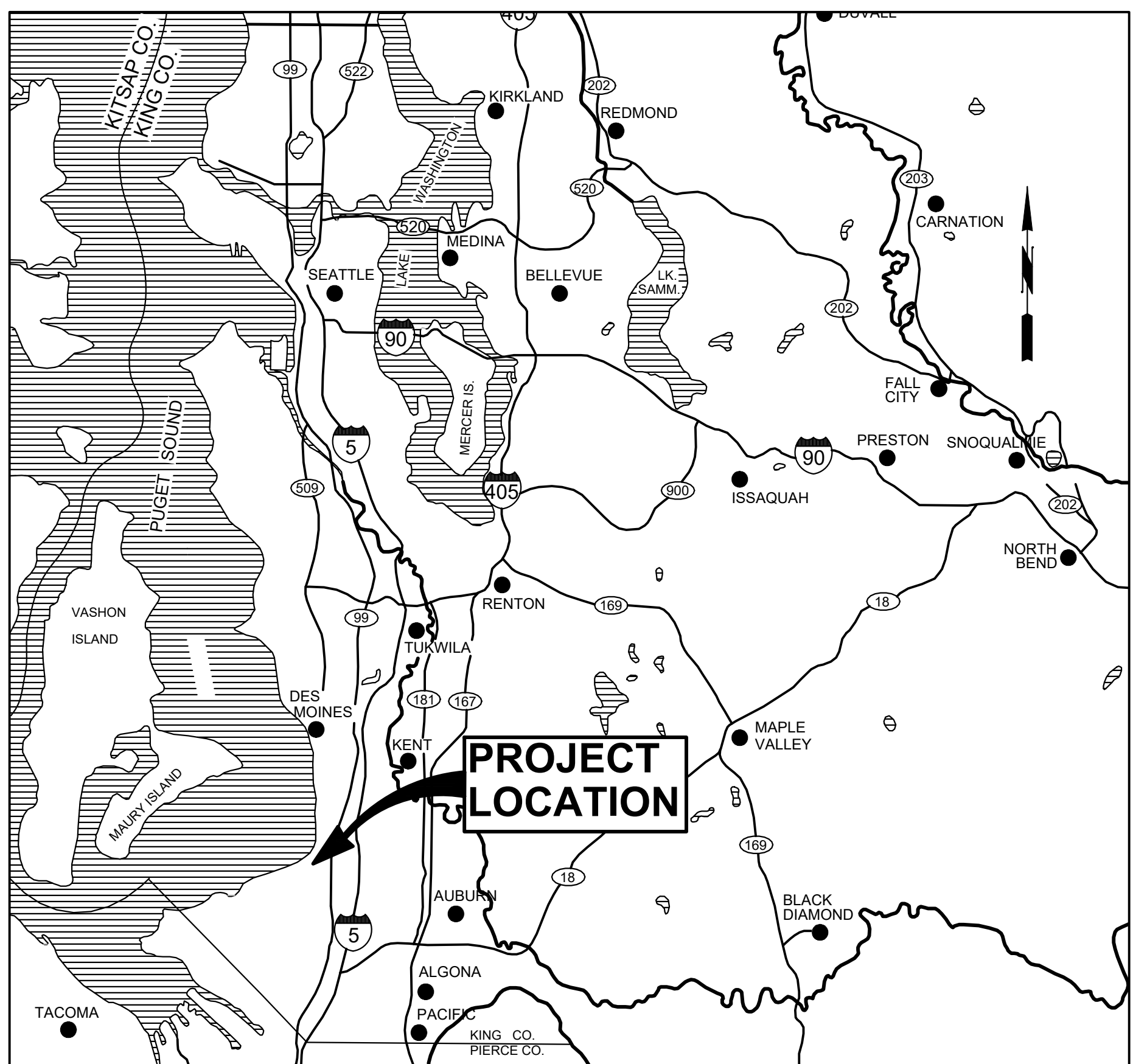
JOHN BOWMAN, PE

ENGINEERING MANAGER

KEN MILLER, PE

ASSISTANT WASTEWATER OPERATIONS MANAGERS

BRIAN RICHARDSON
RANDY MARTINEZ



VICINITY MAP
SCALE: NONE



LOCATION MAP
SCALE: NONE



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Drawn	L.GOUDEAU
Checked	A. PEREZ
Design Review Level	
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REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

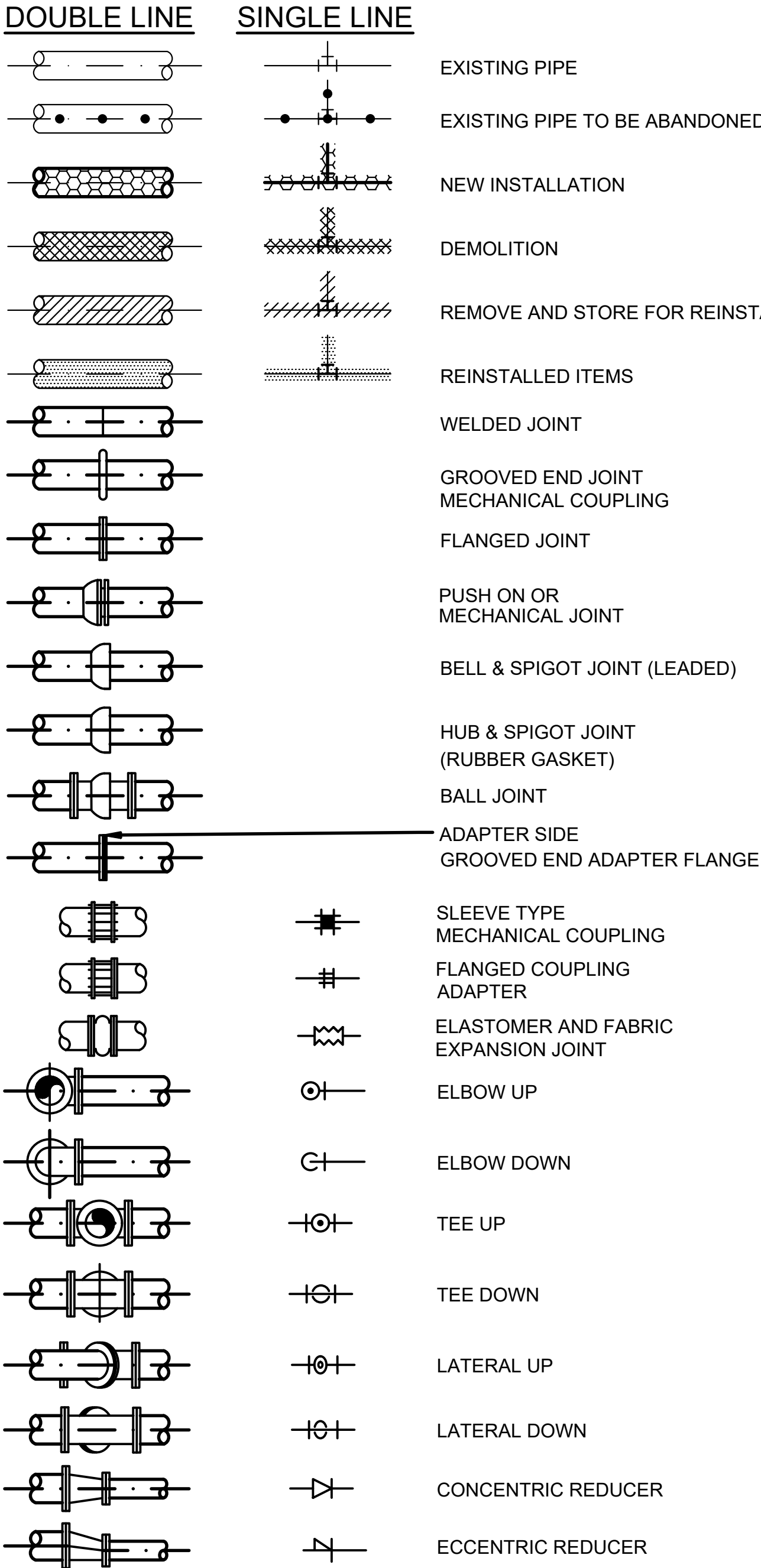
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GENERAL NOTES

1. DRAWINGS ARE BASED ON RECORD DRAWINGS OF PREVIOUS PROJECTS. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS PRIOR TO PERFORMING THE WORK. CONTRACTOR MAY REQUEST ELECTRONIC COPIES OF RECORD DRAWINGS FROM OWNER AS REQUIRED.
2. SHOP DRAWINGS FOR EXISTING PRIMARY AND SECONDARY CLARIFIER RAKE ARMS ARE AVAILABLE.

PIPE AND FITTING SYMBOLS



NOTES:

1. ONLY FLANGED END CONNECTIONS ARE SHOWN HERE FOR DOUBLE LINE FITTINGS. FITTINGS WITH OTHER END PATTERNS ARE SHOWN SIMILARLY ON THE CONSTRUCTION DRAWINGS. ALSO SEE PIPING SPECIFICATIONS.
2. SYMBOLS SHOWN HERE FOR SINGLE LINE FITTINGS ARE GENERIC ONLY. REFER TO PIPING SPECIFICATIONS FOR SPECIFIC END CONNECTIONS FOR SINGLE LINE PIPE AND FITTINGS.
3. EXISTING PIPE AND EQUIPMENT IS SHOWN LIGHT-LINED AND/OR SCREENED AND IS NOTED AS EXISTING. NEW PIPING AND EQUIPMENT IS SHOWN HEAVY-LINED.

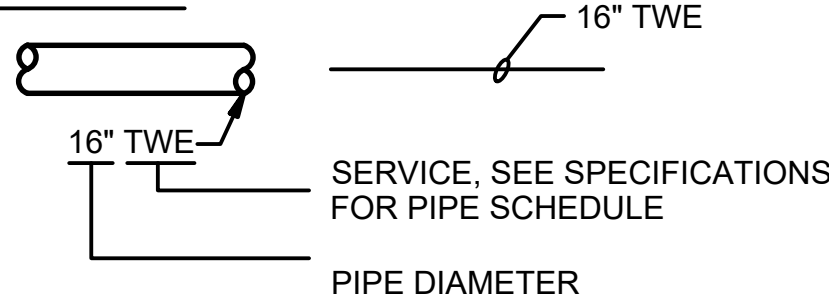
MECHANICAL LEGEND AND NOTES

GENERAL PIPING NOTES

1. LAY PIPE TO UNIFORM GRADE BETWEEN INDICATED ELEVATION POINTS.
2. SIZE OF FITTINGS SHOWN ON DRAWINGS SHALL CORRESPOND TO ADJACENT STRAIGHT RUN OF PIPE, UNLESS OTHERWISE INDICATED. TYPE OF JOINT AND FITTING MATERIAL SHALL BE THE SAME AS SHOWN FOR ADJACENT STRAIGHT RUN OF PIPE.
3. LOCATION AND NUMBER OF PIPE HANGERS AND PIPE SUPPORTS SHOWN IS ONLY APPROXIMATE. CONTRACTOR SHALL DESIGN SUPPORTS AS SPECIFIED.
4. ALL JOINTS SHALL BE WATERTIGHT. WALL PIPES SHALL BE USED WHEREVER PIPING PASSES FROM A STRUCTURE TO BACKFILL.
5. ALL FLEXIBLE CONNECTORS AND COUPLING ADAPTERS SHALL BE PROVIDED WITH THRUST PROTECTION AS SPECIFIED, UNLESS OTHERWISE NOTED. THRUST PROTECTION SHALL BE ADEQUATE FOR TEST PRESSURES SPECIFIED.
6. SYMBOLS, LEGENDS, AND PIPE USE IDENTIFICATIONS SHOWN SHALL BE FOLLOWED THROUGHOUT THE DRAWINGS, WHEREVER APPLICABLE. NOT ALL OF THE VARIOUS PIPING COMPONENTS ARE NECESSARILY USED IN THE PROJECT.
7. NUMBER AND LOCATION OF UNIONS SHOWN ON DRAWINGS IS ONLY APPROXIMATE. PROVIDE ALL UNIONS NECESSARY TO FACILITATE CONVENIENT REMOVAL OF VALVES AND MECHANICAL EQUIPMENT.
8. WHERE A GROOVED END COUPLING IS SHOWN, IT SHALL BE THE RIGID JOINT TYPE, UNLESS OTHERWISE SPECIFIED. WHERE A FLANGED COUPLING ADAPTER IS SHOWN, A STANDARD FLANGE SHALL BE JOINED TO THE COUPLING ADAPTER.

PIPING DESIGNATION

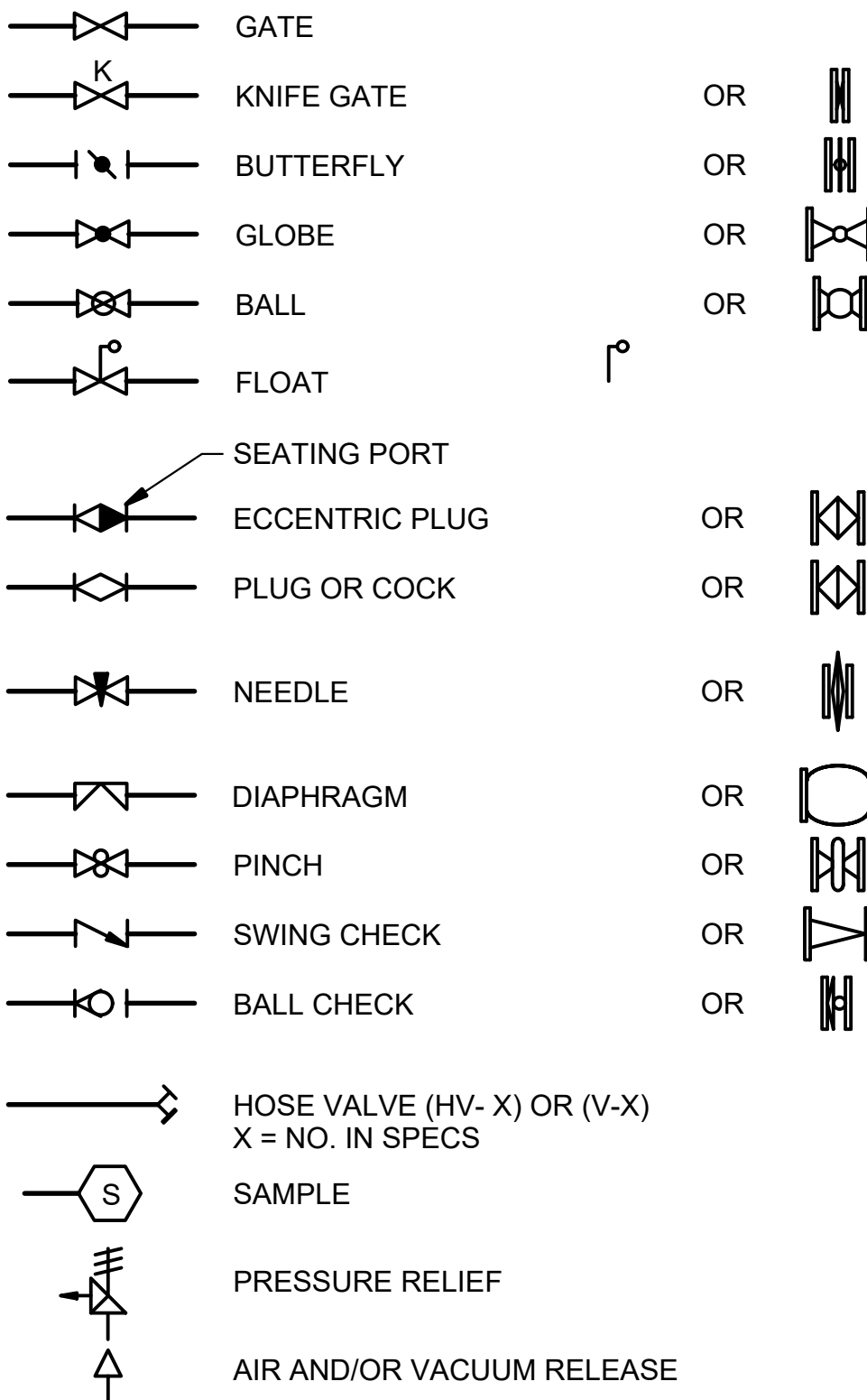
EXAMPLE:



VALVE SYMBOLS

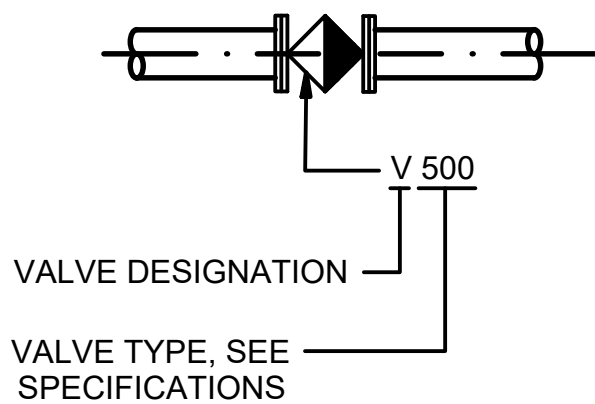
SINGLE LINE

DOUBLE LINE

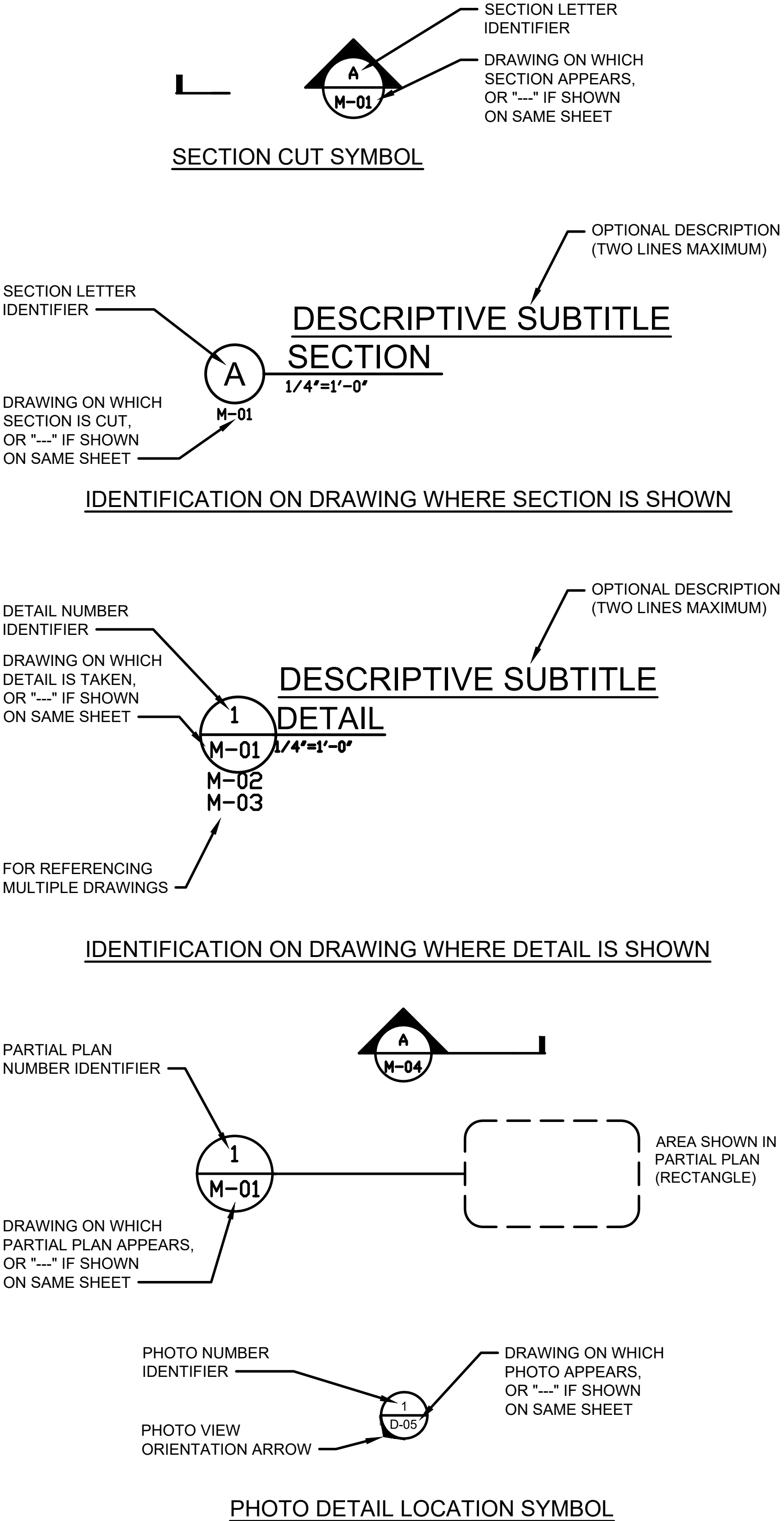


VALVE DESIGNATIONS

MANUAL VALVES AND CHECK VALVES

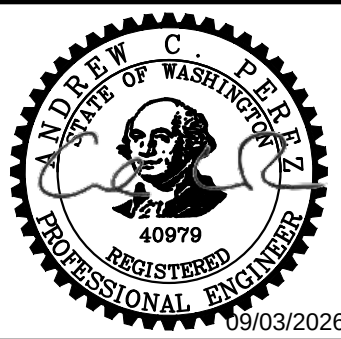


GENERAL SYMBOLS



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L.GOUDEAU
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A. PEREZ
Design Review Level
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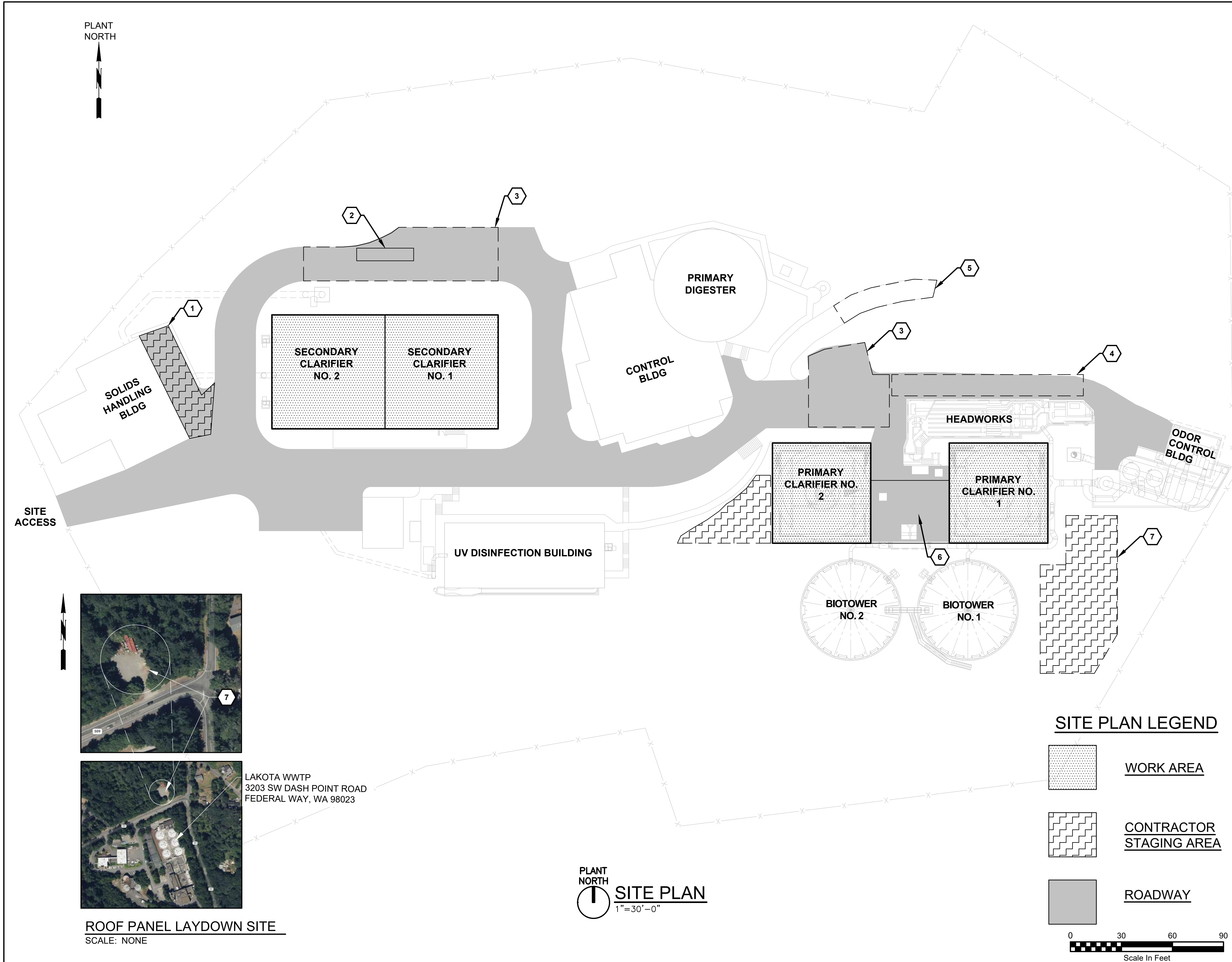
REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

GENERAL NOTES, LEGENDS, SYMBOLS,
AND ABBREVIATIONS-1

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GENERAL SHEET NOTES

1. ROADWAYS MUST BE KEPT UNOBSTRUCTED SO AS THE ALLOW OWNER VEHICLE ACCESS TO ALL BUILDINGS AT ALL TIMES.
2. LIMITED ON-SITE SPACE IS AVAILABLE FOR STAGING, LAYDOWN OR WORKER PARKING.
3. AFTER EFFECTIVE DATE OF THE AGREEMENT AND BEFORE WORK AT SITE IS STARTED, AS PER SECTION 01 32 33, THE CONTRACTOR SHALL DOCUMENT EXISTING CONDITIONS.

FACILITY OPERATIONS NOTES

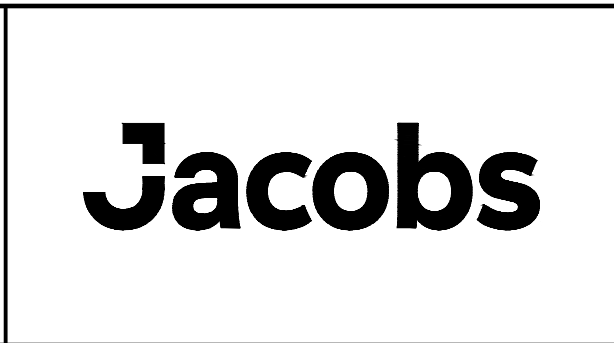
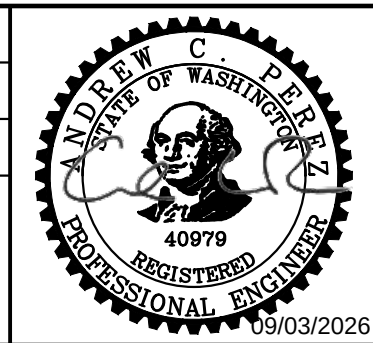
1. CONTINUOUS OPERATION OF OWNER'S FACILITIES IS OF CRITICAL IMPORTANCE. SCHEDULE AND CONDUCT ACTIVITIES TO ENABLE EXISTING FACILITIES TO OPERATE CONTINUOUSLY, UNLESS OTHERWISE SPECIFIED. THE CONTRACTOR SHALL SCHEDULE AND COORDINATE WORK TO AVOID INTERFERENCE WITH NORMAL OPERATION OF THE FACILITY.
2. TO MAINTAIN CONTINUOUS OPERATION OF REDONDO WASTEWATER TREATMENT PLANT, ONLY ONE (1) OF THE FOUR (4) CLARIFIERS SHALL BE OFFLINE AT A TIME TO COMPLETE THE WORK, PER SECTION 01 12 16. CONTRACTOR MUST COORDINATE WITH OWNER IN ADVANCE OF TANK NEEDING TO BE OFFLINE, AS PER SECTION 01 12 26.
3. WHEN NECESSARY, PLAN, DESIGN, AND PROVIDE VARIOUS TEMPORARY SERVICES, TEMPORARY VENTILATION, UTILITIES, CONNECTIONS, TEMPORARY ACCESS, AND SIMILAR ITEMS TO MAINTAIN CONTINUOUS OPERATIONS OF OWNER'S FACILITY.
4. PRIMARY CLARIFIER NO. 1 AND PRIMARY CLARIFIER NO. 2 ARE CLASS I, DIVISION 1, GROUP D AREAS PER NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 820, STANDARD FOR FIRE PROTECTION IN WASTEWATER TREATMENT AND COLLECTION FACILITIES, 2024 EDITION. SECONDARY CLARIFIERS NO. 1 AND NO. 2 ARE UNCLASSIFIED. ALL CONSTRUCTION PRACTICES IN THESE AREAS SHALL BE IN ACCORDANCE WITH THE RESTRICTIONS OF THE HAZARDOUS AREA CLASSIFICATION. ADDITIONAL VENTILATION, FIRE PROTECTION REQUIREMENTS, AND ALL OTHER SAFETY REQUIREMENTS, SHALL BE PROVIDED BY THE CONTRACTOR AND COORDINATED WITH THE OWNER.
5. CONTRACTOR SHALL NOT CLOSE LINES, OPEN OR CLOSE VALVES, OR TAKE OTHER ACTION WHICH WOULD AFFECT THE OPERATION OF EXISTING SYSTEMS, EXCEPT AS SPECIFICALLY REQUIRED BY THE CONTRACT DOCUMENTS AND AFTER AUTHORIZATION BY OWNER AND PROJECT ENGINEER. SUCH AUTHORIZATION WILL BE CONSIDERED WITHIN 48 HOURS AFTER RECEIPT OF CONTRACTOR'S WRITTEN REQUEST.

KEY NOTES

1. LOCATION AVAILABLE FOR CONSTRUCTION TRAILER ONLY. MAINTAIN ACCESS TO ALL DOORS AND BUILDING ENTRANCES.
2. PRESERVE ACCESS TO REFUSE DUMPSTER. DURING WORK ON PRIMARY CLARIFIERS DUMPSTER WILL BE LOCATED AS SHOWN. DURING WORK ON SECONDARY CLARIFIERS, OWNER WILL RELOCATE DUMPSTER TO AREA NEAR PRIMARY CLARIFIERS.
3. LOCATION AVAILABLE FOR CRANE STAGING. CONTRACTOR TO MAINTAIN ACCESS FOR FORKLIFT TRAFFIC.
4. LIMITED ACCESS STAGING AREA. CONTRACTOR TO MAINTAIN ACCESS FOR FORKLIFT TRAFFIC.
5. AREA AVAILABLE TEMPORARILY FOR STAGING. COORDINATE WITH OWNER PRIOR TO USE.
6. RESTRICTED LOADING AREA. NO VEHICLE PARKING.
7. SITE LAYDOWN AREA. LIMITED ACCESS

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Designed	B. PINEROS
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Design Review Level	
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REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

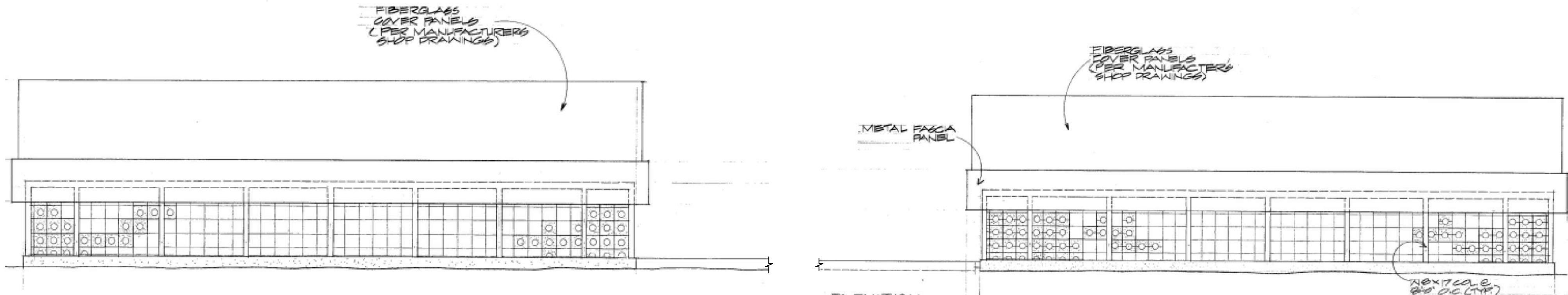
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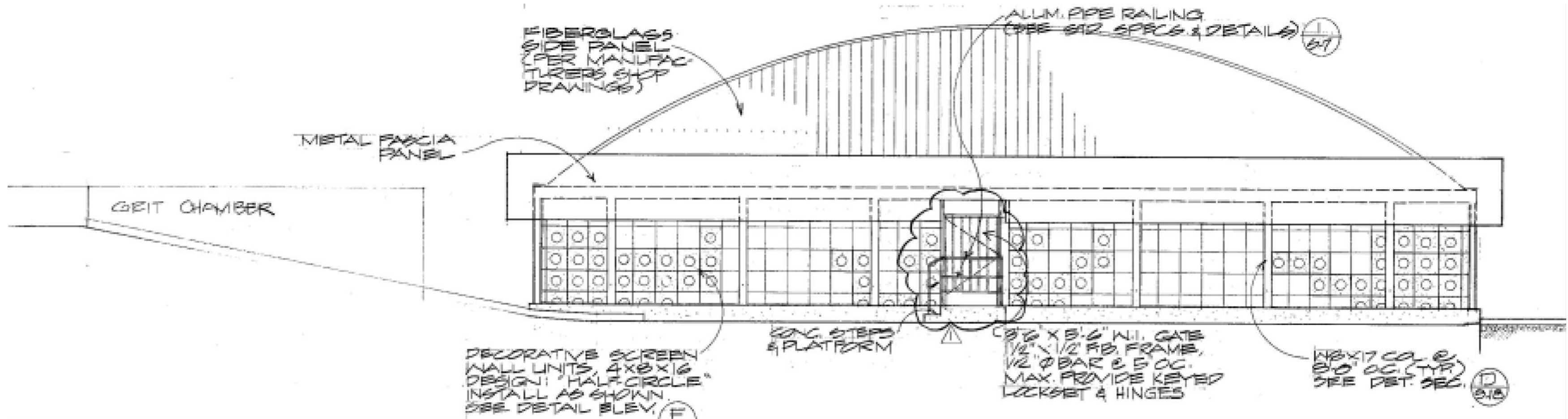
GENERAL SHEET NOTES

1. THE ROOF PANELS ARE CONSTRUCTED OF FRP AND ARE NESTED TOGETHER AND ATTACHED AT INTERVALS USING STEEL BOLTS AND GASKETS. AS-BUILT INFORMATION IS UNAVAILABLE FOR THE ROOFS.
2. CLASS 1, DIV 1, GROUP D AREA. HOT WORK PERMIT REQUIRED. FOLLOW LOCKOUT/TAGOUT PROCEDURES.
3. INSIDE DIAMETER OF BOTH PRIMARY CLARIFIERS IS APPROXIMATELY 55 FEET.



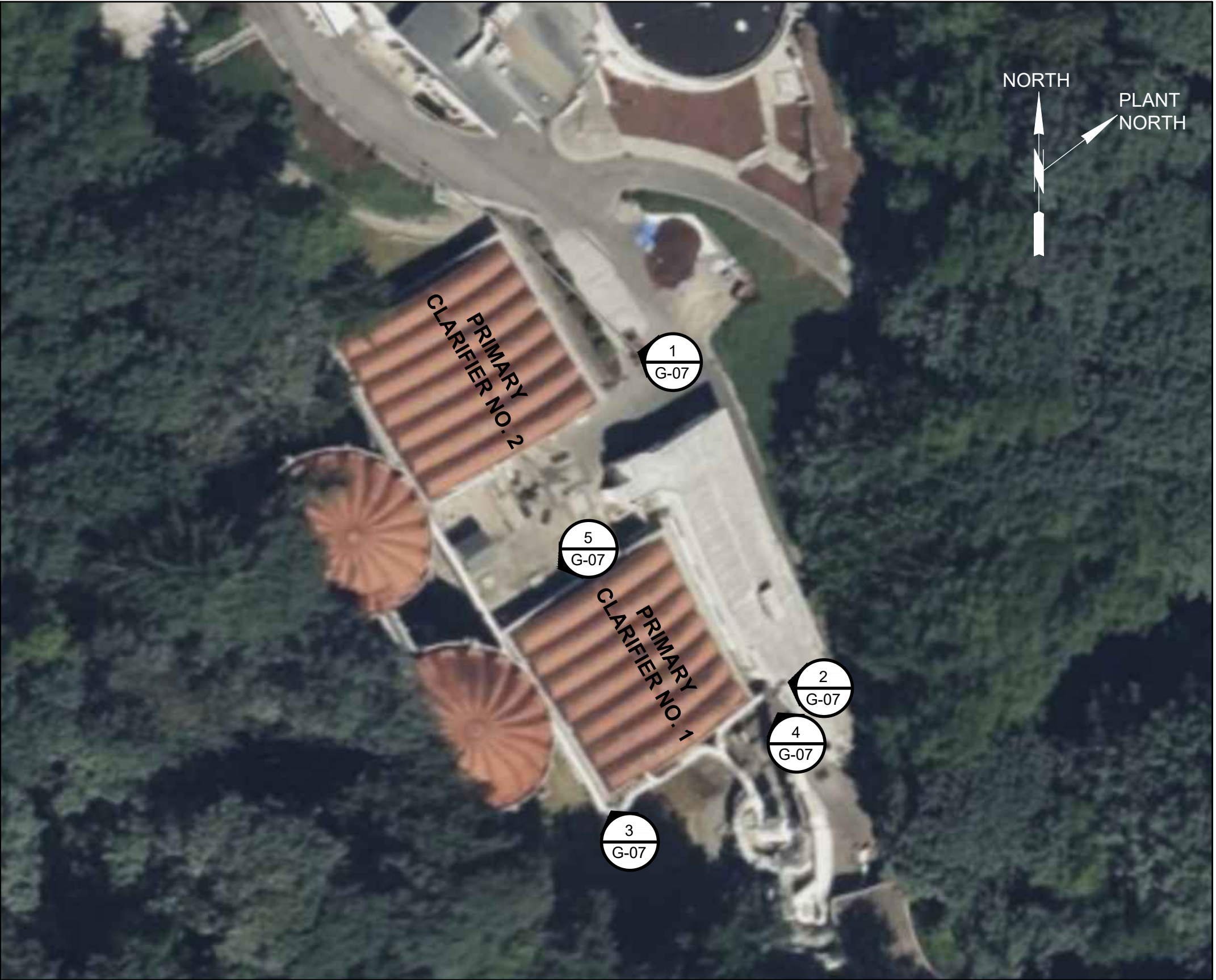
PRIMARY CLARIFIERS TYPICAL FRONT AND REAR ELEVATION

NTS



PRIMARY CLARIFIERS TYPICAL SIDE ELEVATION

NTS

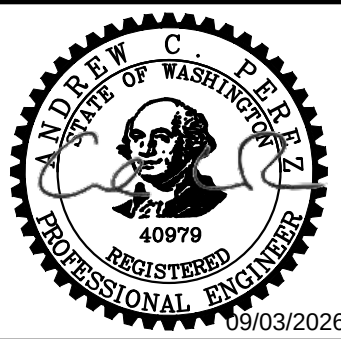


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PRIMARY CLARIFIERS AERIAL VIEW
3/16" = 1'-0"

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REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

PRIMARY CLARIFIER ROOFS

CONTRACT NO: PROJECT NO:

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G-06

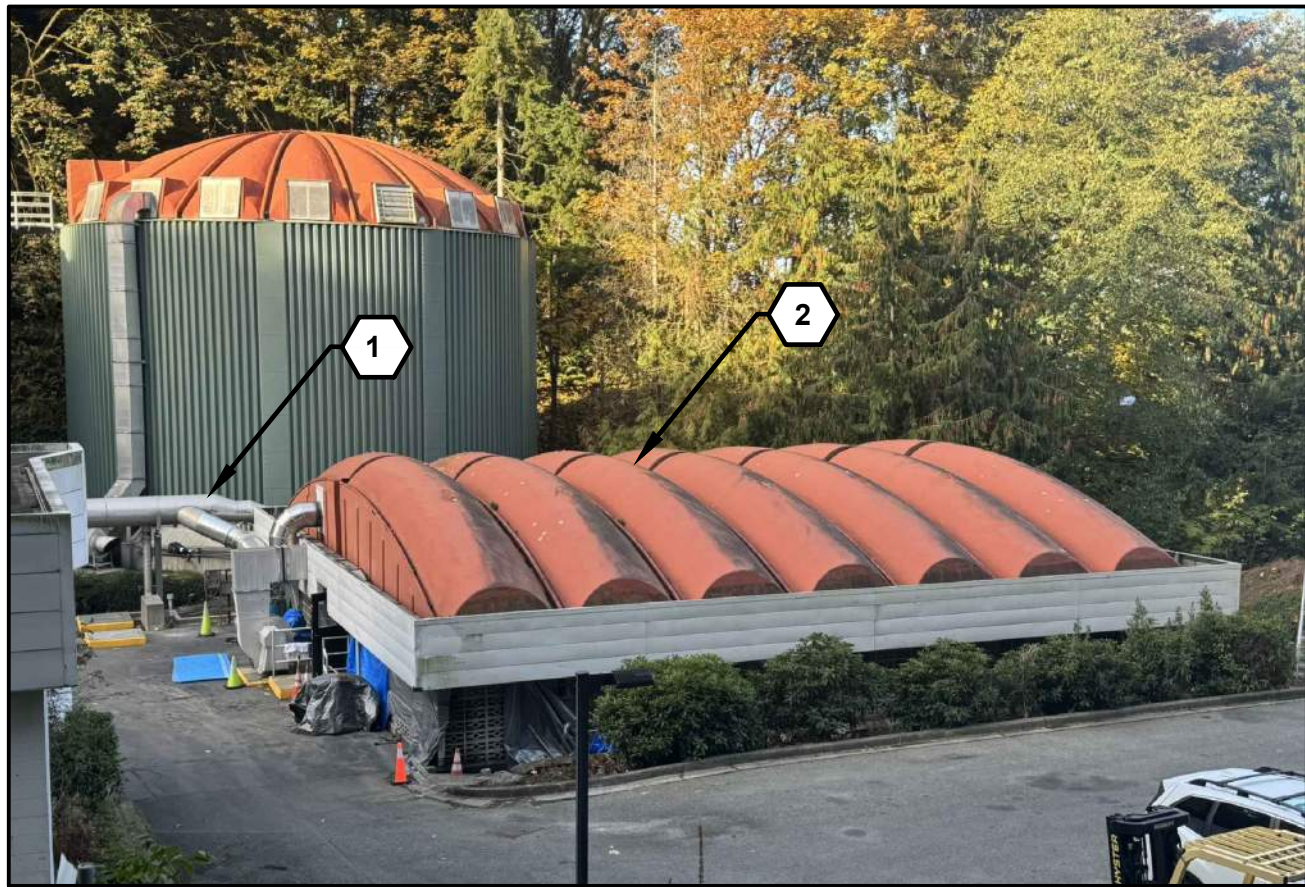
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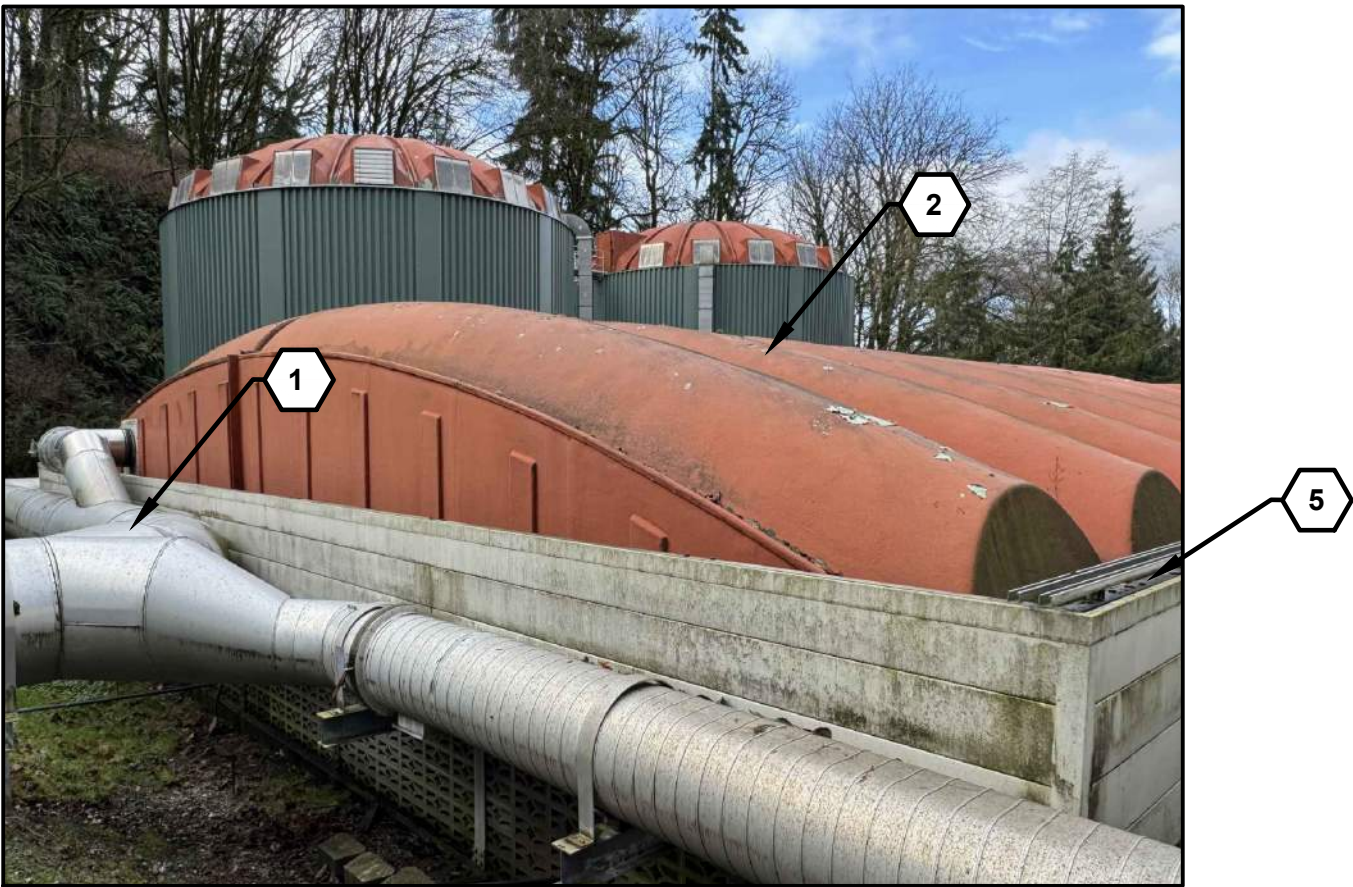
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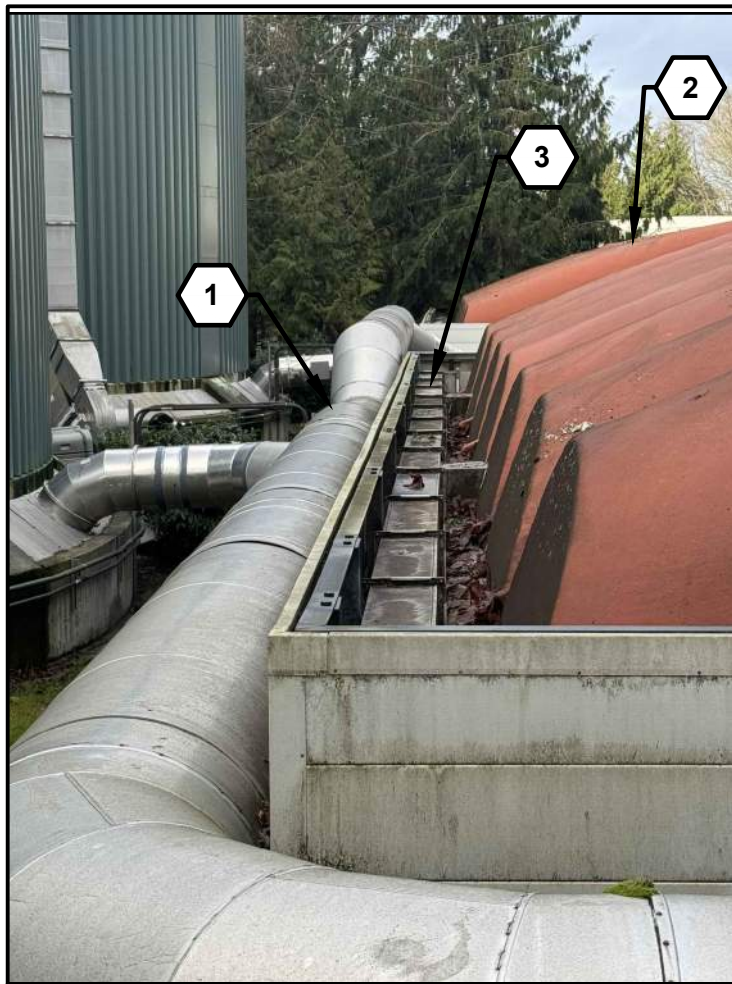
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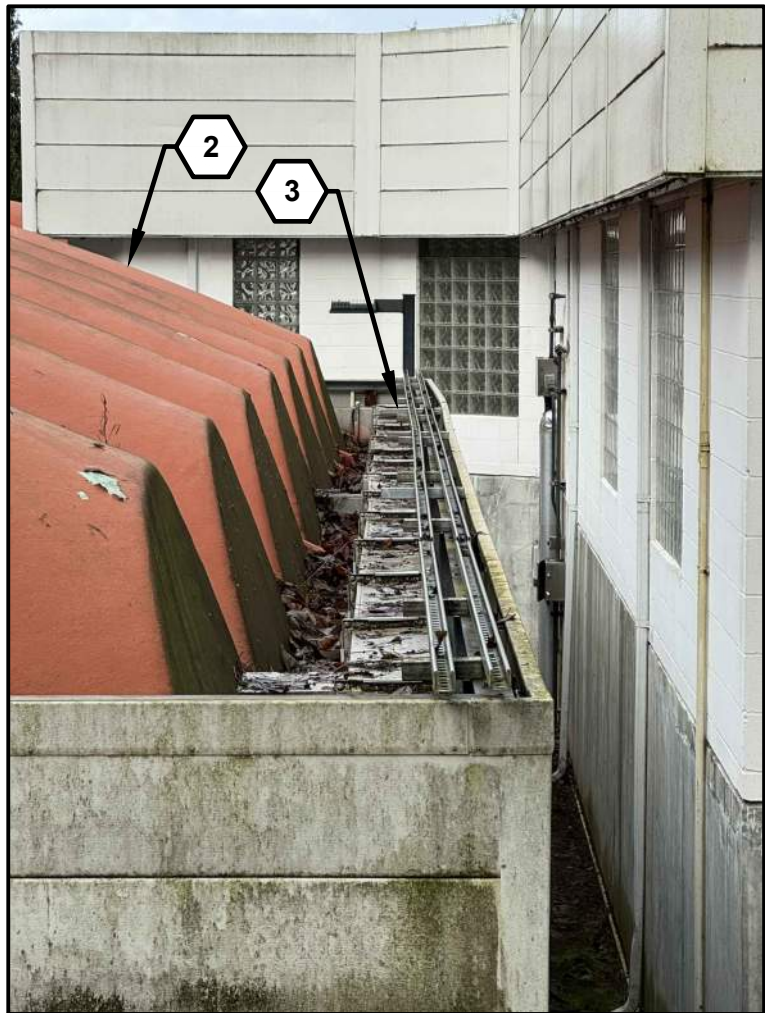
1 PRIMARY CLARIFIER 2 ROOF
G-06 EXISTING CONDITIONS



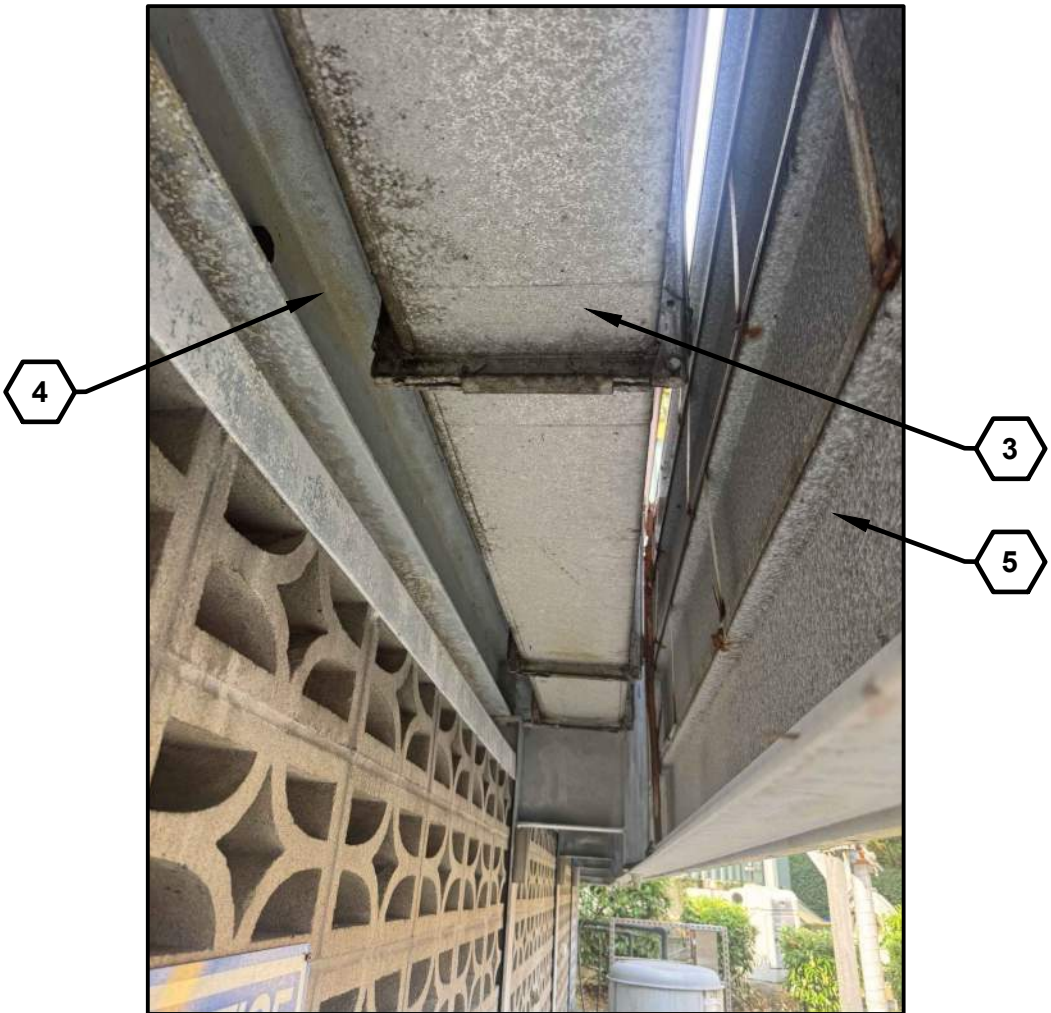
2 PRIMARY CLARIFIER 1 ROOF AND FOUL
G-06 AIR PIPING EXISTING CONDITIONS



3 PRIMARY CLARIFIER 1 ROOF AND FOUL
G-06 AIR PIPING EXISTING CONDITIONS



4 PRIMARY CLARIFIER 1 ROOF
G-06 EXISTING CONDITIONS



5 FRESH AIR DUCTING
G-06 EXISTING CONDITIONS

GENERAL SHEET NOTES

1. FOUL AIR DUCTING AND FRESH AIR DUCTING FOR ONLINE PRIMARY CLARIFIER TO REMAIN ONLINE DURING CONSTRUCTION ACTIVITIES.
2. FOUL AIR DUCTING LOCATED INSIDE EACH CLARIFIER BUILDING IS SHOWN IN THE D AND M SHEETS.

SHEET KEYNOTES

1. FOUL AIR DUCTING TO REMAIN IN SERVICE DURING CONSTRUCTION ACTIVITIES. SEE SHEET D-01 FOR MORE INFORMATION.
2. FRP ROOF PANELS WILL BE REMOVED AND REINSTALLED. SEE D, M, AND S SHEETS FOR MORE INFORMATION.
3. FRESH AIR SUPPLY DUCTING SHALL BE REMOVED, SALVAGED, AND STORED FOR REINSTALLATION UPON COMPLETION OF THE PRIMARY CLARIFIER WORK.
4. EXISTING ROOF BEAM. REFER TO S-09 FOR ROOF BEAM DETAIL.
5. IT IS NOT ANTICIPATED THAT THE FASCIA NEEDS TO BE REPLACED. FASCIA IS SHOWN ON SHEET S-09.

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REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

PRIMARY CLARIFIER ROOFS
PHOTOS AND DETAILS

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G-07

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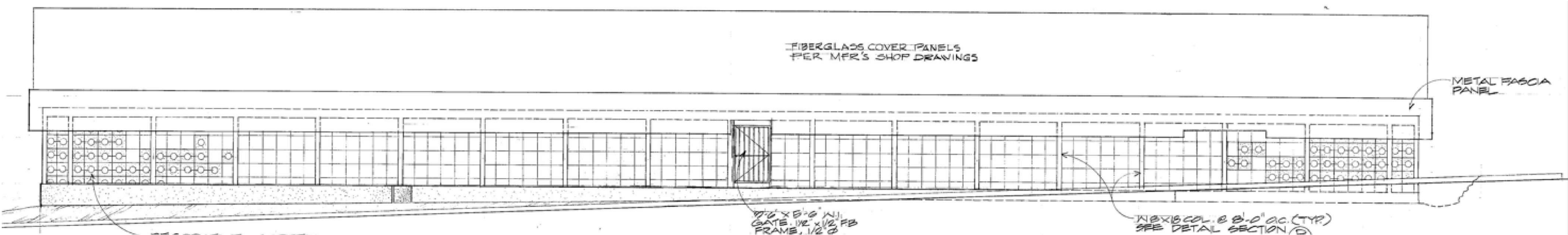
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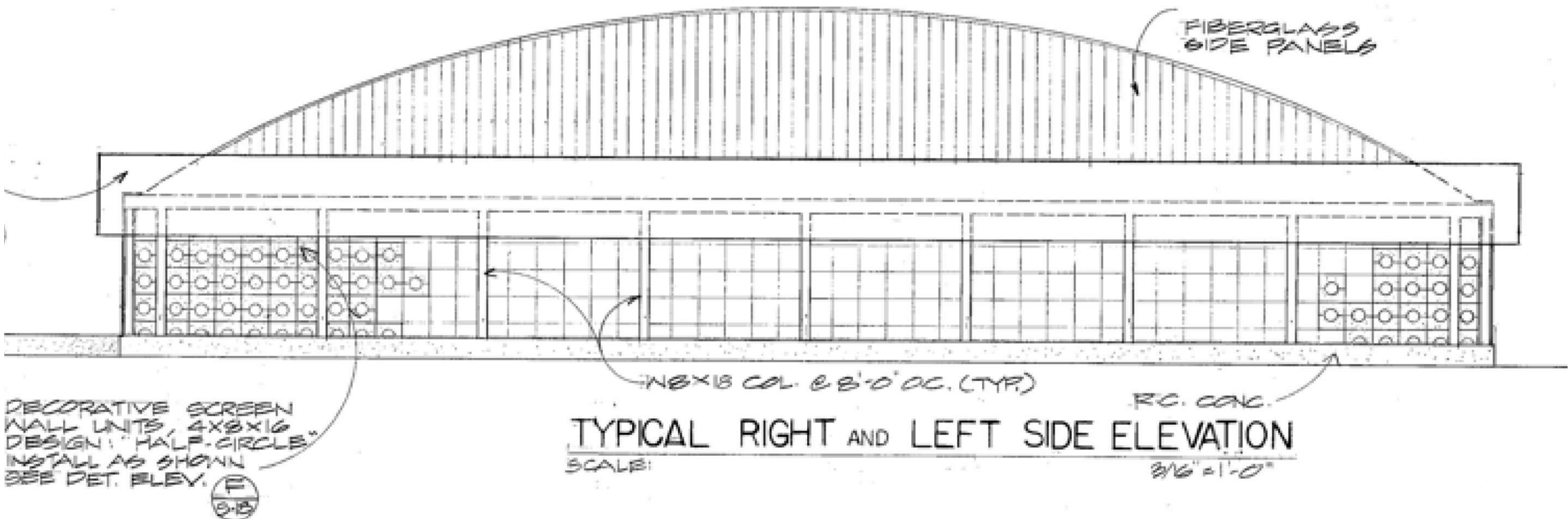
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GENERAL SHEET NOTES

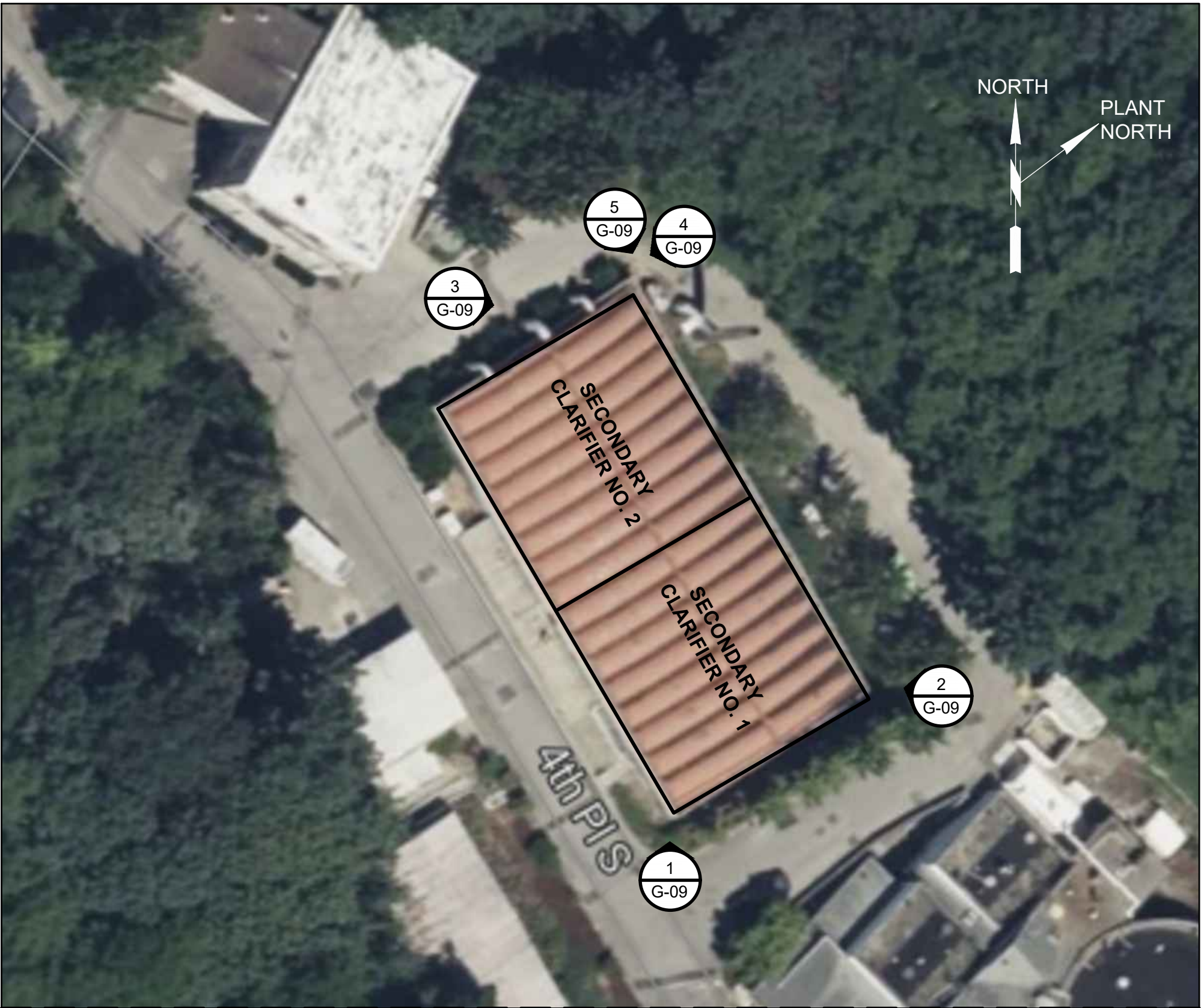
1. THE ROOF PANELS ARE CONSTRUCTED OF FRP AND NESTED TOGETHER AND ATTACHED AT INTERVALS USING STEEL BOLTS AND GASKETS. AS-BUILT INFORMATION IS UNAVAILABLE FOR THE ROOFS.
2. HOT WORK PERMIT REQUIRED. FOLLOW LOCKOUT/TAGOUT PROCEDURES.



SECONDARY CLARIFIER FRONT ELEVATION
3/16" = 1'-0"



SECONDARY CLARIFIER TYPICAL SIDE ELEVATION
3/16" = 1'-0"

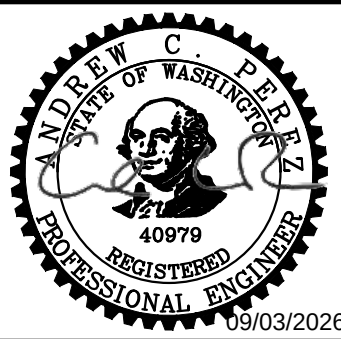


MICROSOFT BING MAPS
MICROSOFT PRODUCT SCREEN-SHOT REPRINTED WITH PERMISSION FROM MICROSOFT CORPORATION

SECONDARY CLARIFIERS AERIAL VIEW
3/16" = 1'-0"

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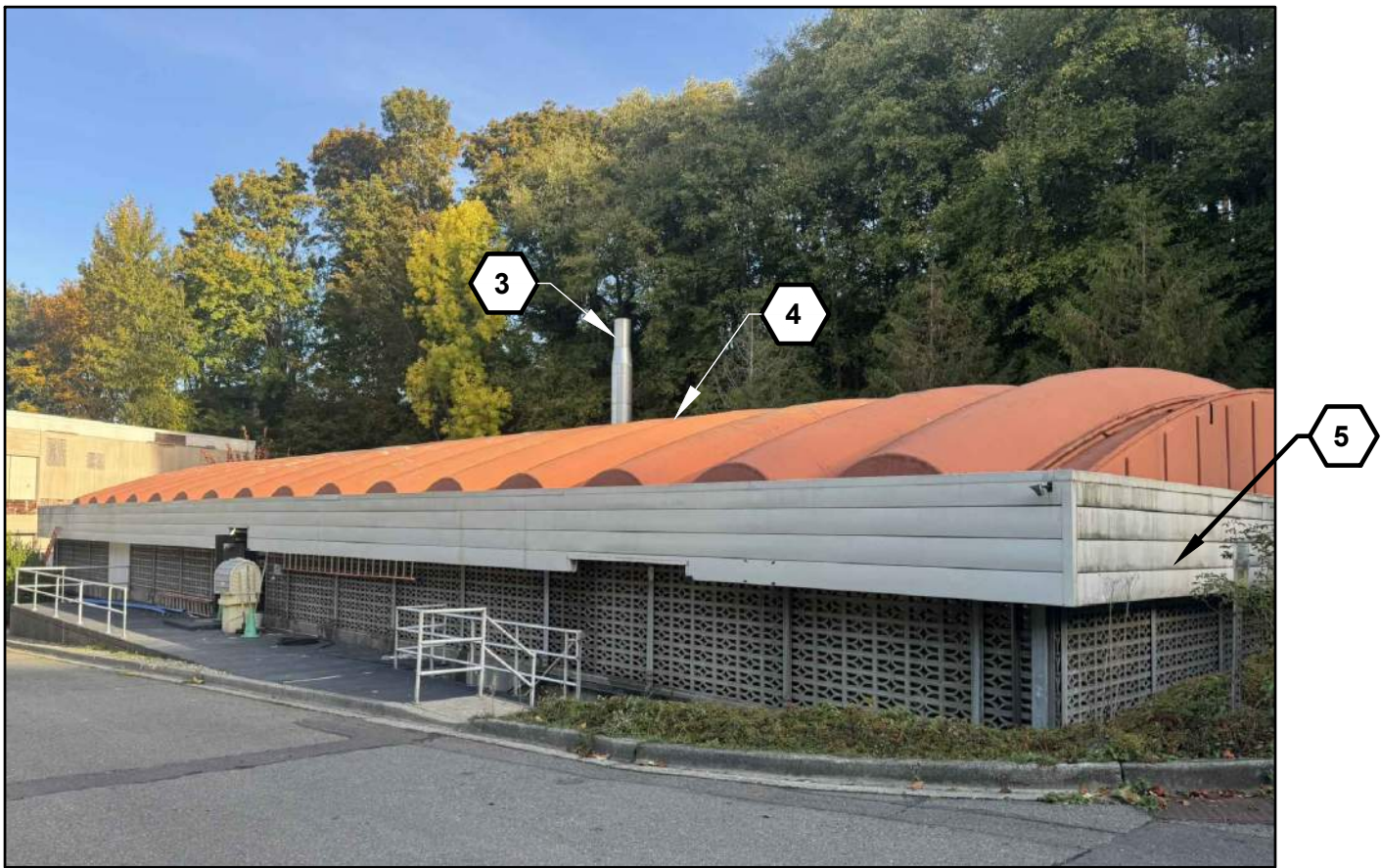
REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

SECONDARY CLARIFIER ROOFS

CONTRACT NO: PROJECT NO:

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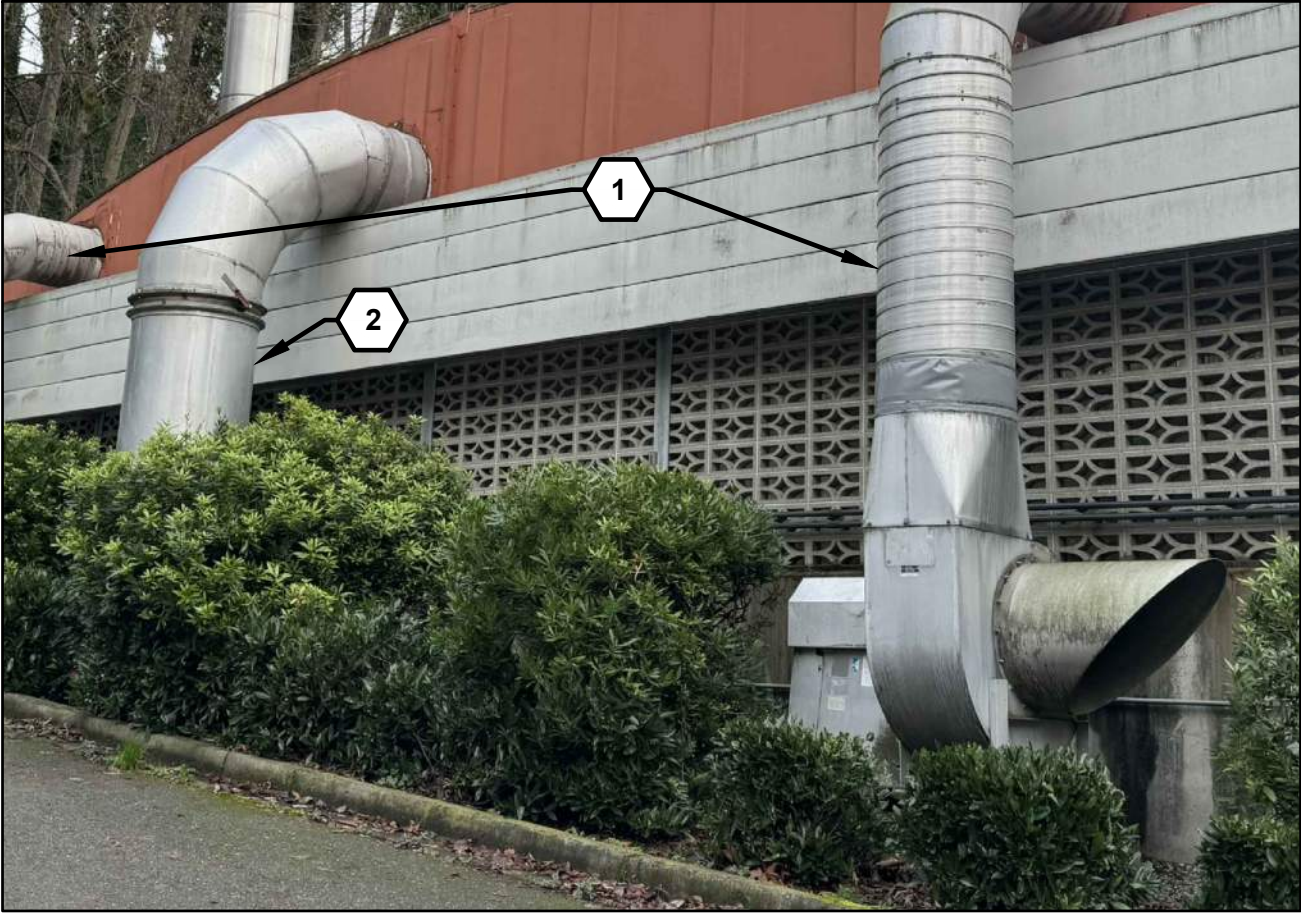
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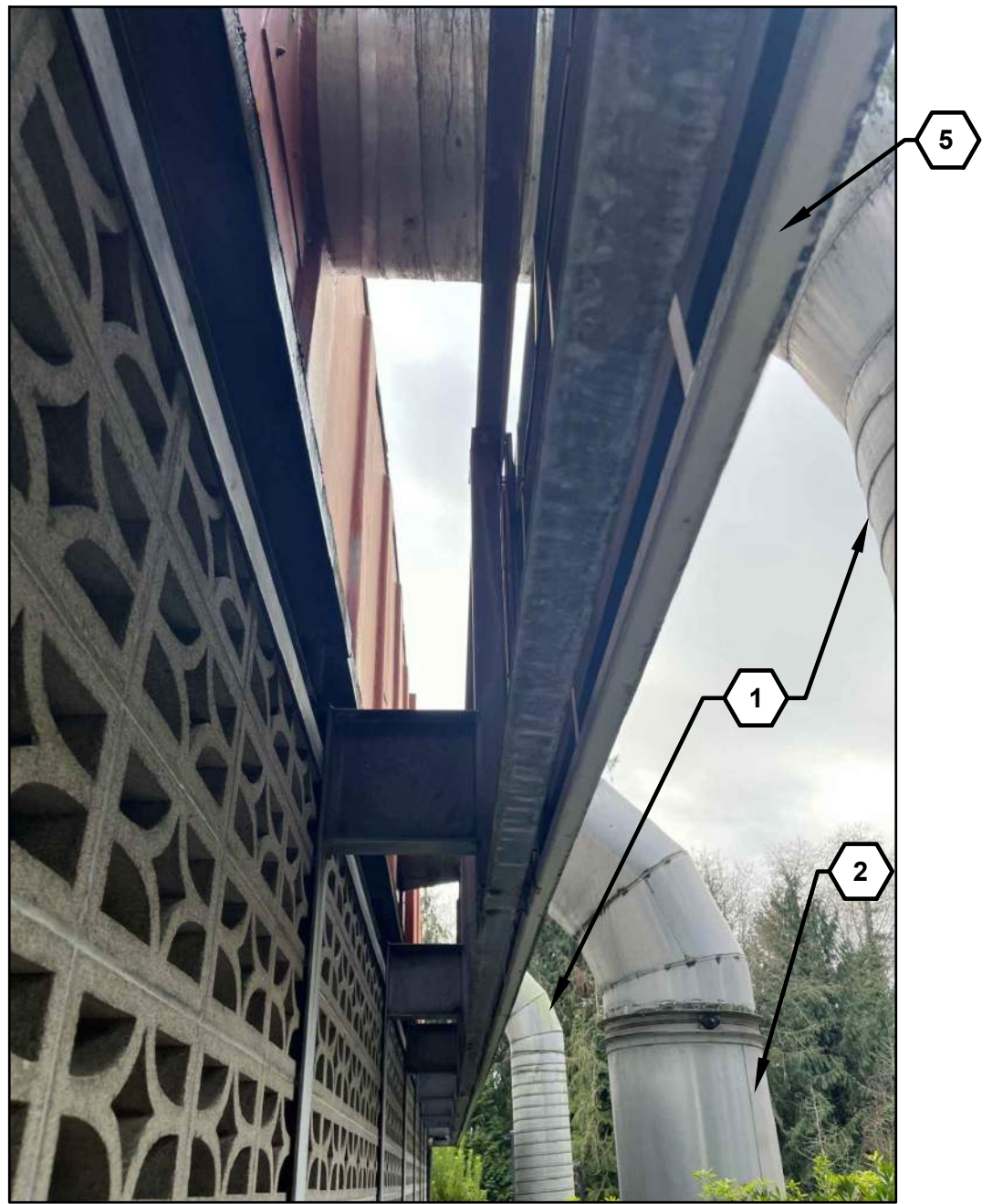
1 SECONDARY CLARIFIER BUILDING
G-08 EXISTING CONDITIONS



2 SECONDARY CLARIFIER BUILDING
G-08 EXISTING CONDITIONS



3 SECONDARY CLARIFIER BUILDING
G-08 FOUL AIR DUCTING AND BLOWER
EXISTING CONDITIONS



4 SECONDARY CLARIFIER BUILDING
G-08 FOUL AIR DUCTING
EXISTING CONDITIONS



5 SECONDARY CLARIFIER BUILDING
G-08 FOUL AIR EXHAUST STACK
EXISTING CONDITIONS

GENERAL SHEET NOTES

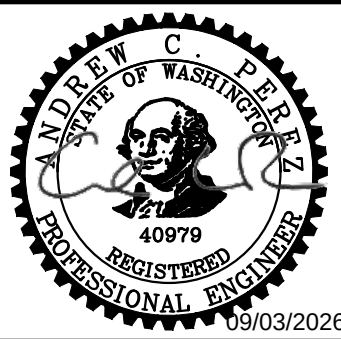
1. FOUL AIR DUCTING AND FRESH AIR DUCTING FOR ONLINE SECONDARY CLARIFIER TO REMAIN ONLINE DURING CONSTRUCTION ACTIVITIES. SEE SECTION 01 12 16.
2. FOUL AIR DUCTING LOCATED INSIDE CLARIFIER BUILDING IS SHOWN IN THE D AND M SHEETS.

SHEET KEYNOTES

1. FRESH AIR SUPPLY FANS AND DUCTWORK SHALL REMAIN IN SERVICE DURING CONSTRUCTION. SEE SHEET D-04 FOR MORE INFORMATION.
2. FOUL AIR EXHAUST HEADER SHALL REMAIN IN SERVICE DURING CONSTRUCTION. SHEET SHEET D-04 FOR MORE INFORMATION.
3. ODOR CONTROL EXHAUST STACK. PROTECT IN PLACE.
4. FRP ROOF PANELS SHALL BE REMOVED, SALVAGED, AND PROTECTED AS NEEDED TO FACILITATE REMOVAL OF CLARIFIER MECHANISM. SEE D AND M SHEET FOR MORE INFORMATION. INSTALL NEW GASKETS FOR ANY REMOVED ROOF PANELS. REINSTALL WIRE ROPES AS NEEDED TO FACILITATE REMOVAL OF CLARIFIER MECHANISM.
5. IT IS NOT ANTICIPATED THAT THE FASCIA WILL NEED TO BE REMOVED TO FACILITATE ROOF PANEL REMOVAL. FASCIA IS SHOWN ON SHEET S-09.

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Designed
B. PINEROS
Drawn
L. GOUDEAU
Checked
A. PEREZ
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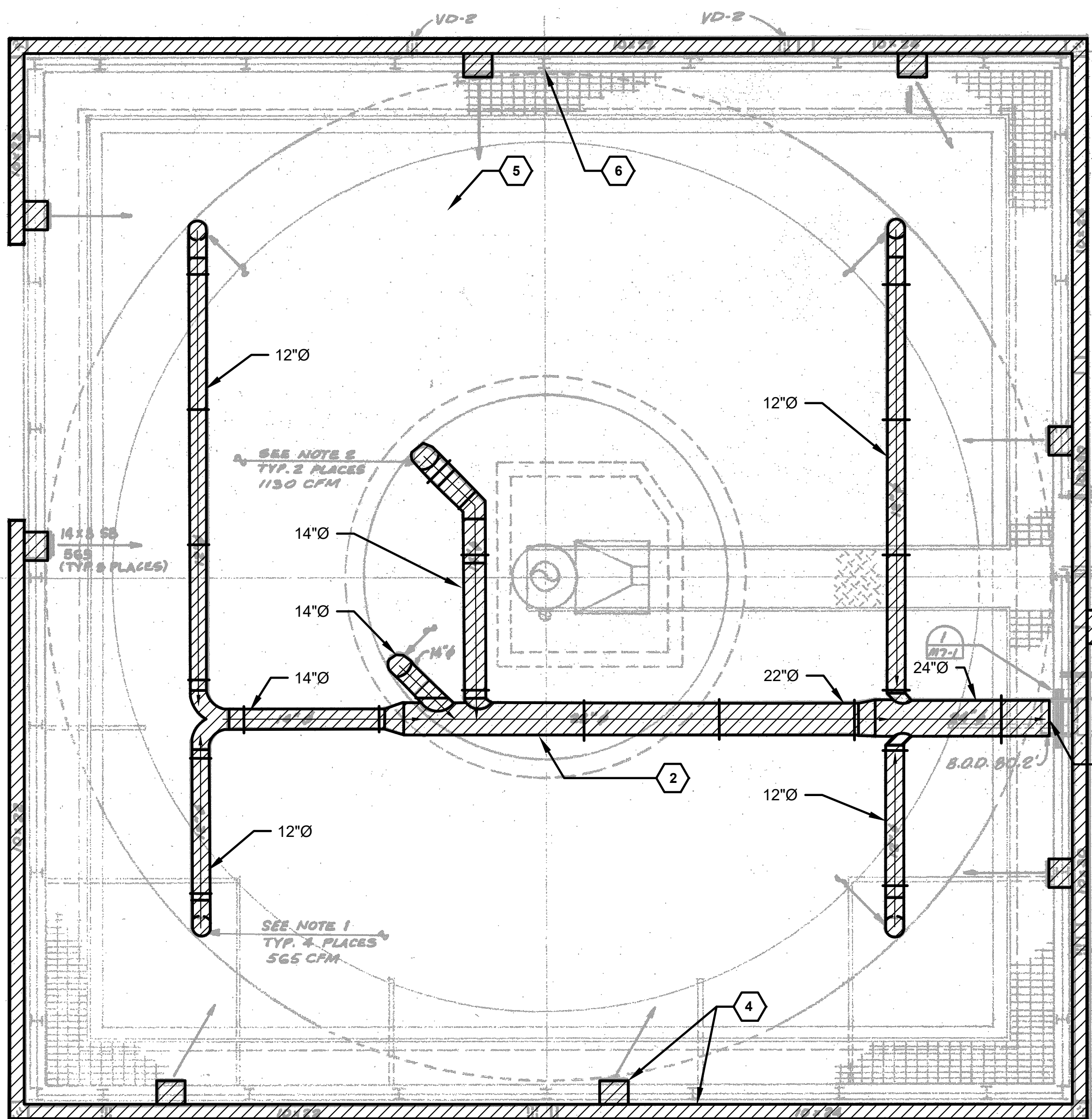
REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

SECONDARY CLARIFIER ROOFS
PHOTOS AND DETAILS

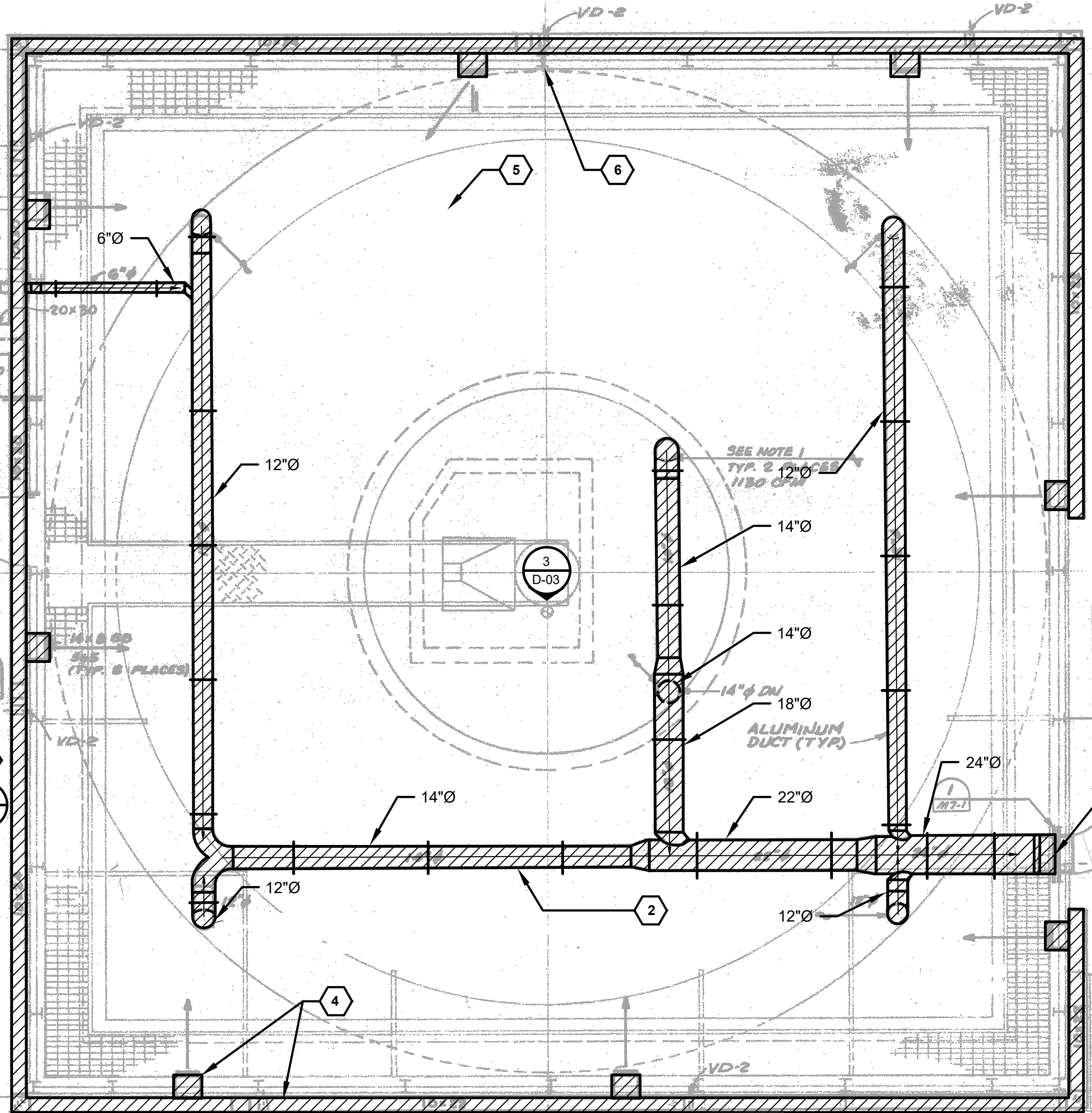
CONTRACT NO: PROJECT NO:

Drawing
G-09
Sheet No.
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Of Total

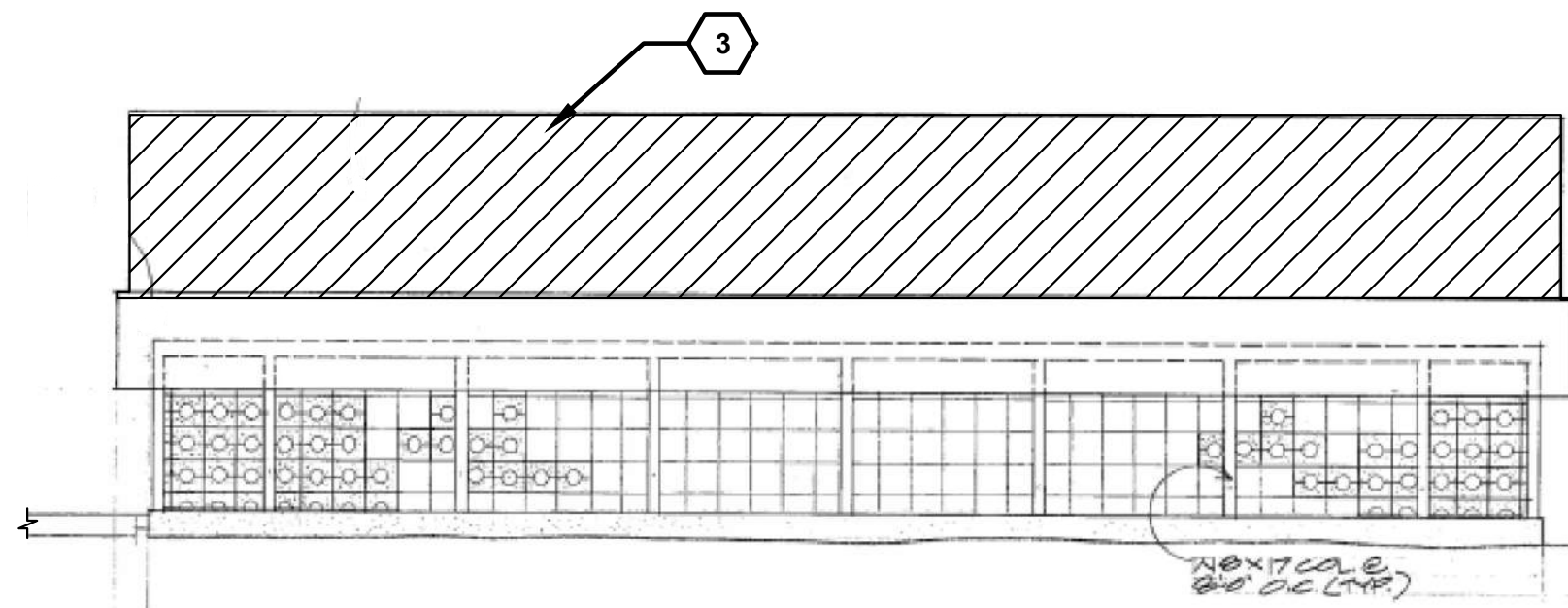
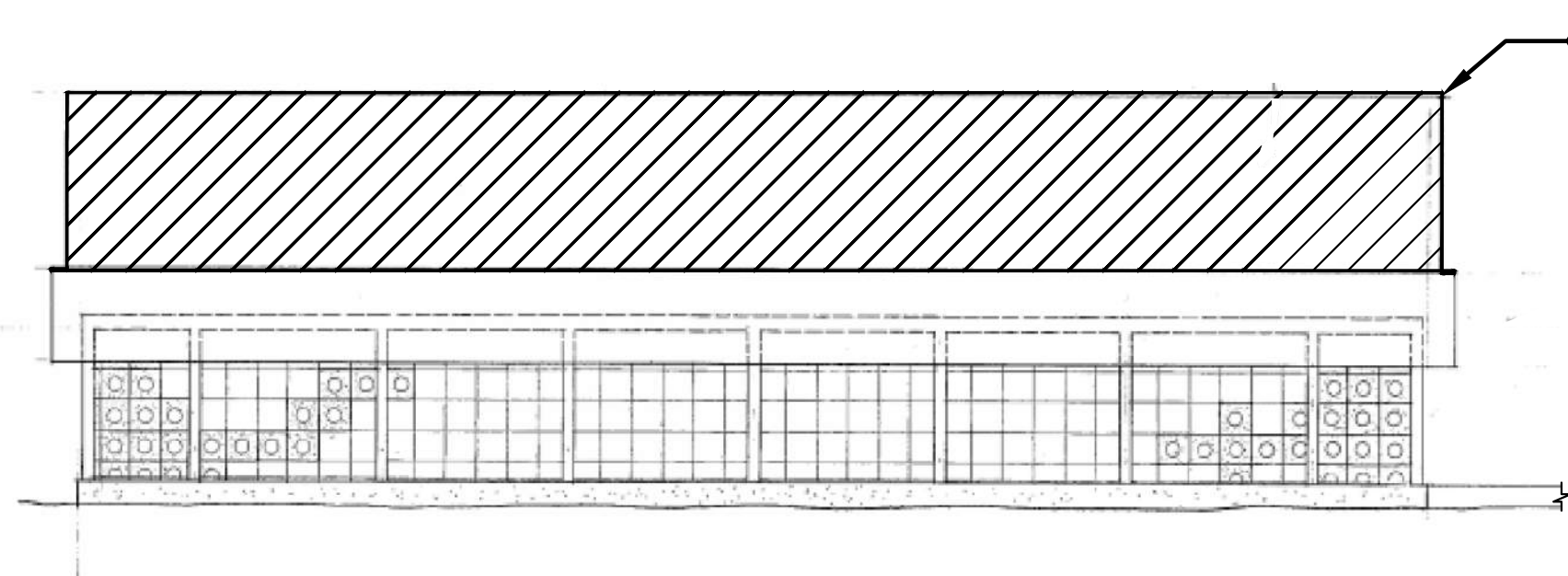
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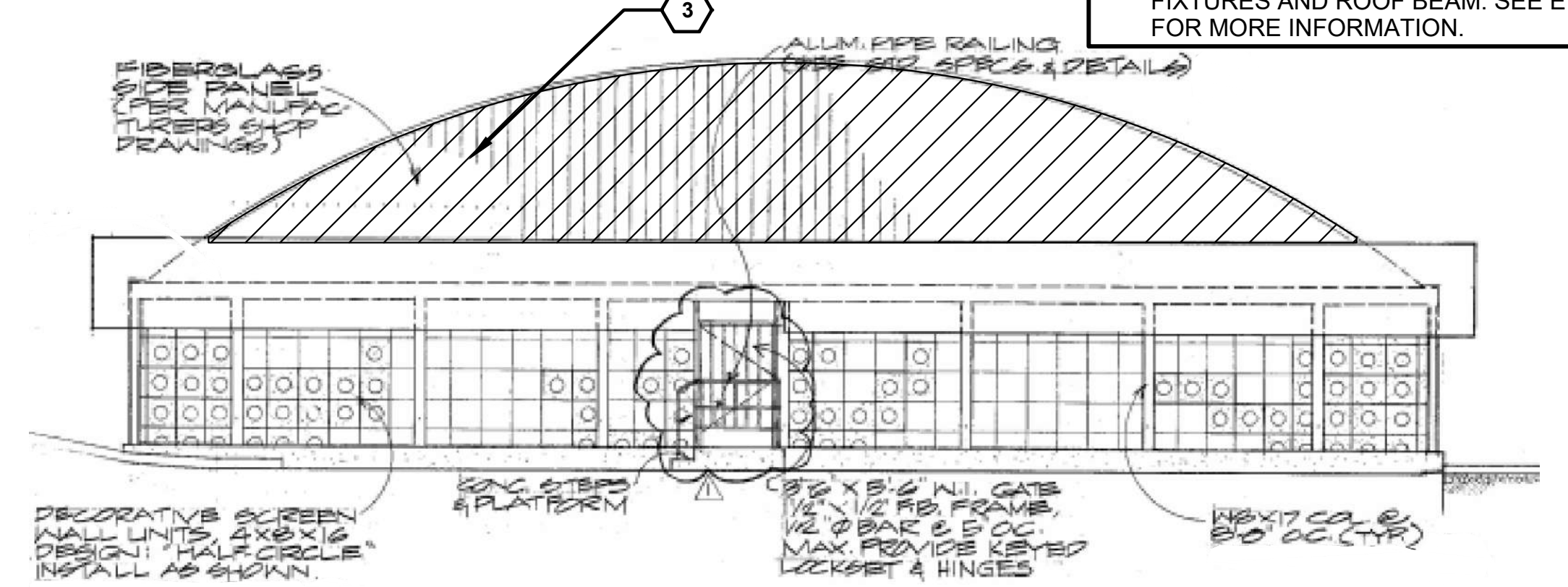
PRIMARY CLARIFIER NO. 2 - FOUL ODOR DUCTWORK DEMO PLAN
3/16"=1'-0"



PRIMARY CLARIFIER NO. 1 - FOUL ODOR DUCTWORK DEMO PLAN
3/16"=1'-0"



PRIMARY CLARIFIERS TYPICAL FRONT AND REAR ELEVATION
NTS



PRIMARY CLARIFIERS TYPICAL SIDE ELEVATION
NTS

GENERAL SHEET NOTES

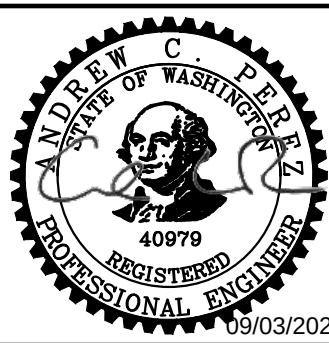
1. FIELD VERIFY ALL DIMENSIONS AND EXISTING DUCTWORK LOCATIONS.
2. REMOVE AND SALVAGE ROOF/DUCT WORK FOR REINSTALLATION IN EXISTING LOCATION AFTER INSTALLATION OF IN-TANK COMPONENTS. SEE M SHEETS FOR MORE DETAILS. THE PANELS CANNOT BE STACKED AND CAN BE STORED AT THE LAKOTA WWTP. SEE G-05 FOR ROOF PANEL LAYDOWN SITE LOCATION. SEE SHEET G-07 FOR ROOF PANEL PHOTO DETAILS.
3. FOUL AIR SYSTEM TO REMAIN ONLINE FOR ONLINE CLARIFIER. COORDINATE WITH OWNER FOR SHUTDOWNS TO FACILITATE DEMOLITION WORK.
4. AS PER SECTION 01 12 16 ONLY ONE (1) CLARIFIER OF THE FOUR (4) TOTAL CLARIFIERS (TWO PRIMARY AND TWO SECONDARY) CAN BE OFFLINE AT A TIME.
5. CONFINED SPACE REQUIREMENTS ASSOCIATED WITH THESE TYPES OF SPACES.
6. CLASS 1 DIV 1, GROUP D AREA. HOT WORK PERMIT REQUIRED. FOLLOW LOCK OUT/TAG OUT PROCEDURES.
7. PRIOR TO REMOVAL OF DUCTWORK, CONTRACTOR SHALL MEASURE AND RECORD THE AIRFLOW AT EACH DROP LEG FOR USE IN SYSTEM BALANCING UPON REINSTALLATION.

SHEET KEYNOTES

1. AFTER TANK IS DRAINED AND CLEANED BY THE OWNER, REMOVE FOUL AIR DUCT WORK UP TO EXISTING DAMPER. EXISTING DAMPER TO REMAIN IN PLACE TO BALANCE ODOR CONTROL SYSTEM FLOW WHILE CLARIFIER IS OFFLINE. SEE PHOTO #5 AND #6 ON D-03.
2. INTERNAL FOUL AIR DUCTWORK OR OTHER FEATURES ATTACHED TO INTERIOR OF ROOF TO BE REMOVED, SALVAGE, AND PROTECT FOR REINSTALLATION UPON REINSTALLATION OF ROOF PANELS.
3. REMOVE, SALVAGE, AND PROTECT NESTED FRP ROOF PANELS FOR REINSTALLATION AFTER COMPLETION OF IN-TANK WORK. ALL PANELS SHALL BE REMOVED TO ALLOW FOR DEMOLITION AND REPLACEMENT OF ROOF BEAMS. SEE DS AND S SHEETS FOR MORE INFORMATION.
4. REMOVE, SALVAGE, AND PROTECT THE PERIMETER FRESH AIR DUCTWORK AND DIFFUSERS AS NEEDED TO FACILITATE ROOF PANEL REMOVAL AND STRUCTURAL REPAIRS. IF FRESH AIR DUCTWORK IS REMOVED, IT MUST BE REINSTALLED IN THE SAME LOCATION ONCE THE ROOF PANELS ARE REINSTALLED.
5. DEMOLITION INCLUDES REMOVAL OF GROUT TOPPING SLAB ON TANK FLOOR. SEE DS SHEETS FOR MORE INFORMATION.
6. DEMOLITION INCLUDES REMOVAL OF LIGHT FIXTURES AND ROOF BEAM. SEE E AND DS SHEETS FOR MORE INFORMATION.

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Drawn	L. GOUDEAU
Checked	A. PEREZ
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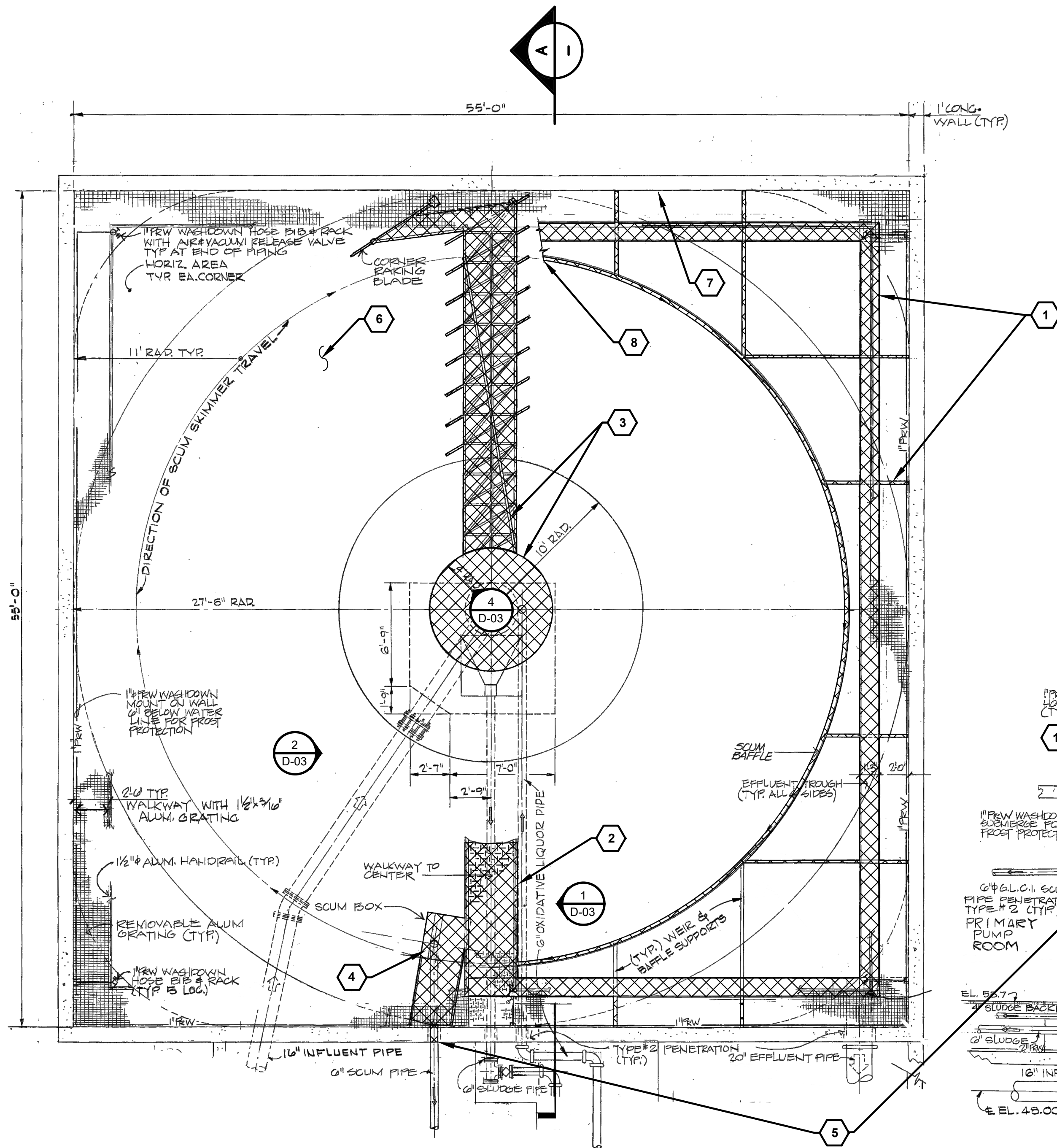
REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

PRIMARY CLARIFIERS TEMPORARY ROOF
AND AIR DUCT REMOVAL

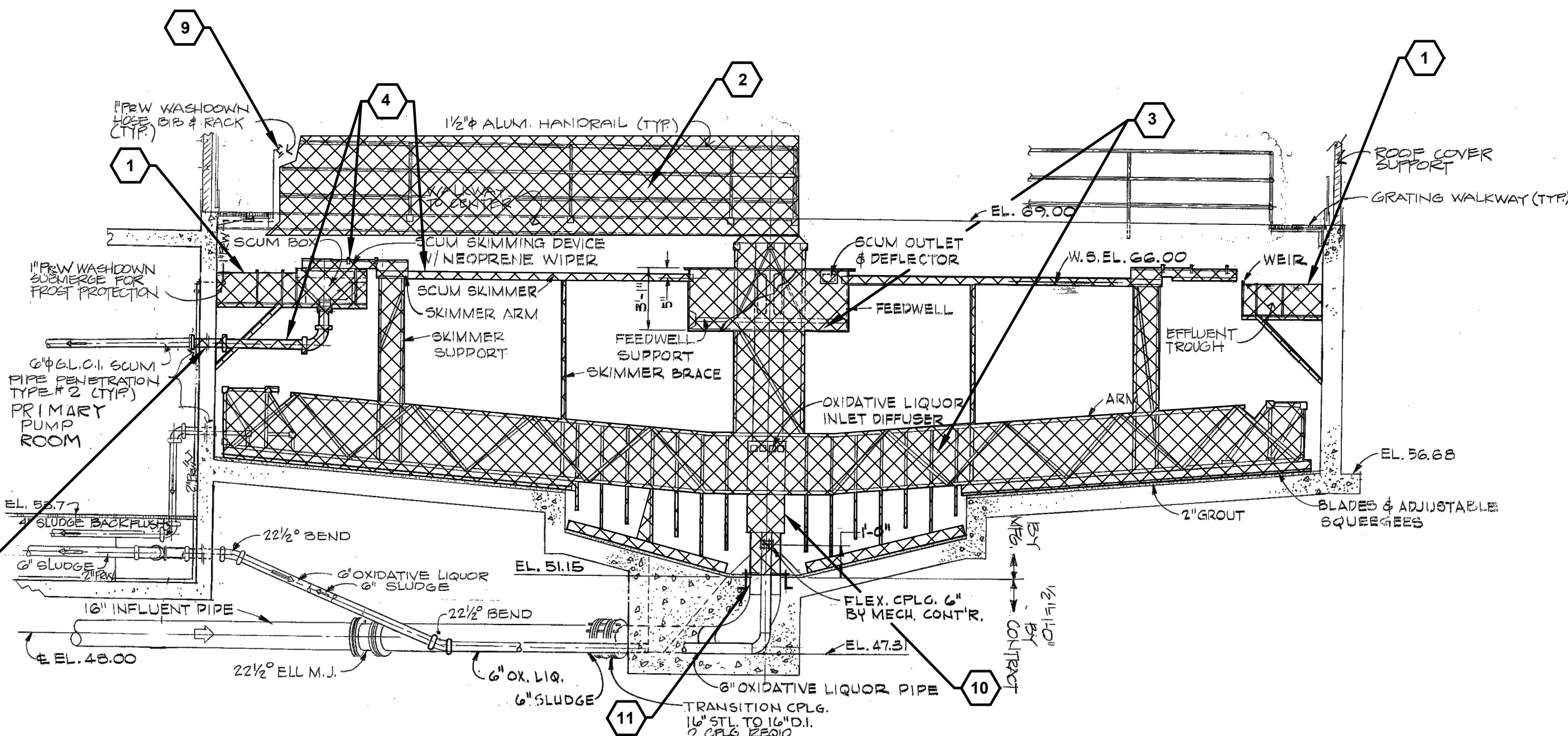
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PRIMARY CLARIFIERS NO. 1 AND 2 - PLAN
3/16" = 1'-0"



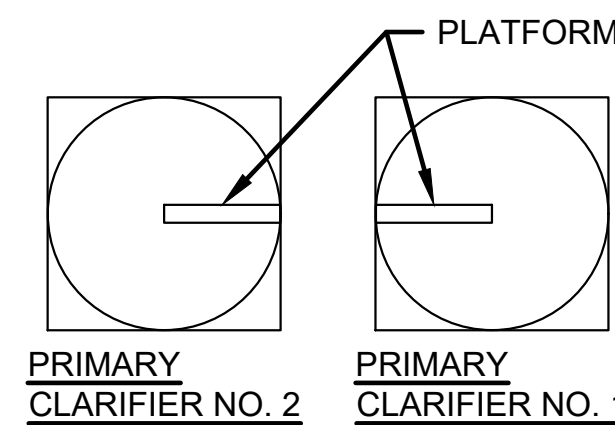
SECTION "A"
3/16" = 1'-0"

GENERAL SHEET NOTES

- ONLY ONE OF THE FOUR CLARIFIERS (2 PRIMARY, 2 SECONDARY) CAN BE OFFLINE AT A TIME.
- PRIOR TO DEVELOPMENT OF SUBMITTALS FOR THE IN-TANK ELEMENTS, OWNER WILL DRAIN AND CLEAN ONE PRIMARY AND ONE SECONDARY CLARIFIER FOR CONTRACTOR TO VERIFY ALL DIMENSIONS NEEDED FOR SUBMITTAL DEVELOPMENT AND PROPER MANUFACTURING OF THE EQUIPMENT. REFER TO SECTION 01 31 00 PARAGRAPH 1.06.E.
- PERIMETER WALKWAY AND HANDRAILS TO REMAIN IN PLACE AND INTACT.
- THESE DRAWINGS DO NOT SHOW THE DETAILS OF DEMOLITION FOR ELECTRICAL EQUIPMENT. REFER TO E SHEETS.

SHEET KEYNOTES

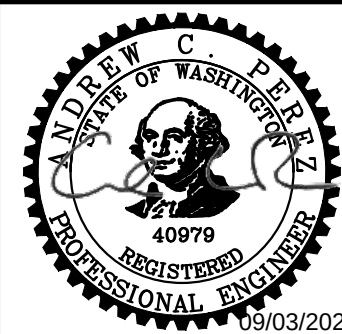
- DEMOLISH EFFLUENT TROUGH AND ASSOCIATED WALL SUPPORTS INCLUDING ANCHORS. SEE DS SHEETS FOR MORE DETAILS.
- DEMOLISH WALKWAY TO THE CENTER COLUMN.
- DEMOLISH RAKE ARM, CENTER COLUMN, AND MECHANISM, FEED WELL, DRIVE, AND PLATFORM.
- DEMOLISH SCUM BOX, SCUM BAFFLE, SCUM SKIMMER AND ASSOCIATED PIPING.
- DEMO PIPE THROUGH THE WALL TO THE FLANGE IN THE PRIMARY PUMP ROOM.
- DEMOLITION INCLUDES REMOVAL OF GROUT TOPPING SLAB ON TANK FLOOR. SEE DS SHEETS FOR MORE INFORMATION.
- DEMOLITION INCLUDES REMOVAL OF ELECTRICAL ELEMENTS TO INCLUDE PERIMETER LIGHTING FIXTURES. SEE E SHEETS FOR MORE INFORMATION.
- EQUIPMENT AND FEATURES SUCH AS THE EFFLUENT LAUNDER, WALKWAY TO CENTER PLATFORM, ETC. ARE PARTIALLY SHOWN FOR CLARITY. THEY CONTINUE AROUND THE PERIMETER OF THE TANK AS SHOWN IN THE PROFILE VIEW ON THIS SHEET.
- PROCESS WATER WASHDOWN STATION TO BE REMOVED AND STORED FOR REINSTALLATION AFTER NEW CLARIFIER MECHANISM AND WALKWAY TO CENTER COLUMN. THIS INCLUDES THE PIPING AND SPRAY NOZZLES LOCATED UNDERNEATH THE WALKWAY.
- THE 6" OXIDATIVE LIQUOR INLET DIFFUSER HAS BEEN REMOVED IN PRIMARY CLARIFIER #1, BUT REMAINS AS SHOWN IN PRIMARY #2. IN PLACE OF THE DIFFUSER, THE OXIDATIVE LIQUOR PIPE EXTENDS UP TO THE FEEDWELL. CONTRACTOR TO REMOVE THIS PIPING UP INTO THE FEEDWELL FOR PRIMARY CLARIFIER.
- CONTRACTOR TO FIELD VERIFY NUMBER OF ANCHOR BOLTS, DEMOLISH EXISTING ANCHOR BOLTS AND REPLACE WITH NEW ANCHOR BOLTS.



PLANT
NORTH
KEY PLAN
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ACTION	DATE	APRVD	ACTION	DATE

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B. PINEROS
Drawn
L. GOUDEAU
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Design Review Level
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REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

PRIMARY CLARIFIERS DEMOLITION
PLAN AND SECTION

CONTRACT NO:

PROJECT NO:

Drawing

D-02

Sheet No.

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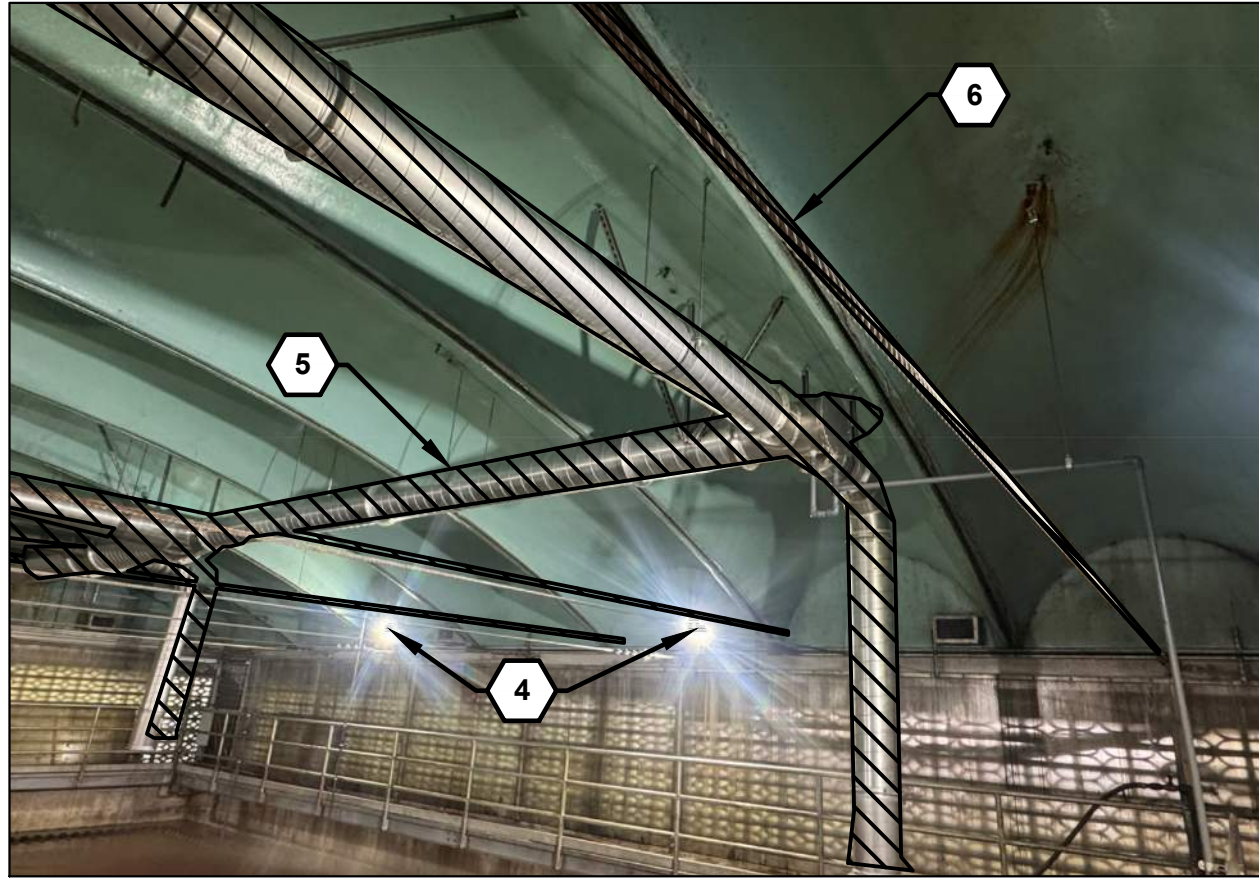
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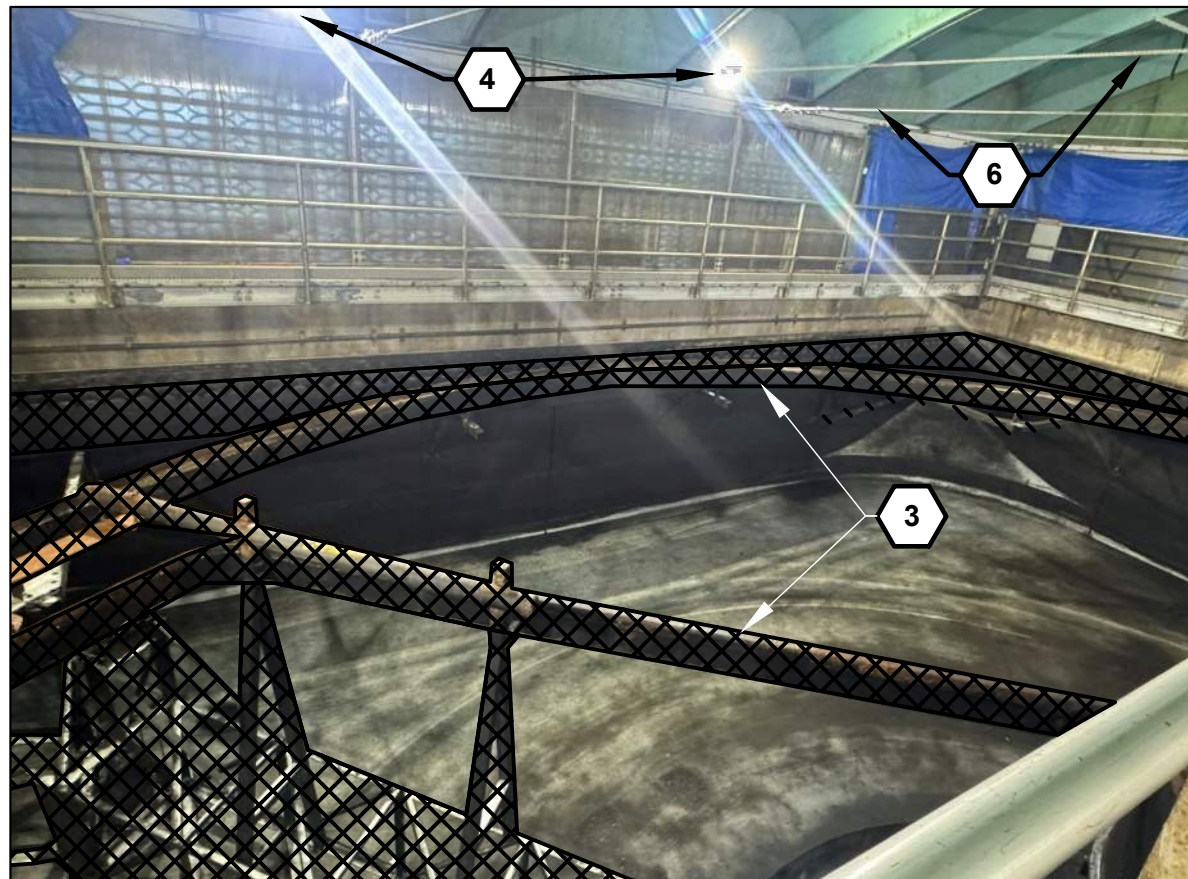
1
D-02
PRIMARY CLARIFIER PROCESS
WATER WASHDOWN STATION



2
D-02
PRIMARY CLARIFIER PLATFORM



3
D-01
PRIMARY CLARIFIER FOUL AIR DUCTING



4
D-02
PRIMARY CLARIFIER RAKE
ARM AND EFFLUENT



5
D-01
PRIMARY CLARIFIER #1
FOUL AIR HEADER CONNECTION



6
D-01
PRIMARY CLARIFIER #2
FOUL AIR HEADER CONNECTION

GENERAL SHEET NOTES

- PHOTOS SHOWN FEATURES TYPICAL FOR BOTH PRIMARY CLARIFIERS WHICH SHALL BE REMOVED AND SALVAGED AS NOTED IN SHEETS D-01 AND D-02 AND AS PER KEYNOTES BELOW.
- THE PHOTOS DO NOT SHOW THE FULL EXTENT OF THE FOUL AIR DUCTING. REFER TO SHEET D-01 FOR MORE INFORMATION.
- THESE DRAWINGS DO NOT SHOW THE REMOVAL OF THE ROOF PANELS. REFER TO G-07 AND G-09 FOR ROOF PANEL PHOTO DETAILS AND S-09 FOR ROOF PLAN AND SECTION.
- THESE DRAWINGS DO NOT SHOW THE DETAILS OF DEMOLITION FOR ELECTRICAL EQUIPMENT. REFER TO E SHEETS.

SHEET KEYNOTES

- REMOVE AND STORE FOR REINSTALLATION, ELECTRICAL ELEMENTS. SEE E SHEETS FOR MORE INFORMATION.
- REMOVE AND STORE FOR REINSTALLATION THE PROCESS WATER WASHDOWN STATION TO INCLUDE HOSE, SPRAY NOZZLES AND PIPING. ONE STATION PER PRIMARY CLARIFIER.
- DEMOLISH CLARIFIER DRIVE AND MOTOR, RAKE ARM, WALKWAY TO CENTER COLUMN INCLUDING HANDRAIL, SCUM SKIMMER, EFFLUENT TROUGH AND ASSOCIATED SUPPORTS. SEE SHEET D-02 AND DS SHEETS FOR MORE INFORMATION.
- REMOVE AND STORE FOR REINSTALLATION, PERIMETER LIGHT FIXTURES. DEMOLISH ASSOCIATED CONDUIT. SEE E SHEETS FOR MORE DETAILS.
- REMOVE AND SALVAGE FOUL AIR DUCTWORK AND ASSOCIATED ROOF SUPPORTS FOR REINSTALLATION UPON COMPLETION OF ROOF INSTALLATION.
- REMOVE AND STORE FOR REINSTALLATION, WIRE ROPE. SEE DS AND S SHEETS FOR MORE INFORMATION. ROOF PANELS MUST ALL BE REMOVED BEFORE CABLES CAN BE REMOVED.
- TEMPORARILY SUPPORT DUCT WORK.

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Drawn	L. GOUDEAU
Checked	A. PEREZ
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REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

CONTRACT NO:

PROJECT NO:

PRIMARY CLARIFIERS
DEMOLITION PHOTOS

Drawing

D-03

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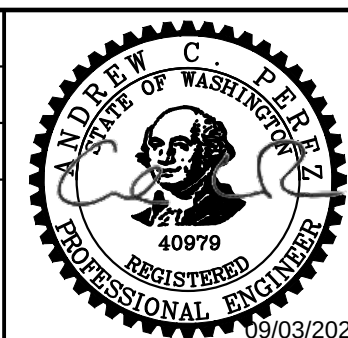

$$3/16'' = 1' - 0''$$


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Drawn	L. GOUDEAU
Checked	A. PEREZ
Design Review Level	
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REDONDO WWTP

PRIMARY AND SECONDARY CLARIFIER

REHABILITATION

SECONDARY CLARIFIERS TEMPORARY ROOF REMOVAL AND AIR DUCT DEMOLITION PLAN

Drawing

0-04

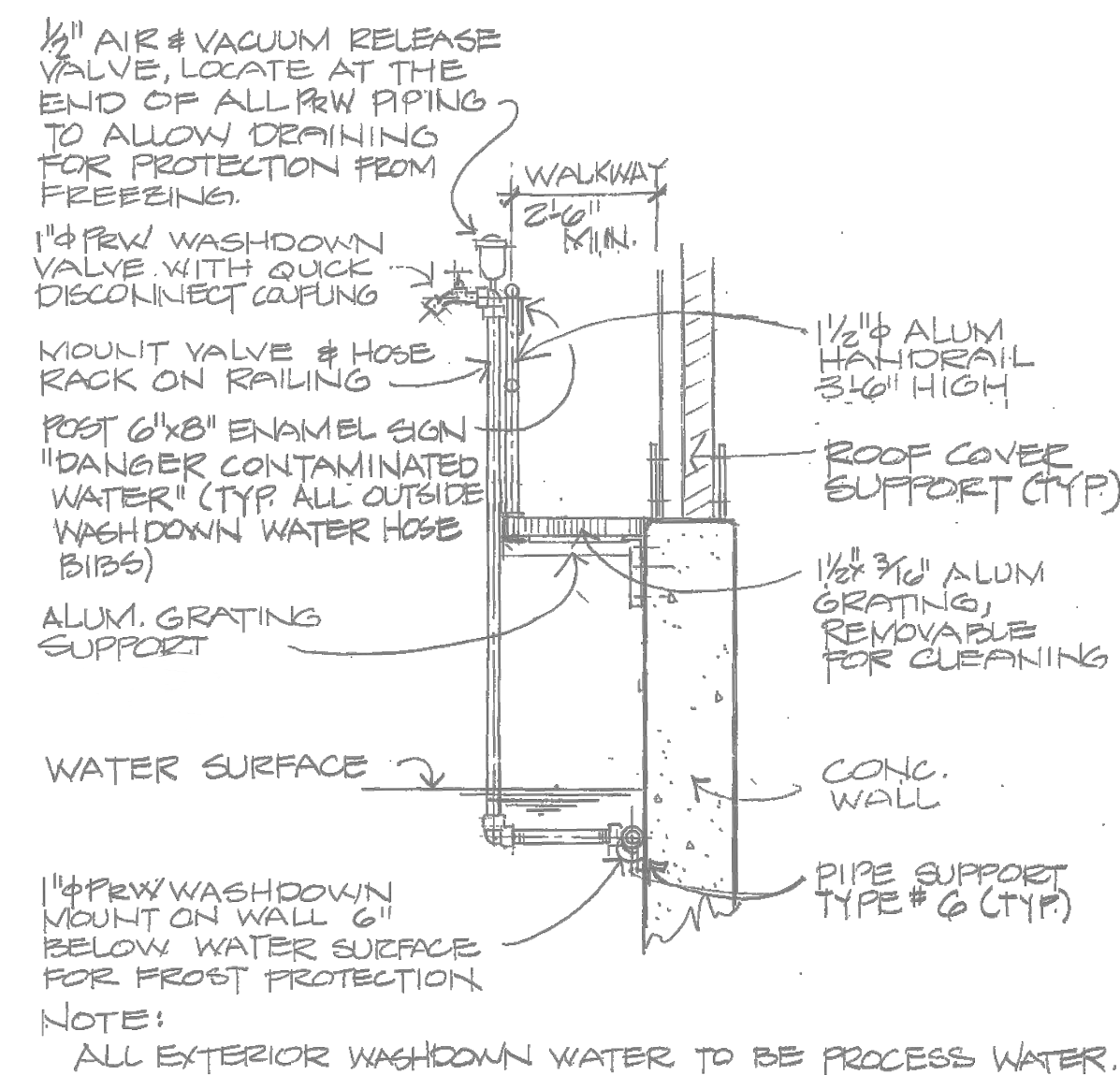
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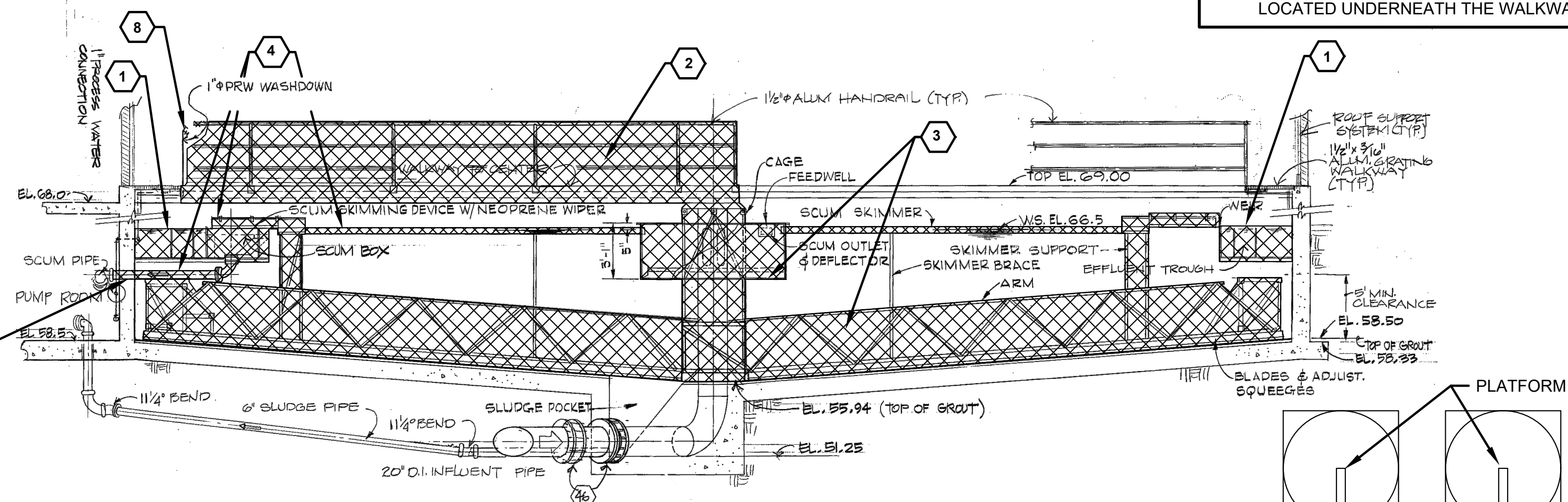
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1. PRIOR TO DEMOLITION OF DUCTWORK, CONTRACTOR SHALL MEASURE AIR FLOW AT EACH DROPLEG AND RECORD FOR USE IN BALANCING NEW DUCTWORK.
2. FOUL AIR EXHAUST SYSTEM AND FRESH SUPPLY AIR SYSTEM TO REMAIN ONLINE FOR ONLINE CLARIFIER. THIS MAY REQUIRE TEMPORARY DUCT WORK FROM SUPPLY/EXHAUST FANS LOCATED OUTSIDE OF BUILDING ADJACENT TO SECONDARY CLARIFIER 2 AND TEMPORARY PARTITIONING BETWEEN THE TWO CLARIFIERS. COORDINATE WITH OWNER FOR SHUTDOWNS TO FACILITATE DEMOLITION WORK. REFER TO SECTION 01 12 16 FOR CONSTRUCTION CONSTRAINTS AND SEQUENCING.

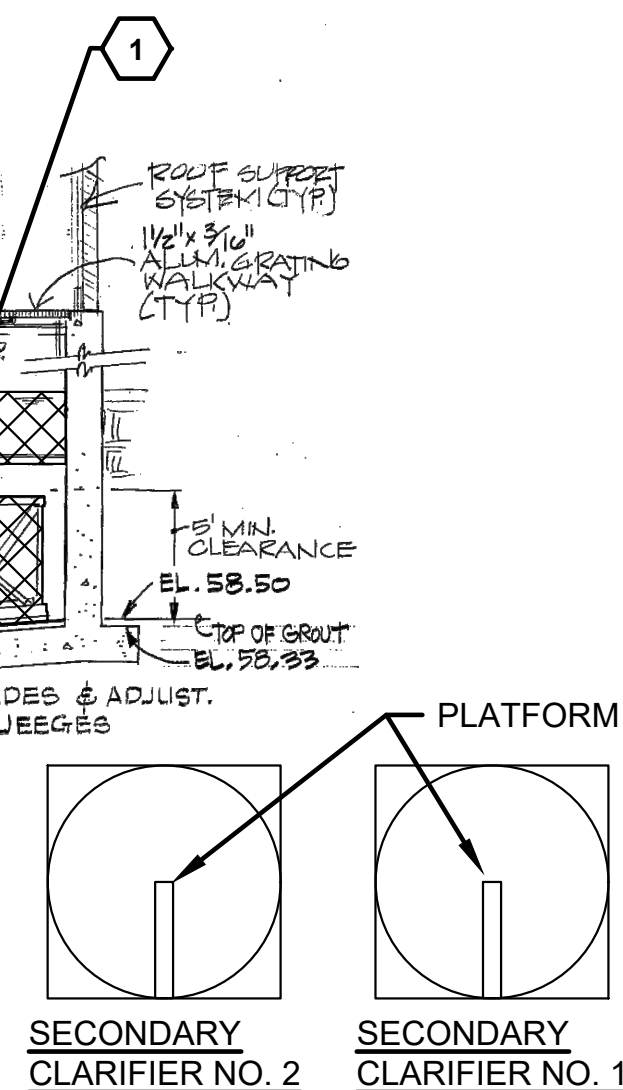
1. DEMOLISH FOUL AIR DUCTWORK AND ASSOCIATED SUPPORTS FROM ROOF PANELS.
2. DEMOLISH FRESH AIR DUCTWORK AND ASSOCIATED SUPPORTS FROM ROOF PANELS.
3. FOUL AND FRESH AIR DUCTWORK IS SHARED BETWEEN CLARIFIERS. INSTALL TEMPORARY DUCTWORK, DAMPERS, AND PARTITIONING TO ISOLATE THE ONLINE CLARIFIER AND MAINTAIN FOUL AIR REMOVAL AND FRESH AIR AND PRESERVE SYSTEM BALANCE.
4. FOUL AIR EXHAUST AND FRESH AIR SUPPLY FAN PHOTOS SHOWN IN SHEET G-09.
5. REMOVE, SALVAGE AND PROTECT NESTED FRP ROOF PANELS FOR REINSTALLATION AFTER COMPLETION OF IN-TANK WORK. PANELS SHALL BE REMOVED AS NEEDED TO ALLOW FOR DEMOLITION AND REPLACEMENT OF CLARIFIER RAKE ARM, MECHANISM AND OTHER IN-TANK ELEMENTS. SEE DS AND S SHEETS FOR MORE INFORMATION.



$\frac{1}{4}'' = 1'-0''$


$$3/16'' = 1'-0''$$
$$3/16'' = 1'-0''$$

1. DEMOLISH EFFLUENT TROUGH AND ASSOCIATED WALL SUPPORTS INCLUDING ANCHORS. SEE DS SHEETS FOR MORE DETAILS.
2. DEMOLISH WALKWAY TO CENTER COLUMN.
3. DEMOLISH RAKE ARM, CENTER COLUMN, AND MECHANISM, FEED WELL, DRIVE, AND PLATFORM.
4. DEMOLISH SCUM BOX, SCUM BAFFLE, SCUM SKIMMER AND ASSOCIATED PIPING.
5. DEMOLISH PIPE THROUGH THE WALL TO THE FLANGE IN THE SECONDARY PUMP ROOM.
6. DEMOLITION INCLUDES REMOVAL OF GROUT TOPPING SLAB ON TANK FLOOR. SEE DS SHEETS FOR MORE INFORMATION.
7. EQUIPMENT AND FEATURES SUCH AS THE EFFLUENT LAUNDER, WALKWAY TO CENTER PLATFORM, ETC. ARE PARTIALLY SHOWN FOR CLARITY. THEY CONTINUE AROUND THE PERIMETER OF THE TANK AS SHOWN IN THE PROFILE VIEW ON THE THIS SHEET.
8. PROCESS WATER WASHDOWN STATION TO BE REMOVED AND STORED FOR REINSTALLATION AFTER NEW CLARIFIER MECHANISM AND WALKWAY TO CENTER COLUMN. THIS INCLUDES THE PIPING AND SPRAY NOZZLES LOCATED UNDERNEATH THE WALKWAY.



SECONDARY
CLARIFIER NO. 2

SECONDARY
CLARIFIER NO. 1

PLANT
NORTH

KEY PLAN

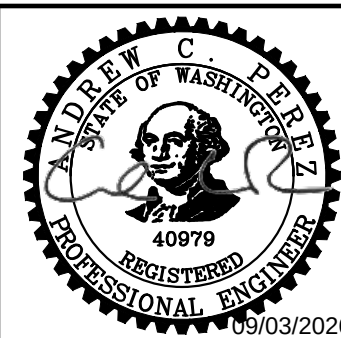
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Drawn	L. GOUDEAU
Checked	A. PEREZ
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REDONDO WWTP

PRIMARY AND SECONDARY CLARIFIER REHABILITATION

SECONDARY CLARIFIERS DEMOLITION PLAN AND SECTION

CONTRACT NO:

PROJECT NO:

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1 SECONDARY CLARIFIER
D-04 FOUL AIR DUCTING (TYP)



2 SECONDARY CLARIFIER RAKE ARM
D-04 AND EFFLUENT TROUGH (TYP)



3 SECONDARY CLARIFIER
D-04 FOUL AIR DUCTING (TYP)



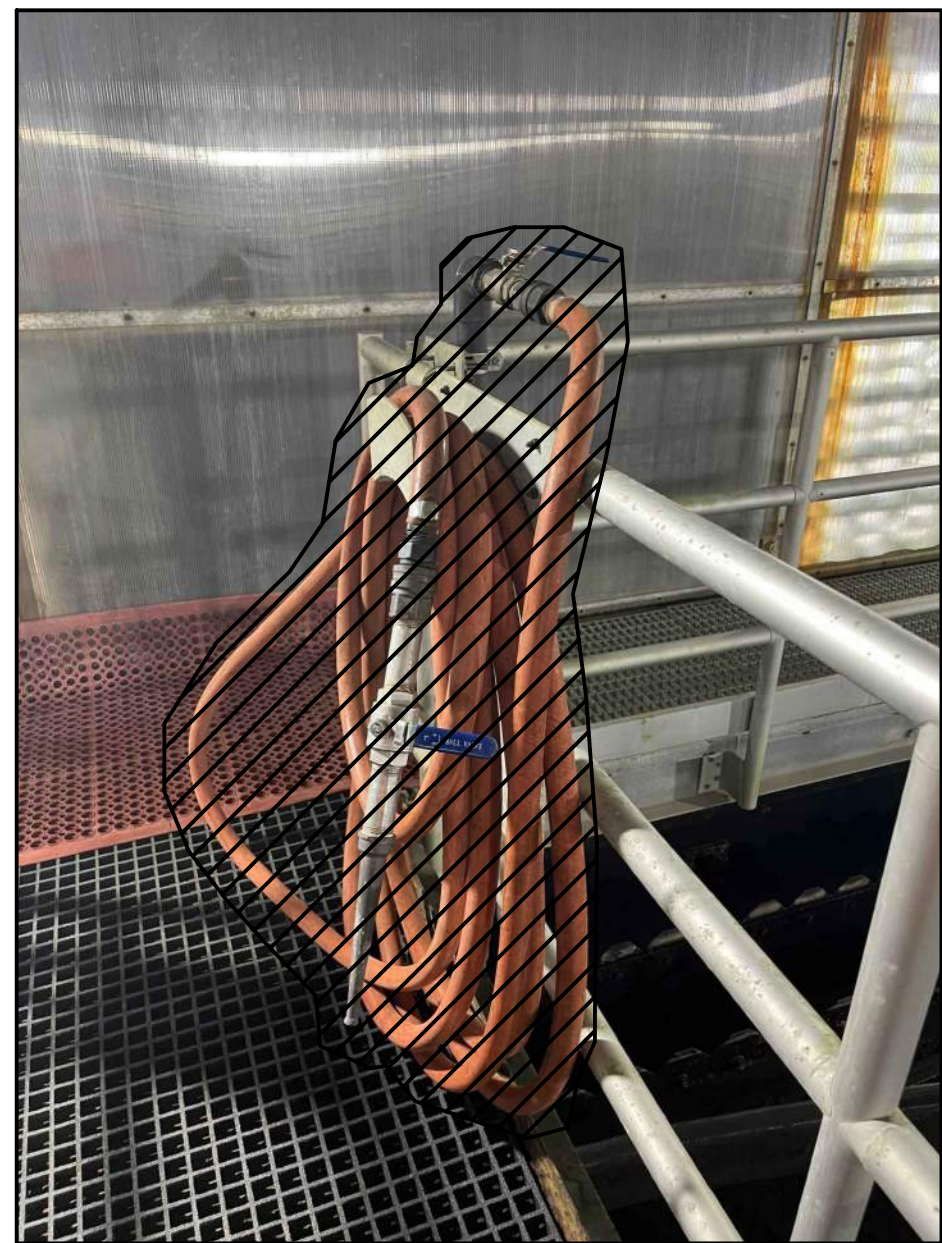
4 SECONDARY CLARIFIER RAKE
D-04 ARM AND PLATFORM (TYP)



5 SECONDARY CLARIFIER RAKE
D-04 ARM AND PLATFORM (TYP)



6 SECONDARY CLARIFIER
D-04 FOUL AIR DUCTING (TYP)



7 PRIMARY CLARIFIERS
D-04 PROCESS WATER
WASHDOWN STATION

GENERAL SHEET NOTES

1. PHOTOS SHOW FEATURES TYPICAL FOR BOTH SECONDARY CLARIFIERS WHICH SHALL BE DEMOLISHED OR REMOVED, SALVAGED AND PROTECTED AS NOTED IN SHEETS D-04 AND D-05 AND AS PER THE KEYNOTES BELOW.
2. THE PHOTOS DO NOT SHOW THE FULL EXTENT OF THE FOUL AIR DUCTING. REFER TO SHEET D-04 FOR MORE INFORMATION.
3. THESE DRAWINGS DO NOT SHOW THE REMOVAL OF THE ROOF PANELS. REFER TO G-07 AND G-09 FOR PANEL PHOTO DETAILS.
4. THESE DRAWINGS DO NOT SHOW THE DETAILS OF DEMOLITION FOR ELECTRICAL EQUIPMENT. REFER TO E SHEETS.

SHEET KEYNOTES

1. DEMOLISH DUCTWORK.
2. DEMOLISH CLARIFIER DRIVE AND MOTOR, RAKE ARM, WALKWAY TO CENTER COLUMN INCLUDING HANDRAIL, SCUM SKIMMER, EFFLUENT TROUGH AND ASSOCIATED SUPPORTS. SEE SHEET D-05 AND DS SHEETS FOR MORE DETAILS. DEMOLISH ELECTRICAL ELEMENTS ON PLATFORM. SEE E SHEETS FOR MORE INFORMATION.
3. NOT USED.
4. REMOVE, SALVAGE, AND PROTECT WIRE ROPES. SEE DS AND S SHEETS FOR MORE INFORMATION. ROOF PANELS MUST BE REMOVED BEFORE CABLES CAN BE REMOVED.

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Checked	A. PEREZ
Design Review Level	ISSUED FOR BID



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REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

SECONDARY CLARIFIERS
DEMOLITION PHOTOS

CONTRACT NO:

PROJECT NO:

Drawing

D-06

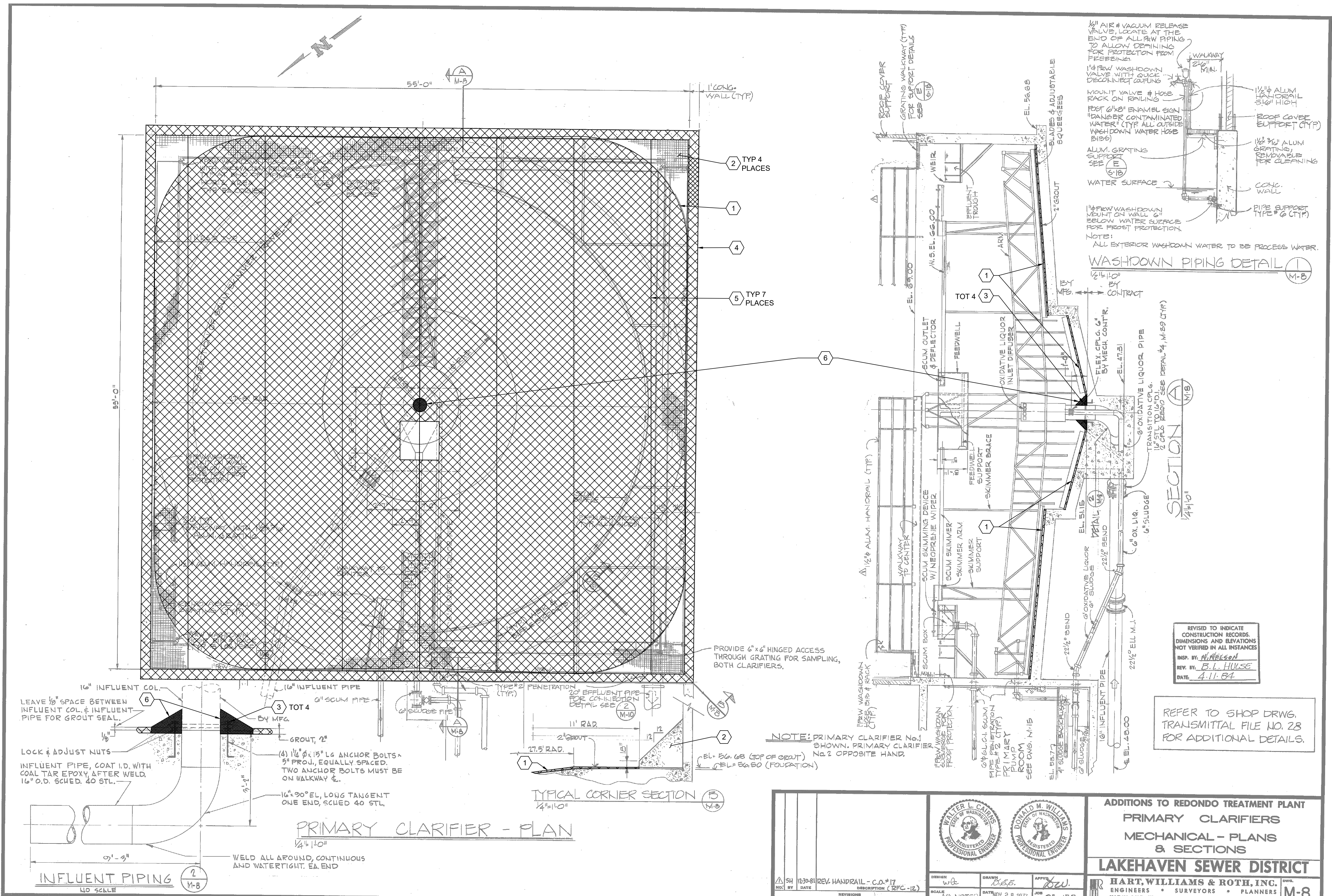
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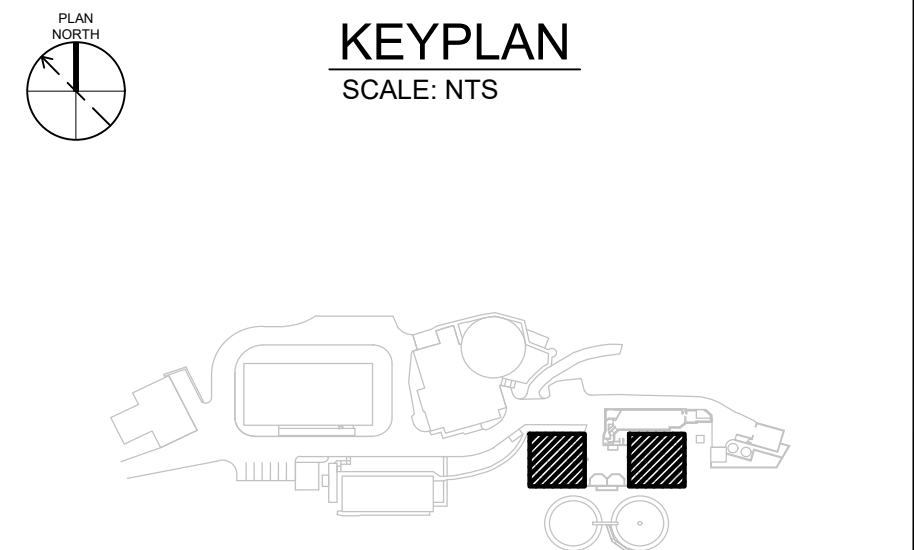
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- GENERAL SHEET NOTES:**
- EXISTING LINEWORK IS FROM 1970S ERA DRAWINGS AND MAY NOT REPRESENT THE CONSTRUCTION OF THE FACILITIES FOR ALL FEATURES. FOR DETAILS AND SECTIONS REFERENCED SEE THE ORIGINAL 1970S ERA DRAWINGS.
 - WORK SHOWN IS TYPICAL FOR EACH PRIMARY CLARIFIER TOTAL 2.
 - DRAWING IS NOT TO SCALE.
 - CROSS HATCH REPRESENTS EXISTING ITEMS TO BE REMOVED.
 - EXTENT OF AREA SHOWN CROSS HATCHED IN PLAN OR ELEVATION REFLECTS THE WORK SHOWN ON THE ORIGINAL CONSTRUCTION DOCUMENTS.
 - EXISTING CONSTRUCTION NOT SHOWN TO BE REMOVED SHALL REMAIN AND SHALL NOT BE DAMAGED BY ANY REMOVAL ACTIVITIES.
 - THE ENGINEER WILL IDENTIFY AREAS OF CONCRETE, STEEL, ANCHOR AND SEALANT JOINT REPAIRS TO BE COMPLETED AT THE BID RATE FOR EACH REPAIR AFTER THE ROOF PANELS HAVE BEEN REMOVED AND THE REMAINING EXISTING STRUCTURE HAS BEEN THOROUGHLY CLEANED. ANTICIPATED REPAIR DETAILS ARE PROVIDED IN THE DETAILS ON DRAWINGS S-03 THROUGH S-05.

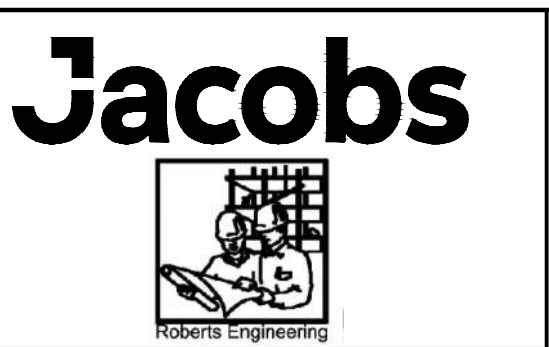
- KEY NOTES:**
- REMOVE +/-2" THICK GROUT TOPPING SLAB. DEMOLITION METHODS SHALL NOT DAMAGE CONCRETE TO REMAIN.
 - SAVE CORNER CONCRETE FILL, TYP 4 PLACES.
 - CUT ANCHOR BOLTS AND PATCH WITH POLYMER MODIFIED REPAIR MORTAR SIMILAR TO DETAIL 4 ON S-03.
 - REMOVE AND REPLACE W8X18 AND C10X20 ROOF SUPPORT BEAM, TYP 4 SIDES EACH PRIMARY CLARIFIER. SEE A/S-09 FOR ROOF BEAM DETAILS.
 - REMOVE ALL ROOF PANELS BEFORE PRECEDING TO REMOVE. SAVE, REINSTALL AND RE-TENSION WIRE ROPE TO EXISTING LENGTHS AT EACH LOCATION, TYP 7 WIRE ROPES FOR EACH PRIMARY CLARIFIER. SEE A/S-09 FOR ADDITIONAL INFORMATION. COMPLETE WIRE ROPE TENSIONING BEFORE REINSTALLING ROOF PANELS. ALL WIRE ROPES SHALL BE REINSTALLED IN THEIR EXISTING LOCATION AND SHALL BE RESTORED TO THEIR EXISTING LENGTHS BY ADJUSTING THE TURNBUCKLES.
 - DEMOLISH CONCRETE ENCASEMENT AROUND BOTTOM OF 16" INFLUENT PIPE AS REQUIRED TO INSTALL NEW MECHANISM.



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ACTION	DATE	APRVD	ACTION	DATE

Designed: R. ROBERTS
Drawn: C. ROBERTS
Checked: R. ROBERTS
Design Review Level: ISSUED FOR BID

RONALD M. ROBERTS
STATE OF WASHINGTON
REGISTERED PROFESSIONAL ENGINEER
20403
09/03/2026



REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

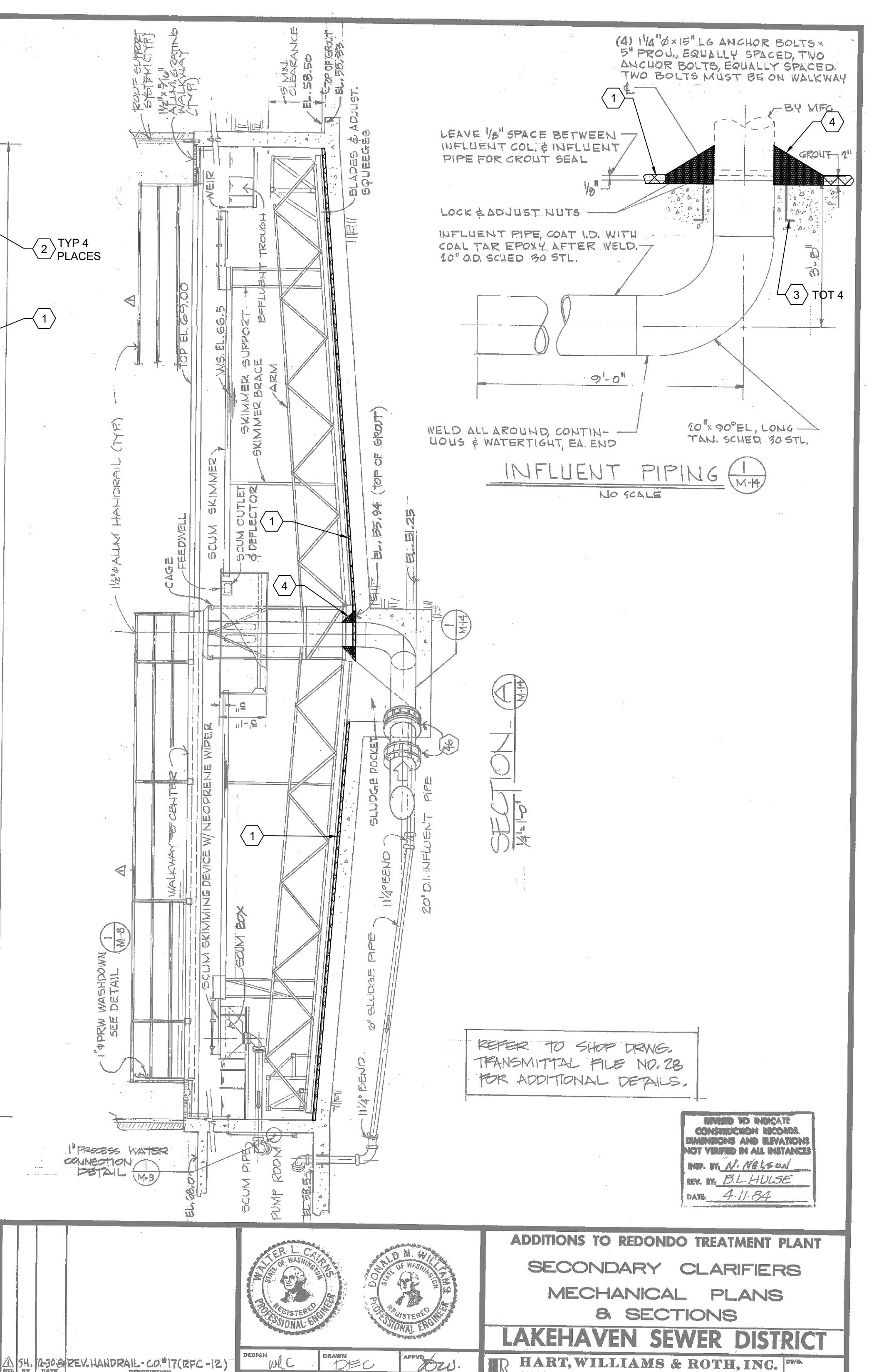
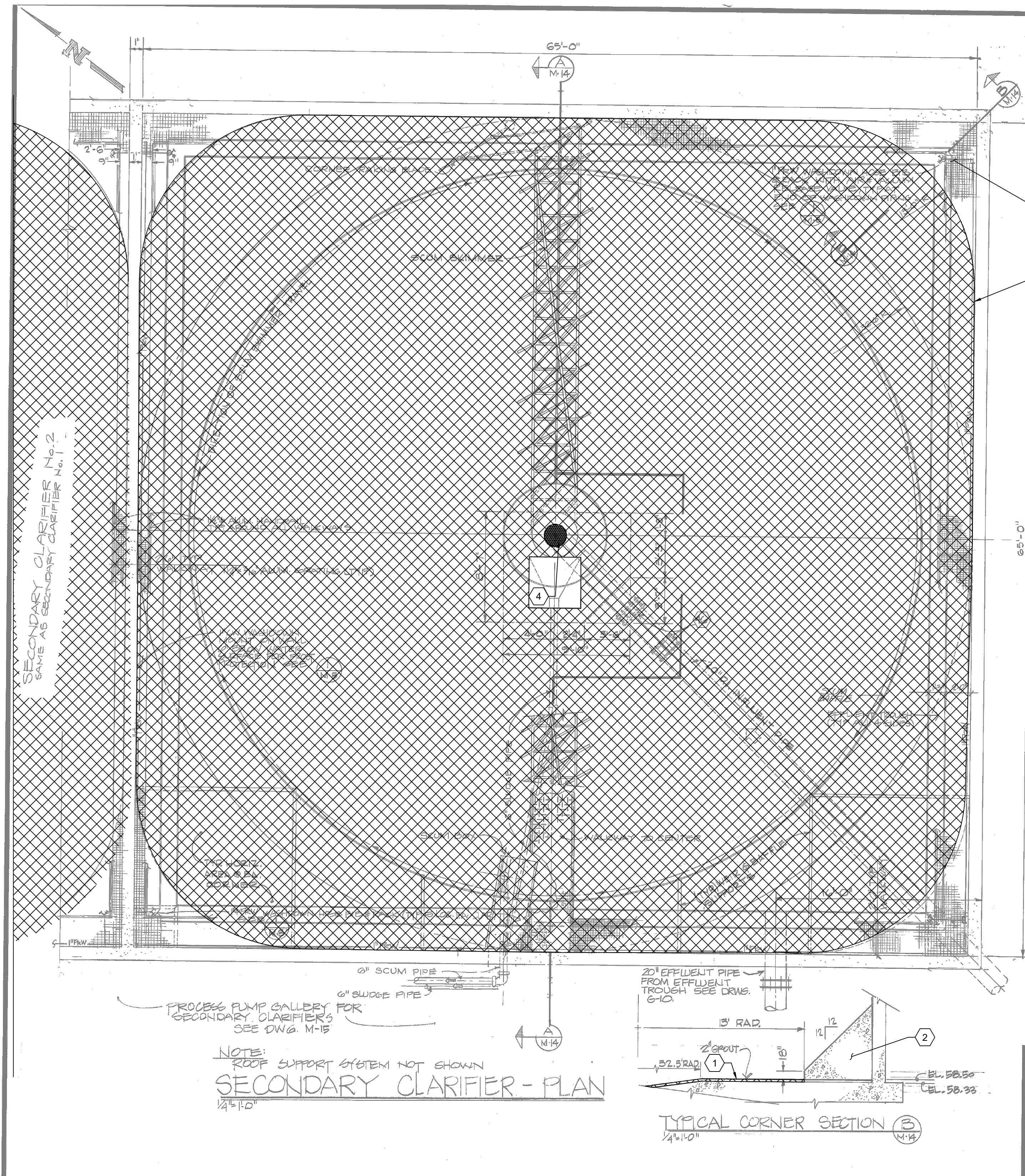
DESIGN: W&R
SCALE: AS NOTED
DATE: NOV 28 1977
JOB: 05-133

HART, WILLIAMS & ROTH, INC.
ENGINEERS • SURVEYORS • PLANNERS
KIRKLAND, WASHINGTON

STRUCTURAL DEMOLITION
PRIMARY CLARIFIERS
PLAN AND SECTION

CONTRACT NO: PROJECT NO:

Drawing: DS-01
Sheet No: 16
46 Of Total



GENERAL SHEET NOTES:

- EXISTING LINEWORK IS FROM 1970S ERA DRAWINGS AND MAY NOT REPRESENT THE CONSTRUCTION OF THE FACILITIES FOR ALL FEATURES. FOR DETAILS AND SECTIONS REFERENCED SEE THE ORIGINAL 1970S ERA DRAWINGS.
- WORK SHOWN IS TYPICAL FOR EACH SECONDARY CLARIFIER TOTAL 2.
- DRAWING IS NOT TO SCALE.
- EXTENT OF AREA SHOWN CROSS HATCHED IN PLAN OR ELEVATION REFLECTS THE WORK SHOWN ON THE ORIGINAL CONSTRUCTION DOCUMENTS.
- EXISTING CONSTRUCTION NOT SHOWN TO BE REMOVED SHALL REMAIN AND SHALL NOT BE DAMAGED BY ANY REMOVAL ACTIVITIES.

KEY NOTES:

- REMOVE +/-2" THICK GROUT TOPPING SLAB. DEMOLITION METHODS SHALL NOT DAMAGE CONCRETE TO REMAIN.
- SAVE CORNER CONCRETE FILL, TYP 4 PLACES.
- CUT ANCHOR BOLTS AND PATCH WITH POLYMER MODIFIED REPAIR MORTAR SIMILAR TO DETAIL 4 ON S-03.
- DEMOLISH CONCRETE ENCASEMENT AROUND BOTTOM OF 16" INFLUENT PIPE AS REQUIRED TO INSTALL NEW MECHANISM.

KEYPLAN
SCALE: NTS

DESIGNED R. ROBERTS					REDONDO WWTP PRIMARY AND SECONDARY CLARIFIER REHABILITATION	STRUCTURAL DEMOLITION SECONDARY CLARIFIERS FOUNDATION PLAN AND SECTION	Drawing DS-03
DRAWN C. ROBERTS							
CHECKED R. ROBERTS							
DESIGN REVIEW LEVEL ISSUED FOR BID							
NO. DATE BY APRVD		REVISION		PLANS ISSUED FOR		CONTRACT NO: PROJECT NO:	
BID		CONST		RECORD		Sheet No. 18	
ACTION DATE APRVD		ACTION DATE APRVD		ACTION DATE APRVD		46 Of Total	

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GENERAL STRUCTURAL NOTES

A. GENERAL

1. **SCOPE**
THE GENERAL STRUCTURAL NOTES AND TYPICAL STRUCTURAL DETAILS ARE GENERAL AND APPLY TO THE ENTIRE PROJECT EXCEPT WHERE THERE ARE SPECIFIC INDICATIONS OR MODIFICATIONS TO THE CONTRARY. THE CONTRACTOR SHALL DETERMINE WHICH TYPICAL DETAIL IS MOST APPROPRIATE FOR THE CONSTRUCTION CONDITION.
2. **APPLICABLE SPECIFICATIONS AND CODES**
ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE BUILDING CODE AS ADOPTED BY THE AUTHORITY HAVING JURISDICTION AND OTHER REFERENCED STANDARDS INDICATED IN THE CONTRACT DOCUMENTS. THE PROVISIONS OF THE BUILDING CODE SHALL SUPERSEDE THE PLANS AND SPECIFICATIONS EXCEPT WHERE THE PLANS AND SPECIFICATIONS ARE MORE RESTRICTIVE.
3. **DIMENSIONS**
REFER TO MECHANICAL AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS FOR SLEEVES, DUCTS, PIPING, CONDUITS, ETC., NOT SHOWN. ALL OPENINGS IN STRUCTURAL MEMBERS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER PRIOR TO INSTALLATION. SUBMIT DRAWINGS THAT SHOW ACTUAL SIZE AND LOCATION OF PENETRATIONS. COORDINATE ALL DIMENSIONS WITH MECHANICAL AND ELECTRICAL DRAWINGS.

STRUCTURAL DIMENSIONS CONTROLLED BY OR RELATED TO MECHANICAL AND ELECTRICAL EQUIPMENT SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

4. **PROVISIONS FOR EQUIPMENT**
MECHANICAL AND ELECTRICAL EQUIPMENT SUPPORTS, ANCHORAGES, OPENINGS, PIPE SLEEVES, PENETRATIONS, RECESSES AND REVEALS NOT SHOWN ON THE STRUCTURAL DRAWINGS, BUT REQUIRED AND OR SPECIFIED BY OTHER CONSTRUCTION DOCUMENTS OR VENDOR SUPPLIED EQUIPMENT DRAWINGS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR PRIOR TO CASTING CONCRETE.

5. **CONSTRUCTION LOADS**
STRUCTURES HAVE BEEN DESIGNED FOR SELF WEIGHT AND OPERATIONAL LOADS ON THE COMPLETED STRUCTURES ONLY. UNTIL THE STRUCTURES ARE COMPLETE, INCOMPLETE STRUCTURAL ELEMENTS SHALL NOT BE ASSUMED TO BE CAPABLE OF SUPPORTING CONSTRUCTION PHASE LOADING. THE CONTRACTOR SHALL DETERMINE WHERE AND WHEN ADDITIONAL BRACING SHALL BE NEEDED UNTIL THE STRUCTURE HAS REACHED SUFFICIENT DESIGN STRENGTH. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN OF ANY NECESSARY BRACING.

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DESIGN OF ALL FORMWORK, SCAFFOLDING, RIGGING AND TEMPORARY BRACING OF LIFTING DEVICES OR FITTINGS, INCLUDING TEMPORARY WELDMENTS.

B. STRUCTURAL DESIGN DATA

1. **GENERAL**
- a. BUILDING CODE: 2021 INTERNATIONAL BUILDING CODE WITH WASHINGTON STATE AND CITY OF FEDERAL WAY AMENDMENTS AND BY REFERENCE ASCE 7-2016 "MINIMUM DESIGN LOADS FOR AND BUILDINGS AND OTHER STRUCTURES."
- b. RISK CATEGORY: III
- c. LOCATION: 47.33° N, 122.37° W, APPROXIMATE ELEVATION 115 FT.
2. **DESIGN LOADS:**
- a. DEAD LOADS: ACTUAL STRUCTURE OR EQUIPMENT WEIGHT
- b. LIVE LOADS
- 100 PSF OR 300 LB CONCENTRATED LOAD WHICHEVER IS GREATER
- c. EARTHQUAKE DESIGN DATA
- | | |
|--------------------------------|--------------------|
| SEISMIC IMPORTANCE FACTOR | Ie=1.25 |
| SEISMIC IMPORTANCE FACTOR | Ip = 1.00 |
| MAPPED SPECTRAL ACCELERATIONS | SS=1.365, S1=0.469 |
| SITE CLASS | D |
| SPECTRAL RESPONSE COEFFICIENTS | SDS=1.092, SD1=N/A |
| SEISMIC DESIGN CATEGORY | D |

C. CONCRETE

1. MIXING, BATCHING, TRANSPORTING, FORMING, PLACING, FINISHING AND CURING OF ALL CONCRETE, AND SELECTION OF CONCRETE MATERIALS, SHALL CONFORM TO ACI 301, "SPECIFICATIONS FOR STRUCTURAL CONCRETE," EXCEPT AS NOTED BELOW. PROPORTIONS OF AGGREGATE TO CEMENTITIOUS PASTE SHALL BE SUCH AS TO PRODUCE A DENSE, WORKABLE MIX THAT CAN BE PLACED WITHOUT SEGREGATION OR EXCESS FREE SURFACE WATER.
2. **CONCRETE CONSTRUCTION**
- a. CAST-IN-PLACE CONCRETE
- STRUCTURAL CONCRETE 4000 PSI AT 28 DAYS.
- b. REINFORCING STEEL
- TYPICAL ASTM A615 GRADE 60
 - WELDED ASTM A706 GRADE 60
- c. WELDED WIRE REINFORCEMENT (WWR) SHALL BE ASTM A185 SMOOTH WIRE - fy = 60 KSI MINIMUM. PROVIDE SHEETS, ROLLS NOT ALLOWED, LAP SHEETS A MINIMUM OF 8 INCH.
- d. FABRICATION AND PLACEMENT OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH CRSI MSP-1 "MANUAL OF STANDARD PRACTICE" AND ACI 301 "SPECIFICATIONS FOR STRUCTURAL CONCRETE".
- e. CONCRETE COVER FOR REINFORCING, UNLESS SHOWN OTHERWISE, SHALL BE:

CONCRETE COVER FOR REINFORCING STEEL	MINIMUM COVER (INCHES)
SLABS & JOISTS	
TOP & BOTTOM BARS FOR DRY CONDITIONS	3/4
FORMED CONCRETE SURFACES EXPOSED TO EARTH, WATER OR WEATHER, AND OVER IN CONTACT WITH SEWAGE AND FOR BOTTOMS BEARING ON WORK MAT, OR SLABS SUPPORTING EARTH COVER.	2
WALLS	
FOR DRY CONDITIONS	3/4
FORMED CONCRETE SURFACES EXPOSED TO EARTH, WATER, SEWAGE, WEATHER, OR IN CONTACT WITH GROUND	2

3. **BAR LAP SPLICES**
ALL REBAR LAP SPLICES SHALL BE ACI CLASS B TENSION LAP SPLICES.
4. **STANDARD HOOKS**
ALL HOOKED REBARS SHALL BE ACI STANDARD HOOKS, UNLESS NOTED OTHERWISE.
5. **SLOPING SLABS**
MONOLITHIC SLABS WITH TOPS THAT ARE SLOPED SHALL HAVE BOTTOMS SLOPED THE SAME AMOUNT, MAINTAINING A UNIFORM SLAB THICKNESS, UNLESS OTHERWISE NOTED.
6. **CHAMFERS**
EXCEPT AS OTHERWISE NOTED, EXPOSED CONCRETE CORNERS AND EDGES SHALL HAVE 3/4" CHAMFERS. RE-ENTRANT CORNERS SHALL NOT HAVE FILLETS.
7. **CONSTRUCTION JOINTS**
ENGINEER APPROVAL IS REQUIRED FOR ANY CONSTRUCTION JOINTS NOT SHOWN ON THE DRAWINGS. CONSTRUCTION JOINTS SHALL BE DETAILED AS SHOWN ON THE DRAWINGS.
8. **ADHESIVE ANCHORS**
USE 316 STAINLESS STEEL ANCHORS W/ HILTI HIT-RE 500 V3 EPOXY, OR APPROVED EQUAL COMPLYING WITH IBC 2021 REQUIREMENTS.
9. **MECHANICAL ANCHORS**
USE 316 STAINLESS STEEL ANCHORS, HILTI KWIK BOLTS, KB-T22, OR APPROVED EQUAL COMPLYING WITH IBC 2021 REQUIREMENTS WHERE SPECIFICALLY ALLOWED.

D. NON-SHRINK GROUT

GROUT FOR BASE PLATES, EQUIPMENT ANCHORAGE AND GENERAL PURPOSES SHALL BE APPROVED, NON-SHRINK CEMENTITIOUS GROUT CONTAINING NATURAL AGGREGATES DELIVERED TO THE JOB SITE IN FACTORY PREPACKAGED CONTAINERS REQUIRING ONLY THE ADDITION OF WATER, ASTM C1107 TYPE B OR C.

E. TOPPING SLAB GROUT

AS RECOMMENDED BY THE MANUFACTURER OF THE ROTATING EQUIPMENT ARMS. PLACEMENT SHALL BE BY SWEEPING THE GROUT WITH THE ROTATING ARM HAVING A TEMPORARY SCREED BOARD AT THE REQUIRED ELEVATION AND SLOPE. GROUT THICKNESS SHALL BE 2" MINIMUM UNLESS OTHERWISE RECOMMENDED BY THE ROTATING EQUIPMENT MANUFACTURER. REMOVE THE TEMPORARY SCREED BOARDS AFTER THE GROUT HAS HARDENED AND INSTALL THE PERMANENT SQUEEGEES TO FIT TO THE RESULTING GROUT SLOPE.

IBC 1705.3 SPECIAL INSPECTION OF CONCRETE CONSTRUCTION			
VERIFICATION AND INSPECTION	FREQUENCY	REFERENCED STANDARD	IBC REFERENCE
1. INSPECTION OF REINFORCING STEEL, AND PLACEMENT.	PERIODIC	ACI 318: CH 20, 25.2, 25.3, 26.6.1-26.6.3	1908.4
2. REINFORCING BAR WELDING:			
A. VERIFY WELDABILITY OF REINFORCING BARS OTHER THAN ASTM A706	PERIODIC	AWS D1.4, ACI 318: 26.6.4	-
B. INSPECT SINGLE-PASS FILLET WELDS, MAXIMUM 5/16"	PERIODIC		
C. INSPECT ALL OTHER WELDS	CONTINUOUS		
3. INSPECTION OF ANCHORS CAST IN CONCRETE	PERIODIC	ACI 318: 17.8.2	
4. INSPECTION OF ANCHORS POST-INSTALLED IN HARDENED CONCRETE MEMBERS.			
A. ADHESIVE ANCHORS INSTALLED IN HORIZONTALLY OR UPWARDLY INCLINED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS.	CONTINUOUS	ACI 318 355.4, SECTION 13.3	-
B. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4A.	PERIODIC	ACI 318 355.4, SECTION 13.3	
5. VERIFYING USE OF REQUIRED DESIGN MIX	PERIODIC	ACI 318: CH 19, 26.4.3, 26.4.4	1904.1, 1904.2, 1908.2, 1908.3
6. AT THE TIME FRESH CONCRETE IS SAMPLED TO FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	CONTINUOUS	ASTM C 172, ASTM C31, ACI 318: 26.4, 26.12	1908.10
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	CONTINUOUS	ACI318: 26.5	1908.6, 1908.7, 1908.8
8. INSPECTION FOR MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	PERIODIC	ACI 318: 26.5.3, 26.5.5	1908.9
9. VERIFICATION OF IN-SITU CONCRETE STRENGTH, PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	PERIODIC	ACI 318: 26.11.2	-
10. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	PERIODIC	ACI 318: 26.11.1.2(b)	-

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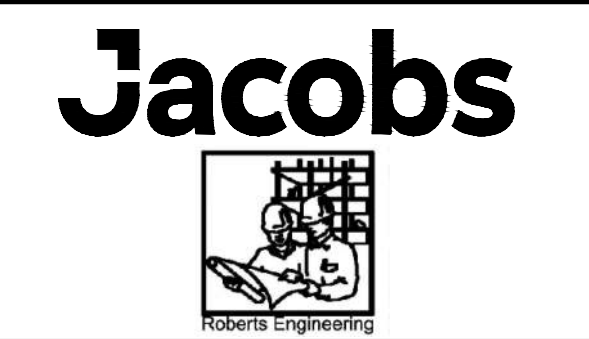
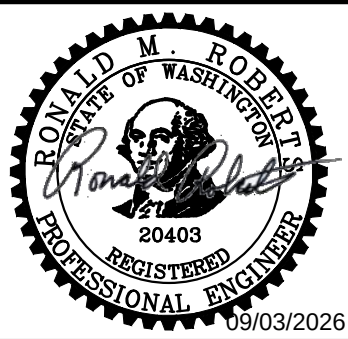
Designed
R. ROBERTS

Drawn
C. ROBERTS

Checked
R. ROBERTS

Design Review Level

ISSUED FOR BID



REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

STRUCTURAL
GENERAL
NOTES AND SPECIAL INSPECTION

CONTRACT NO:

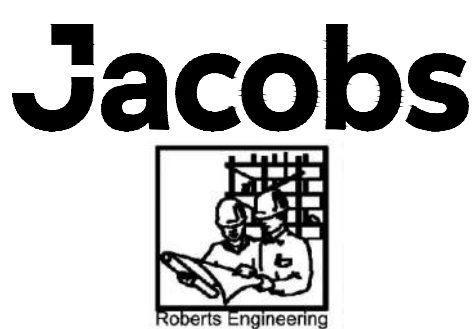
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Drawing
S-01

Sheet No.
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Of Total

Designed	R. ROBERTS
Drawn	C. ROBERTS
Checked	R. ROBERTS
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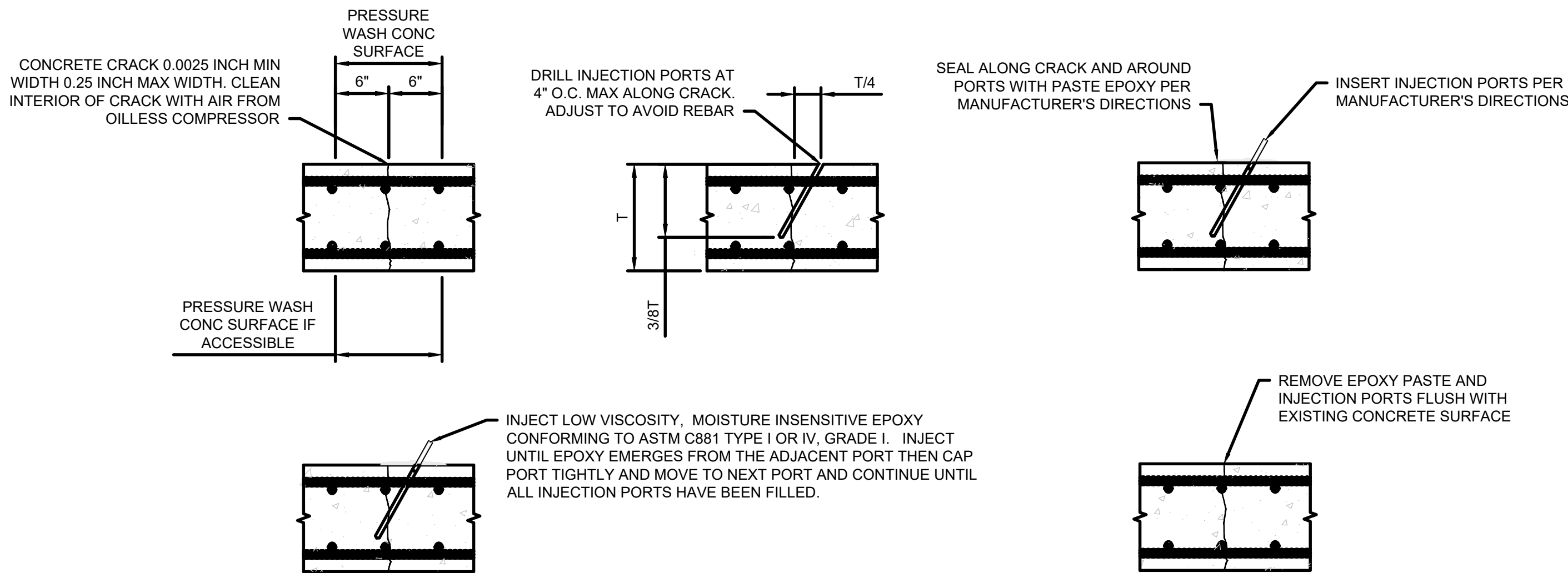


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S-02
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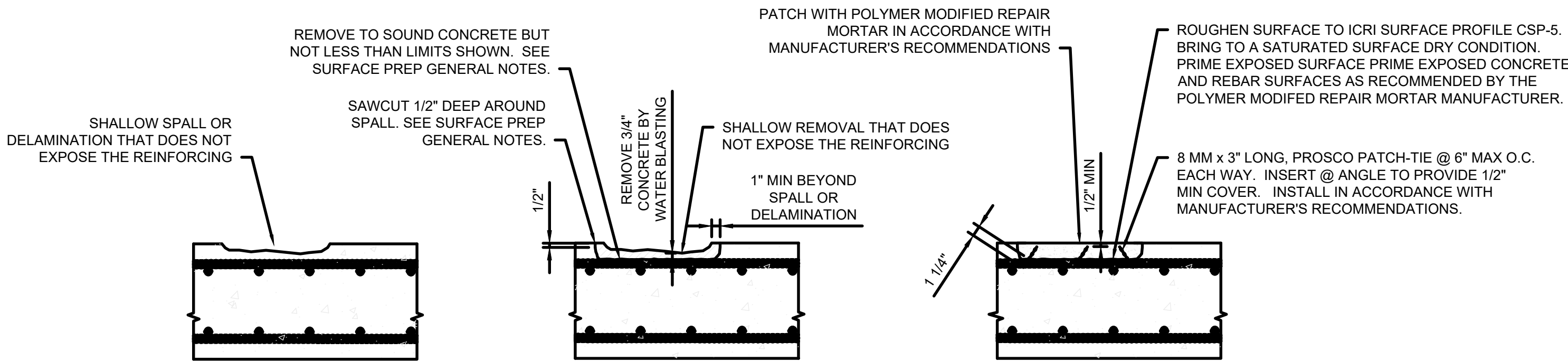
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SURFACE PREP GENERAL NOTES

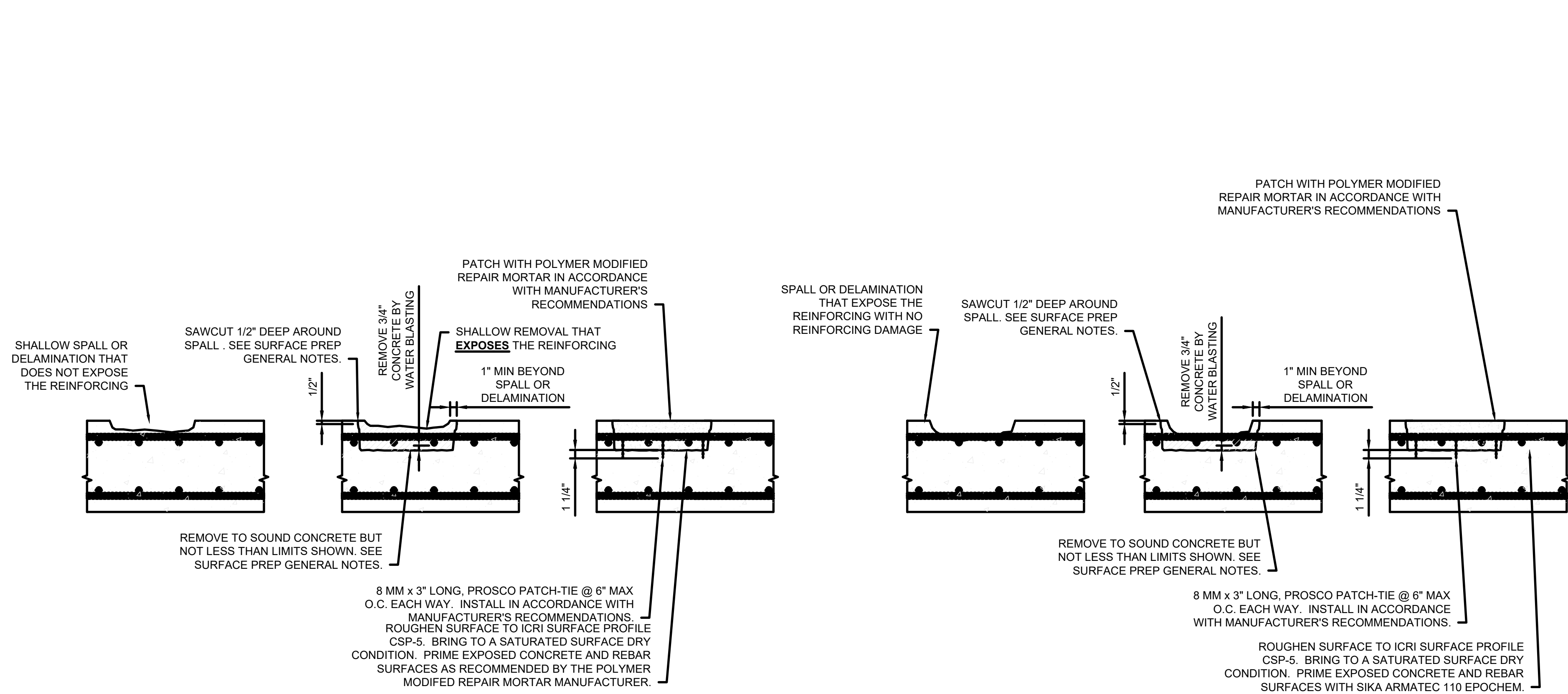
1. AFTER LOCALIZED DAMAGE HAS BEEN REPAIRED, PERFORM A LIGHT SAND OR GRIT BLAST AS REQUIRED TO ACHIEVE AN ICRI SURFACE ROUGHNESS OF CSP 3 TO CSP 5.



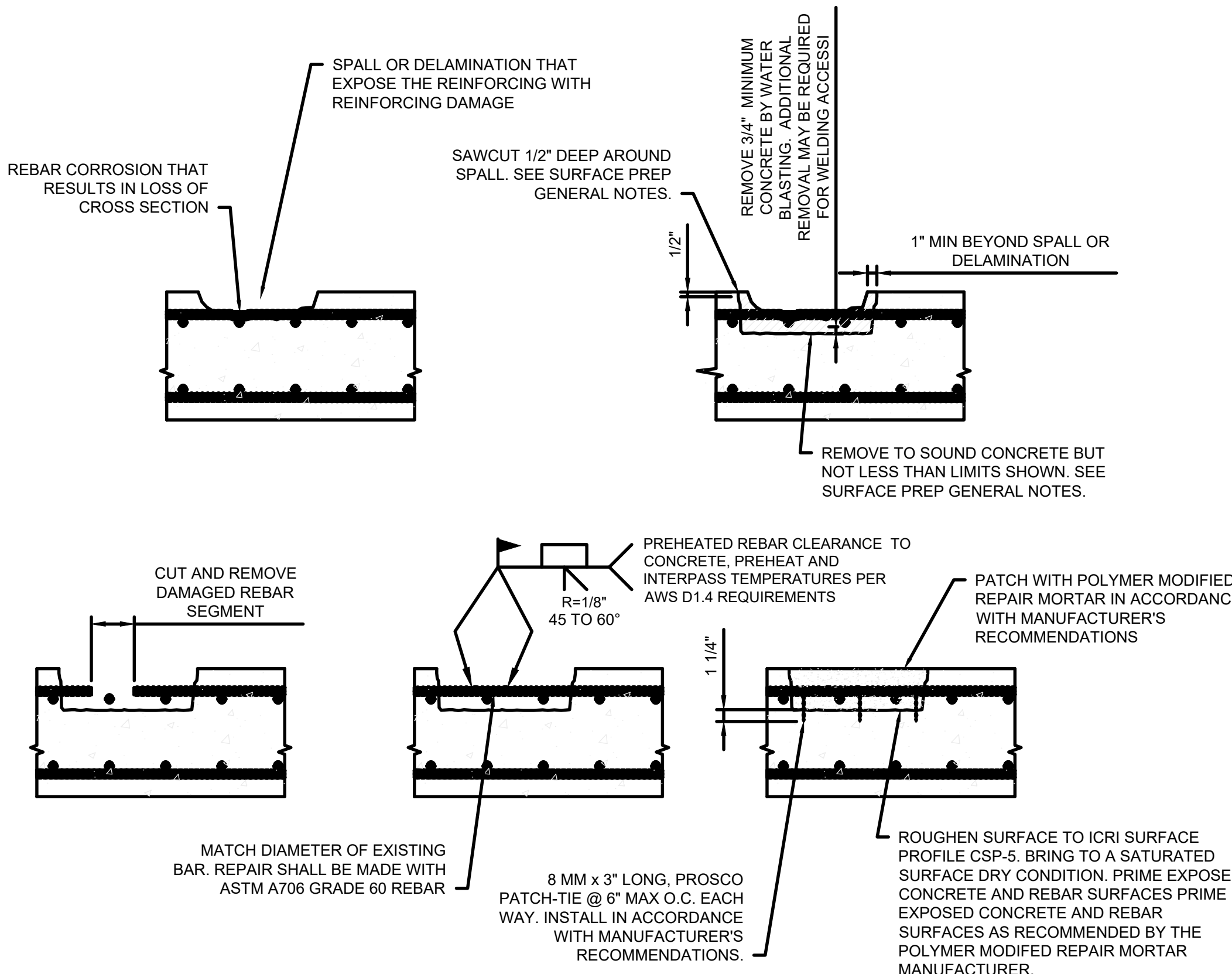
1 CRACK INJECTION
- NTS



2 SHALLOW SPALL REPAIR WITHOUT REBAR EXPOSED
- NTS



3 SHALLOW SPALL REPAIR WITHOUT REBAR EXPOSED
- NTS

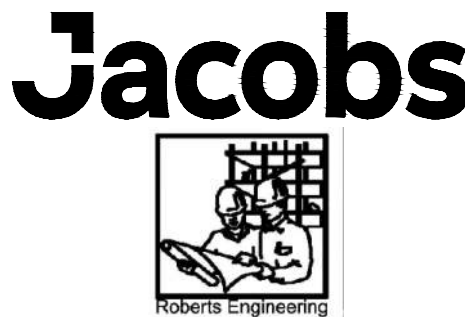


4 DEEP SPALL REPAIR WITHOUT DAMAGED REBAR REPAIR
- NTS

5 DEEP SPALL REPAIR WITH DAMAGED REBAR REPAIR
- NTS

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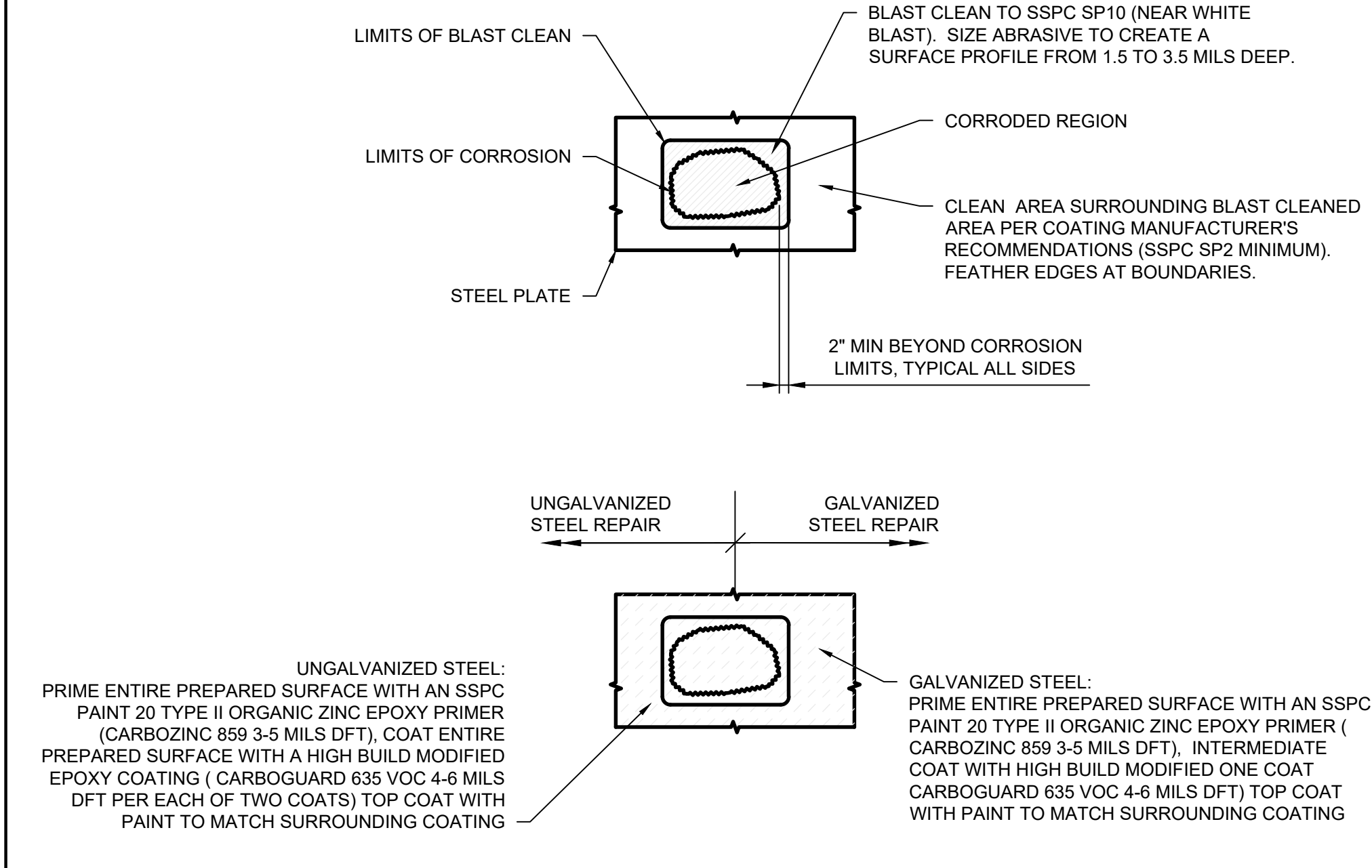


REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

STRUCTURAL
DETAILS
CONCRETE REPAIR

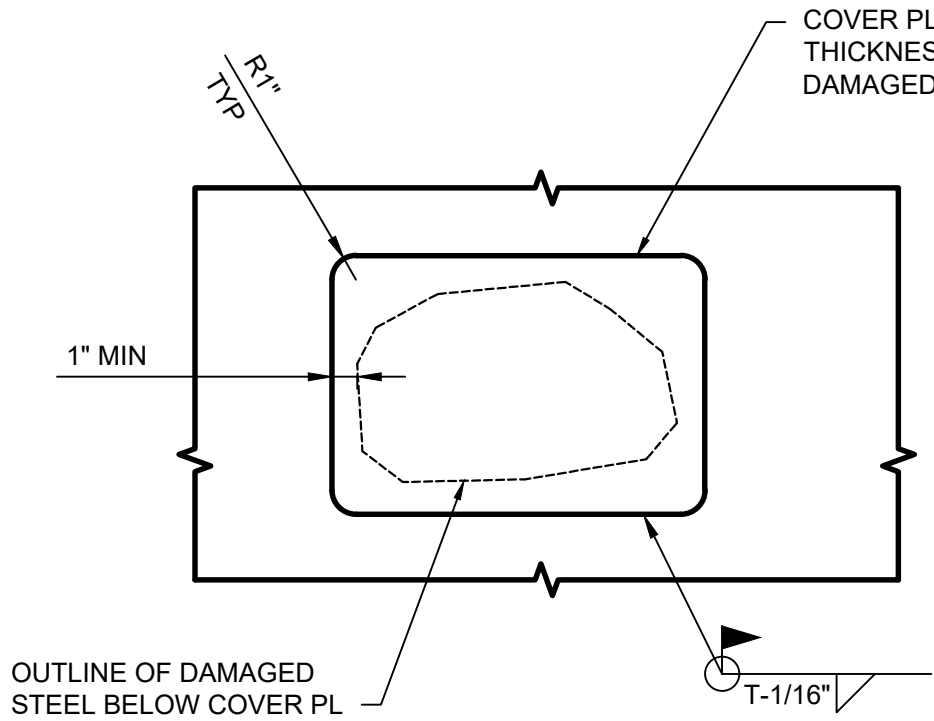
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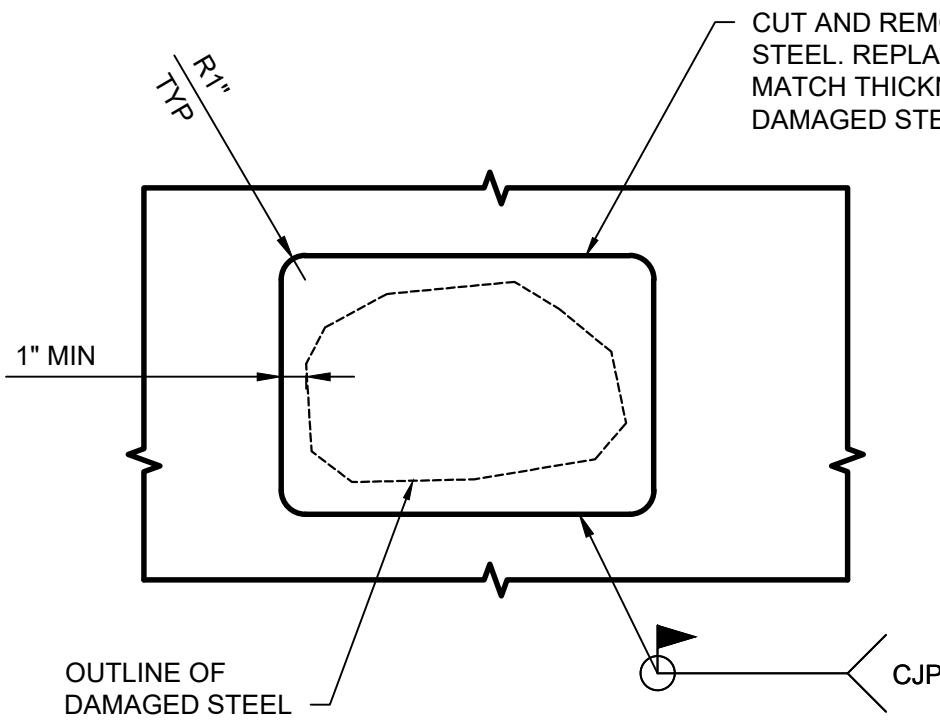
NOTES:
THIS REPAIR DETAIL SHALL NOT BE USED WHERE THE DEPTH OF CORROSION EXCEEDS 10% OF THE ORIGINAL PLATE THICKNESS.

1 STEEL REPAIR - TYPE 1
- NTS



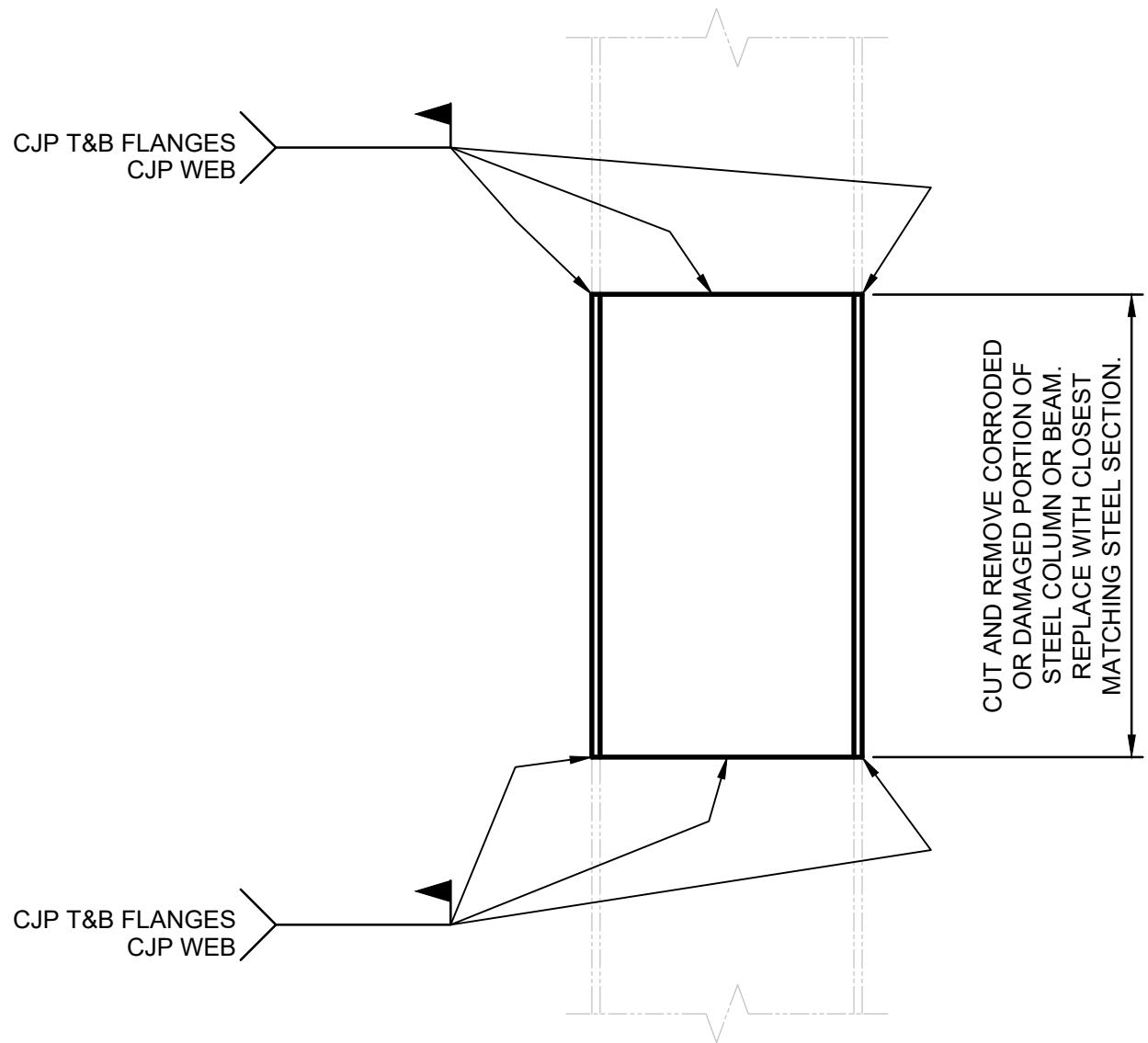
NOTES:
THIS REPAIR DETAIL SHALL NOT BE USED WHERE THE DEPTH OF CORROSION EXCEEDS 20% OF THE ORIGINAL PLATE THICKNESS.

2 STEEL REPAIR - TYPE 2
- NTS



NOTES:
THIS REPAIR DETAIL SHALL NOT BE USED WHERE DAMAGE OCCURS ON PERPENDICULAR FACES.

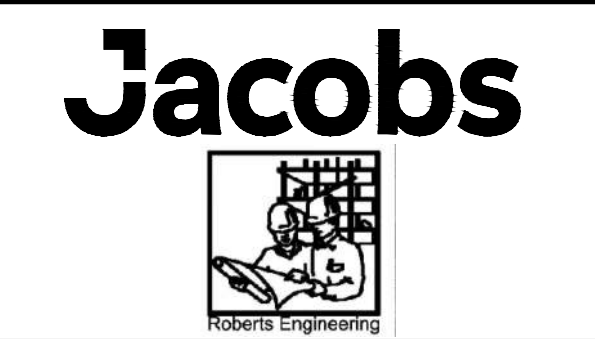
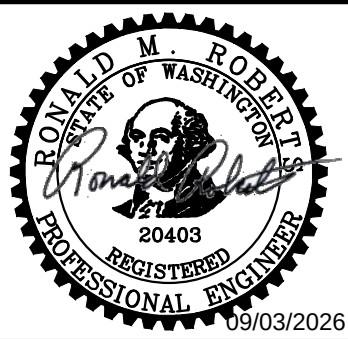
3 STEEL REPAIR - TYPE 3
- NTS



4 STEEL REPAIR - TYPE 4
- NTS

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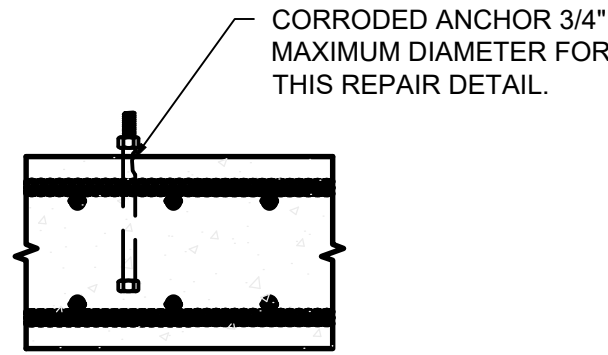


REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

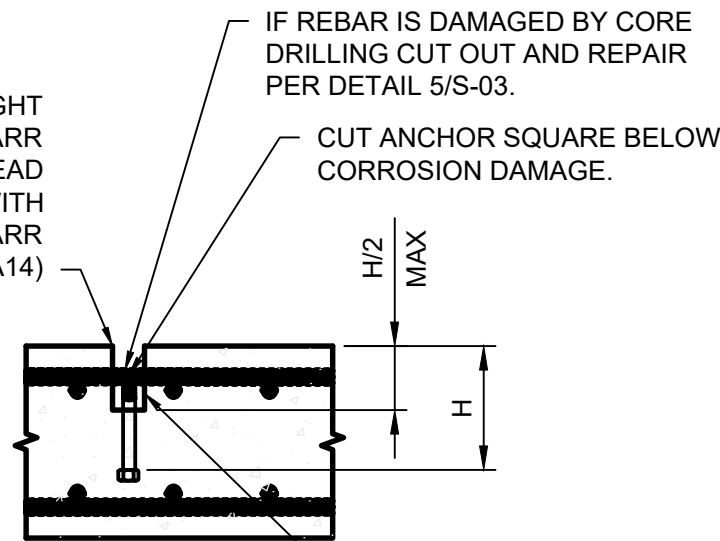
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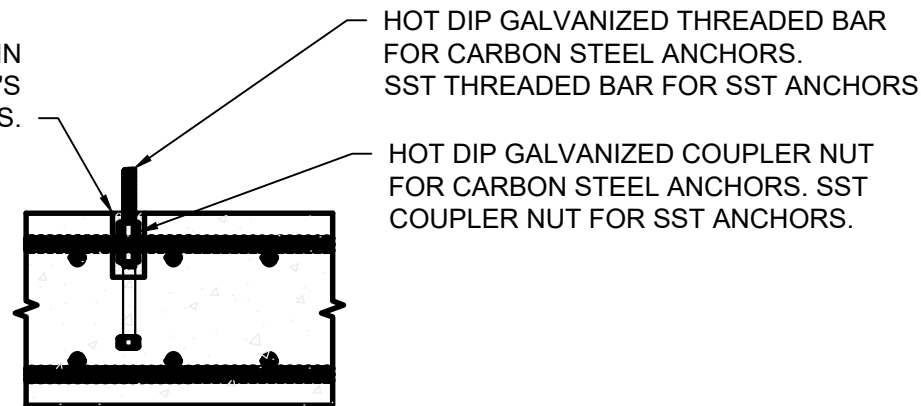


CORE DRILL 3" DIAMETER TO ALLOW A TIGHT SPOT THREAD REPAIRING DIE (McMASTER-CARR PART NO. 2667A411 THRU 2667A443) TO THREAD TOP OF CUTOFF ANCHOR. TURN DIE WITH EXTRA-DEEP 6 POINT SOCKET (McMASTER-CARR PART NO. 55375A42 THRU 55375A14)



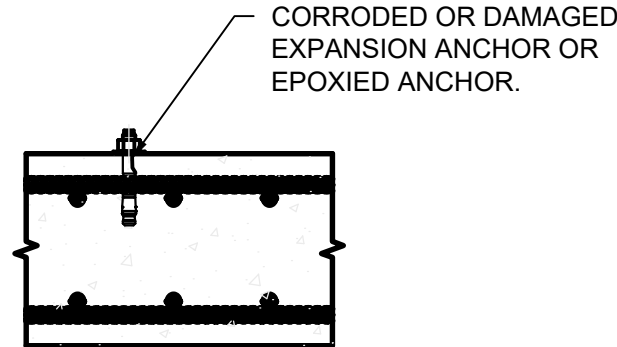
ROUGHEN SIDEWALLS TO ICRI SURFACE PROFILE CSP-5.

FILL WITH SIKA ANCHORFIX-3001 IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

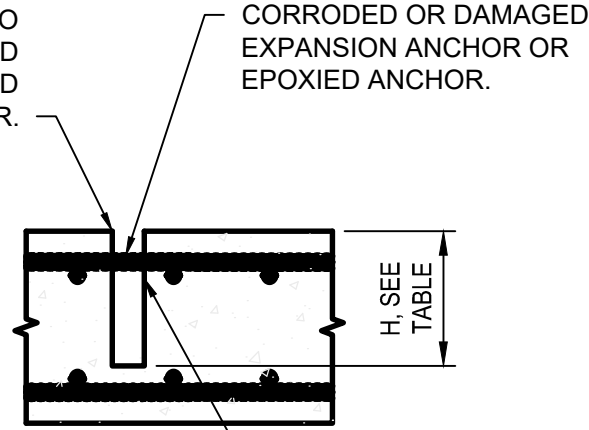


1 CORRODED CAST-IN-PLACE ANCHOR REPAIR

NTS

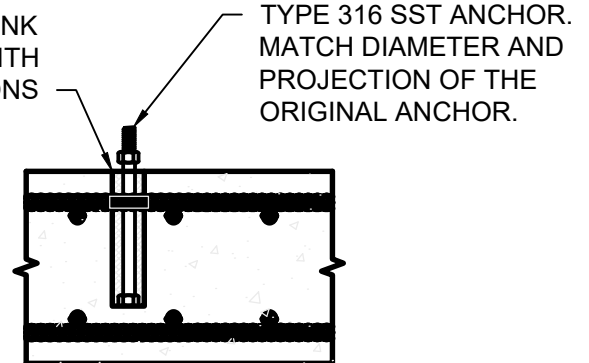


CORE DRILL SUFFICIENT DIAMETER TO REMOVE CORRODED OR DAMAGED EXPANSION ANCHOR OR EPOXIED ANCHOR AND INSTALL NEW ANCHOR.



ROUGHEN SIDEWALLS TO ICRI SURFACE PROFILE CSP-5.

FILL WITH CEMENTITIOUS NON-SHRINK GROUT IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS

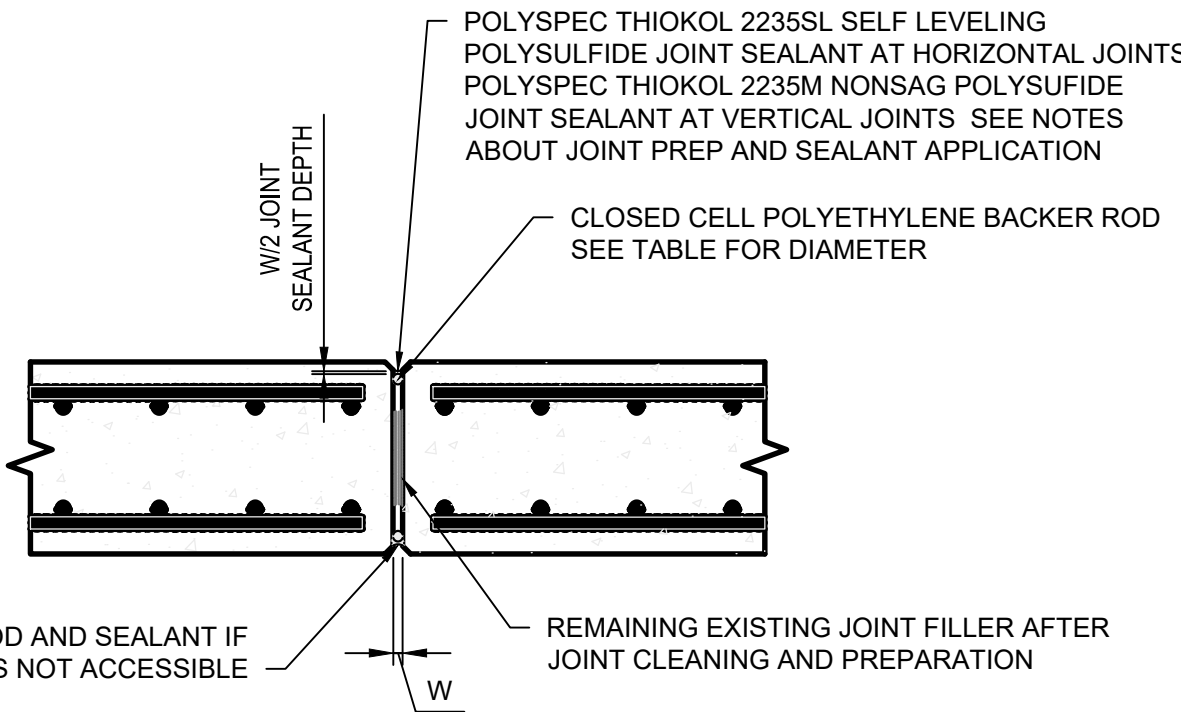
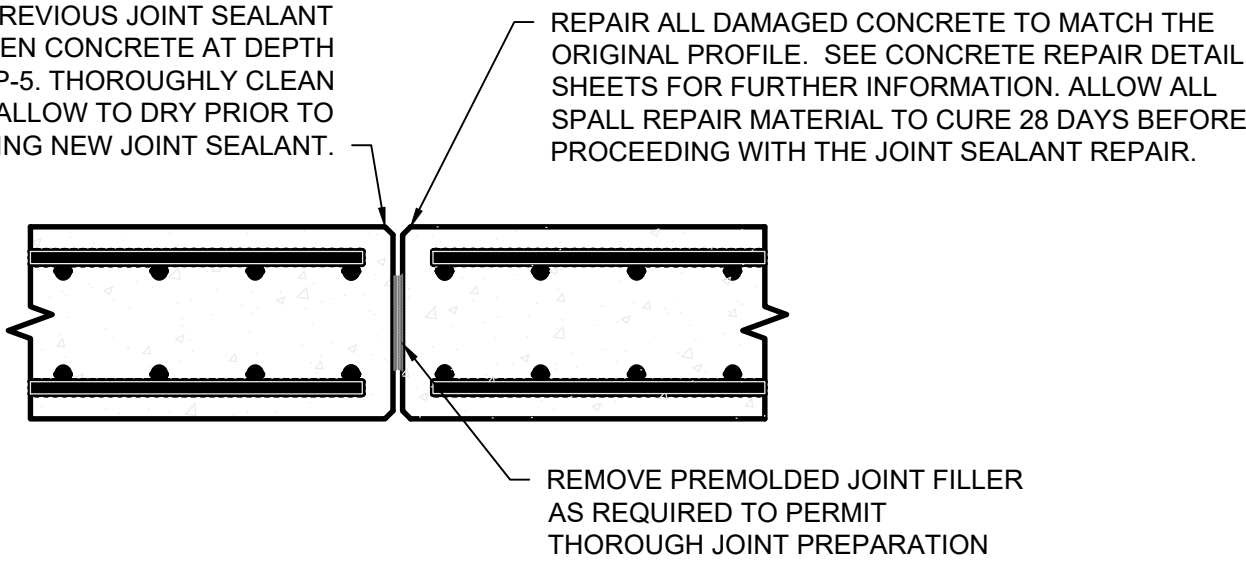


2 CORRODED EPOXIED OR EXPANSION ANCHOR REPAIR

NTS

CORE DRILLED HOLE DEPTH	
ANCHOR DIAMETER, INCHES	CORE DRILLED HOLE DEPTH, INCHES
3/8	7 1/2
1/2	10
5/8	12 1/2
3/4	CONTACT ENGINEER
7/8	CONTACT ENGINEER
1	CONTACT ENGINEER

BACKER ROD DIAMETER	
JOINT WIDTH "W", INCHES	BACKER ROD DIAMETER, INCHES
1/4	3/8
1/2	5/8
3/4	1
1	1 1/4
1 1/4	1 5/8
1 1/2	1 7/8



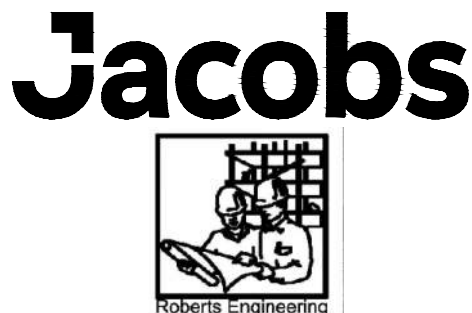
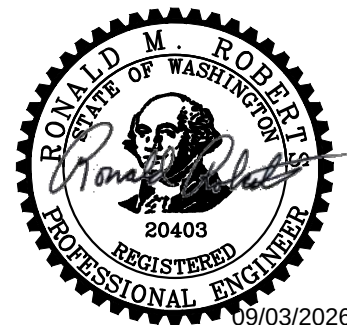
- NOTES FOR JOINT PREP AND SEALANT APPLICATION:
- PRIME CONCRETE SURFACES WITH THIKOL 5050 PRIMER (3-5 MILS DFT) IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
 - MIX AND PLACE JOINT SEALANT IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
 - TOOL THE SEALANT TO A CONCAVE SHAPE USING A SEALANT SPATULA WITH A ROUNDED TIP (ALBION SERIES 258 OR SIMILAR). SPATULA SHALL BE SLIGHTLY WIDER THAN THE WIDTH OF THE EXPANSION JOINT.

3 JOINT SEALANT REPAIR

NTS

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REDONDO WWTP PRIMARY AND SECONDARY CLARIFIER REHABILITATION

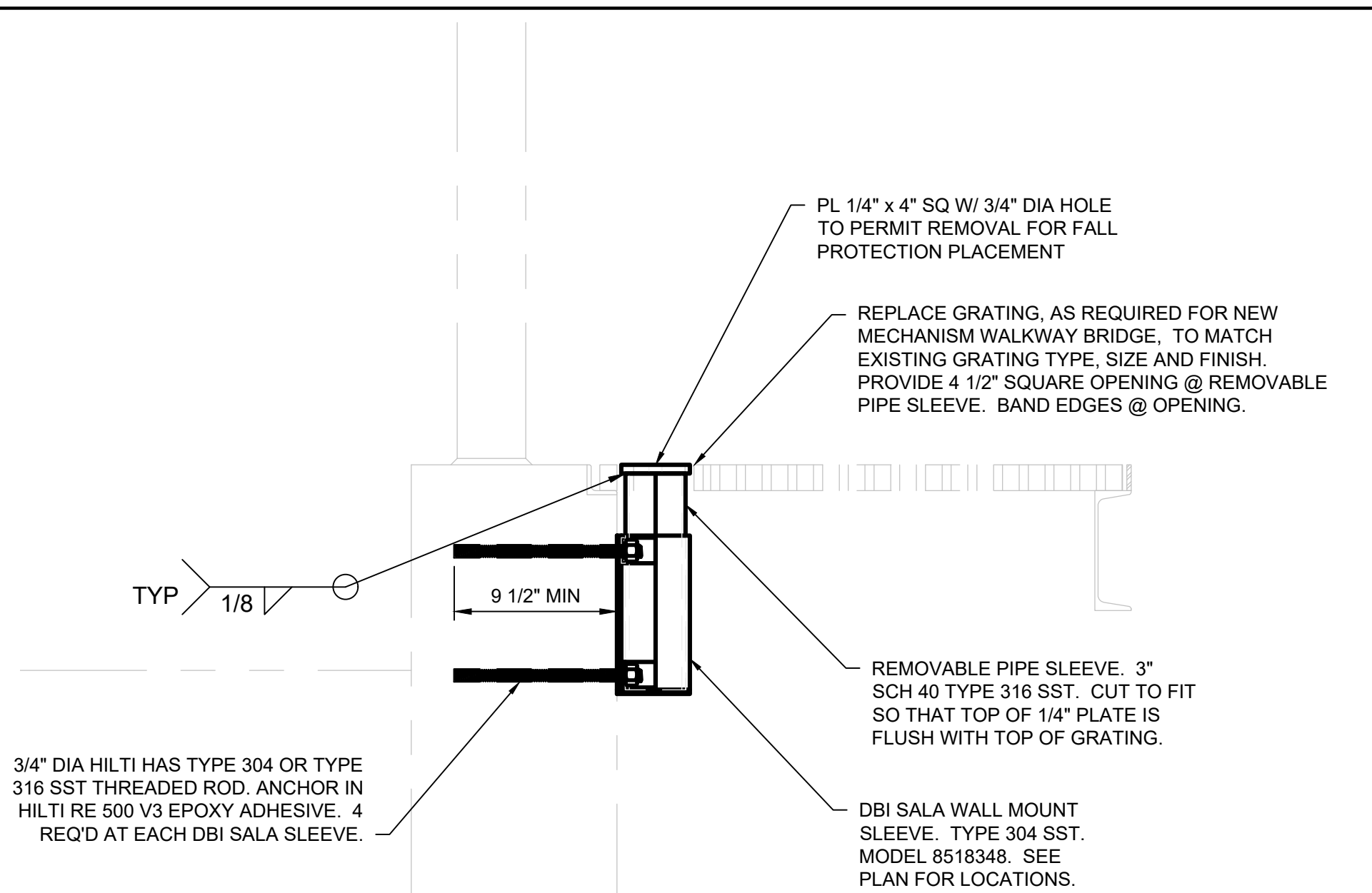
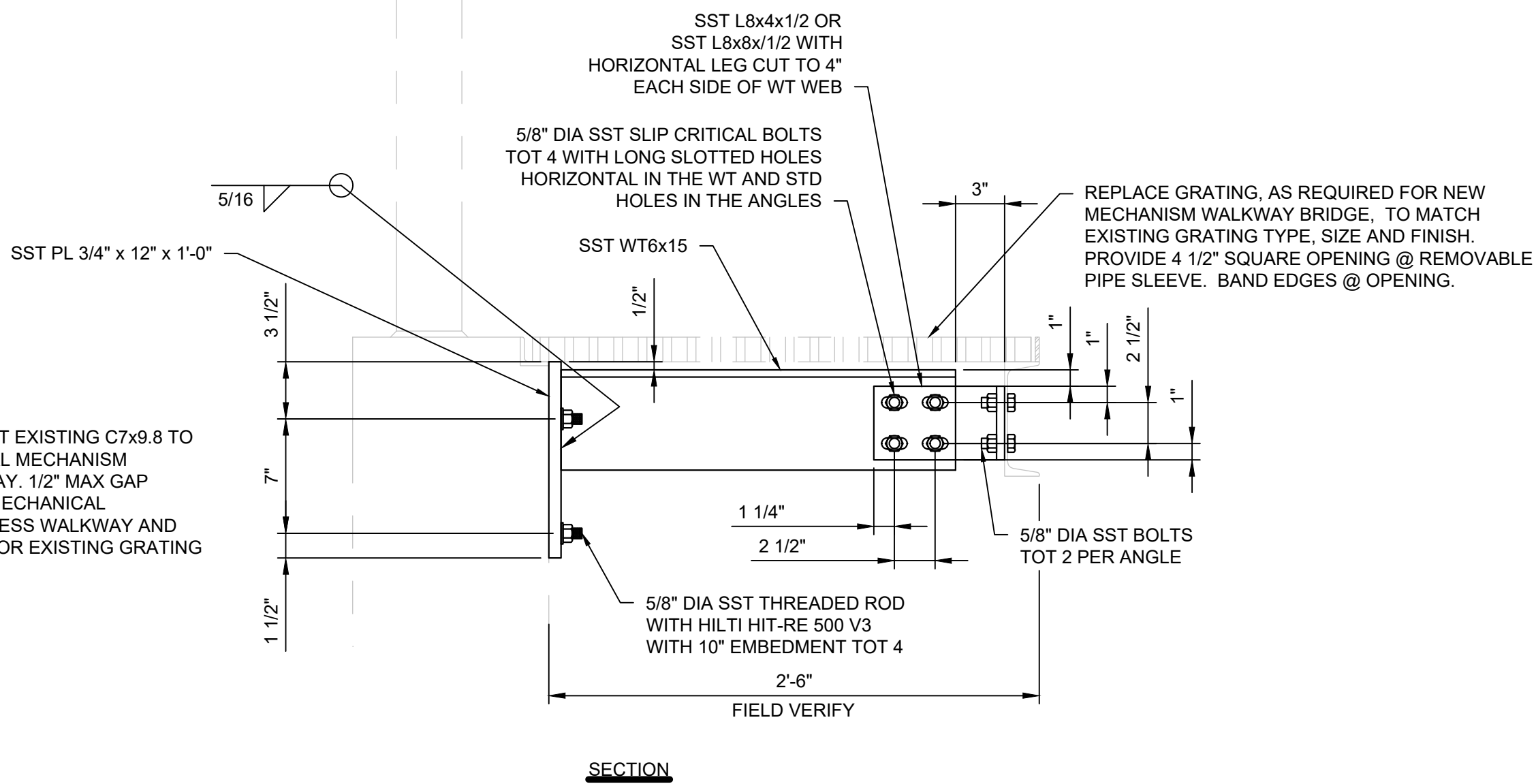
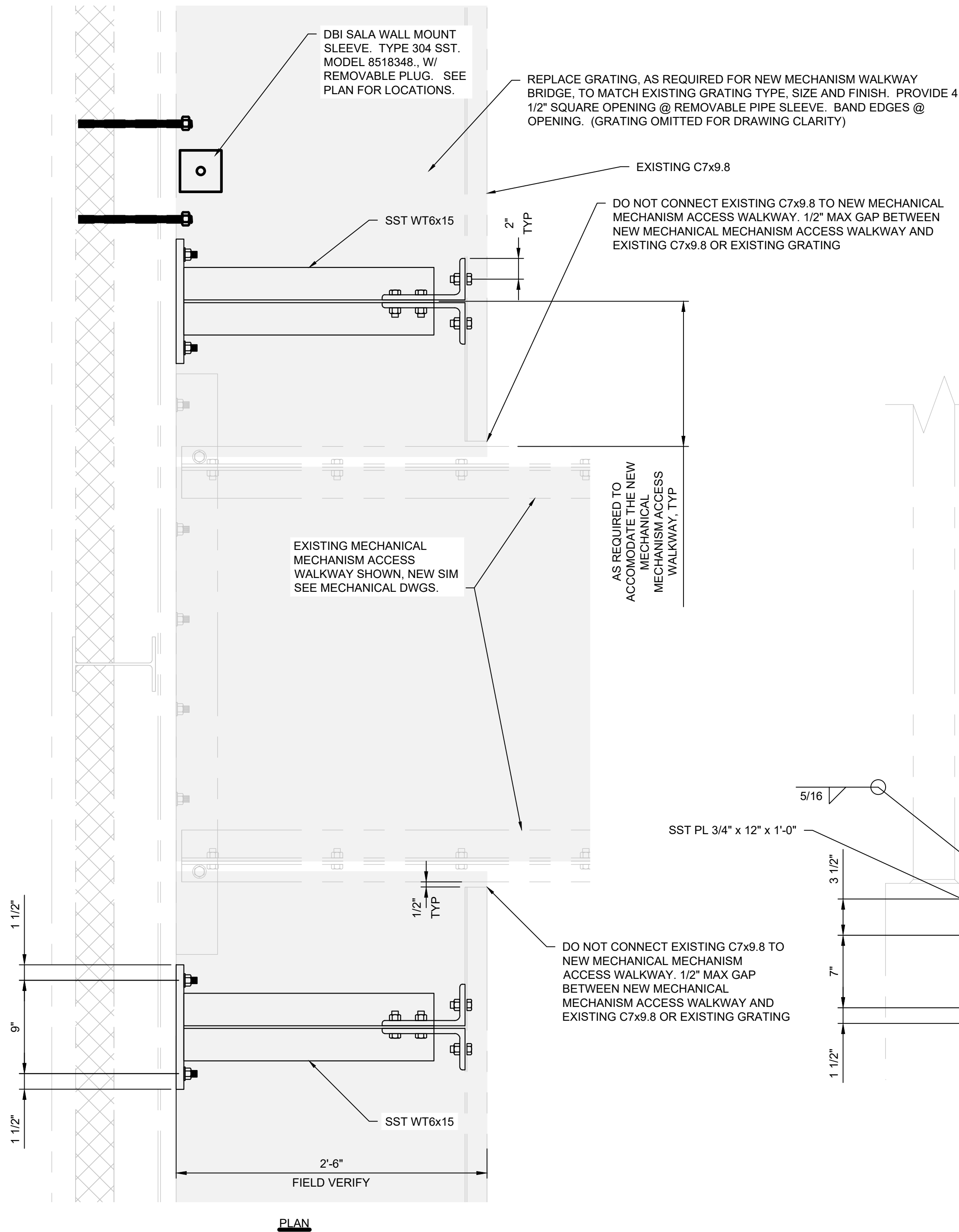
STRUCTURAL DETAILS MISC REPAIR

CONTRACT NO: PROJECT NO:

Drawing
S-05

Sheet No.
23
46
Of Total

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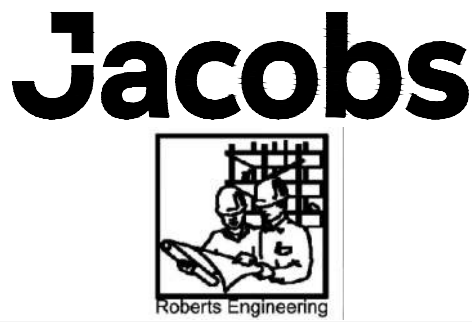
2 FALL PROTECTION WALL MOUNT SLEEVE
NTS

- GENERAL NOTES:
- EXISTING CONDITIONS SHOWN, NEW SIMILAR. CONTRACTOR TO COORDINATE NEW WALKWAY SUPPORT AND GRATING WITH NEW MECHANICAL MECHANISM ACCESS WALKWAY.
 - EXISTING RAILING AND CONNECTIONS NOT SHOWN FOR CLARITY.

1 WALKWAY SUPPORT BRACKET
NTS

NO.	DATE	BY	APRVD	REVISION
PLANS ISSUED FOR				
BID				
ACTION	DATE	APRVD	CONST ACTION	DATE APRVD
			RECORD ACTION	DATE APRVD

Designed	R. ROBERTS
Drawn	C. ROBERTS
Checked	R. ROBERTS
Design Review Level	
ISSUED FOR BID	



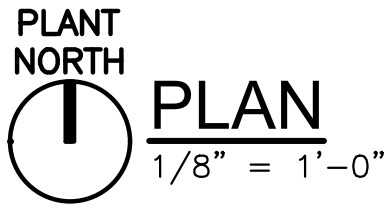
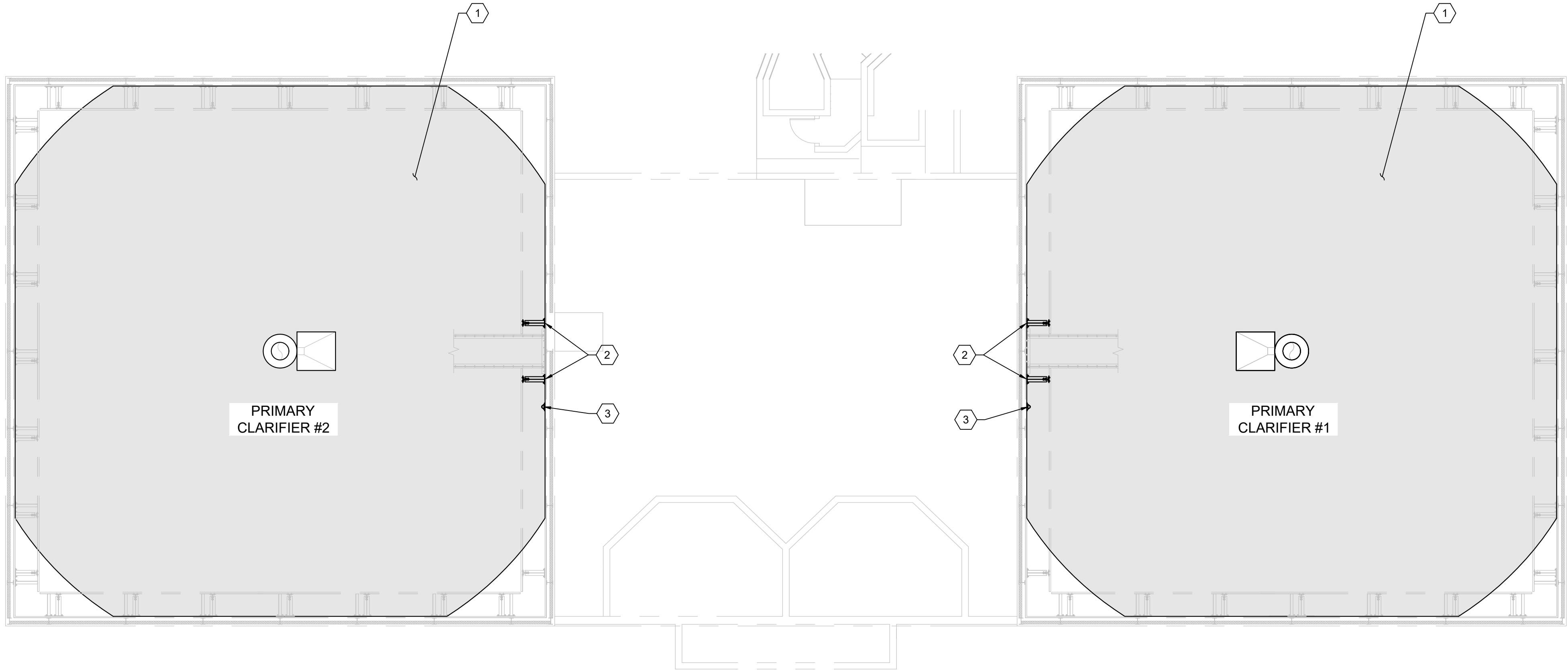
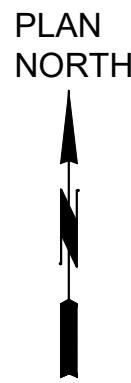
REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

**STRUCTURAL
DETAILS
WALKWAY SUPPORT BRACKET**

CONTRACT NO: PROJECT NO:

Drawing	S-07
Sheet No.	25
Of Total	46

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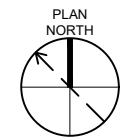


GENERAL NOTES:

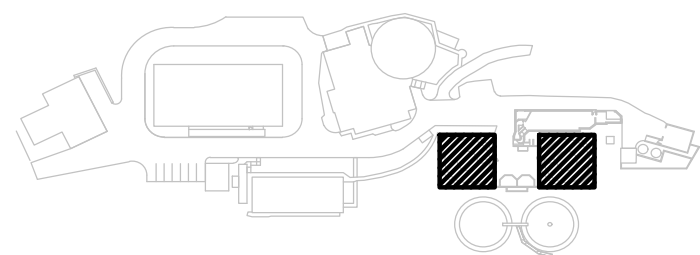
1. CONTRACTOR TO FIELD VERIFY CONDITIONS AND DIMENSIONS BEFORE STARTING WORK.
2. REPLACE GRATING, AS REQUIRED FOR NEW MECHANISM WALKWAY BRIDGE, TO MATCH EXISTING GRATING TYPE, SIZE AND FINISH. PROVIDE 4 1/2" SQUARE OPENING @ REMOVABLE PIPE SLEEVE. BAND EDGES @ OPENING. (GRATING OMITTED FOR DRAWING CLARITY)
3. THE ENGINEER WILL IDENTIFY AREAS OF CONCRETE, STEEL, ANCHOR AND SEALANT JOINT REPAIRS TO BE COMPLETED AT THE BID RATE FOR EACH REPAIR AFTER THE EXISTING STRUCTURE HAS BEEN THOROUGHLY CLEANED. ANTICIPATED REPAIR DETAILS ARE PROVIDED IN THE DETAILS ON DRAWINGS S-03 THROUGH S-05.

KEY NOTES:

1. +/-2" THICK GROUT AS REQUIRED BY MECHANICAL MECHANISM MANUFACTURER SEE GENERAL NOTE E ON DRAWING S-01.
2. WALKWAY SUPPORT BRACKET SEE DETAIL 1/S-07.
3. FALL PROTECTION WALL SLEEVE, REMOVABLE PLUG AND GRATING MODIFICATIONS. SEE DETAILS 1/S-07 AND 2/S-07. TYP 1 PER PRIMARY CLARIFIER TANK. COORDINATE LOCATION WITH THE OWNER.

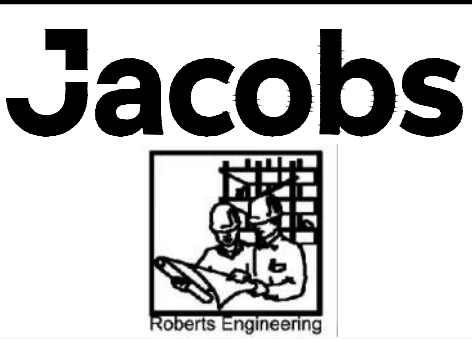
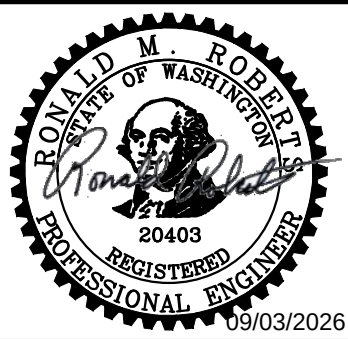


KEYPLAN
SCALE: NTS



NO.	DATE	BY	APRVD	REVISION					
PLANS ISSUED FOR									
BID				CONST			RECORD		
ACTION	DATE	APRVD		ACTION	DATE	APRVD	ACTION	DATE	APRVD

Designed	R. ROBERTS
Drawn	C. ROBERTS
Checked	R. ROBERTS
Design Review Level	
ISSUED FOR BID	



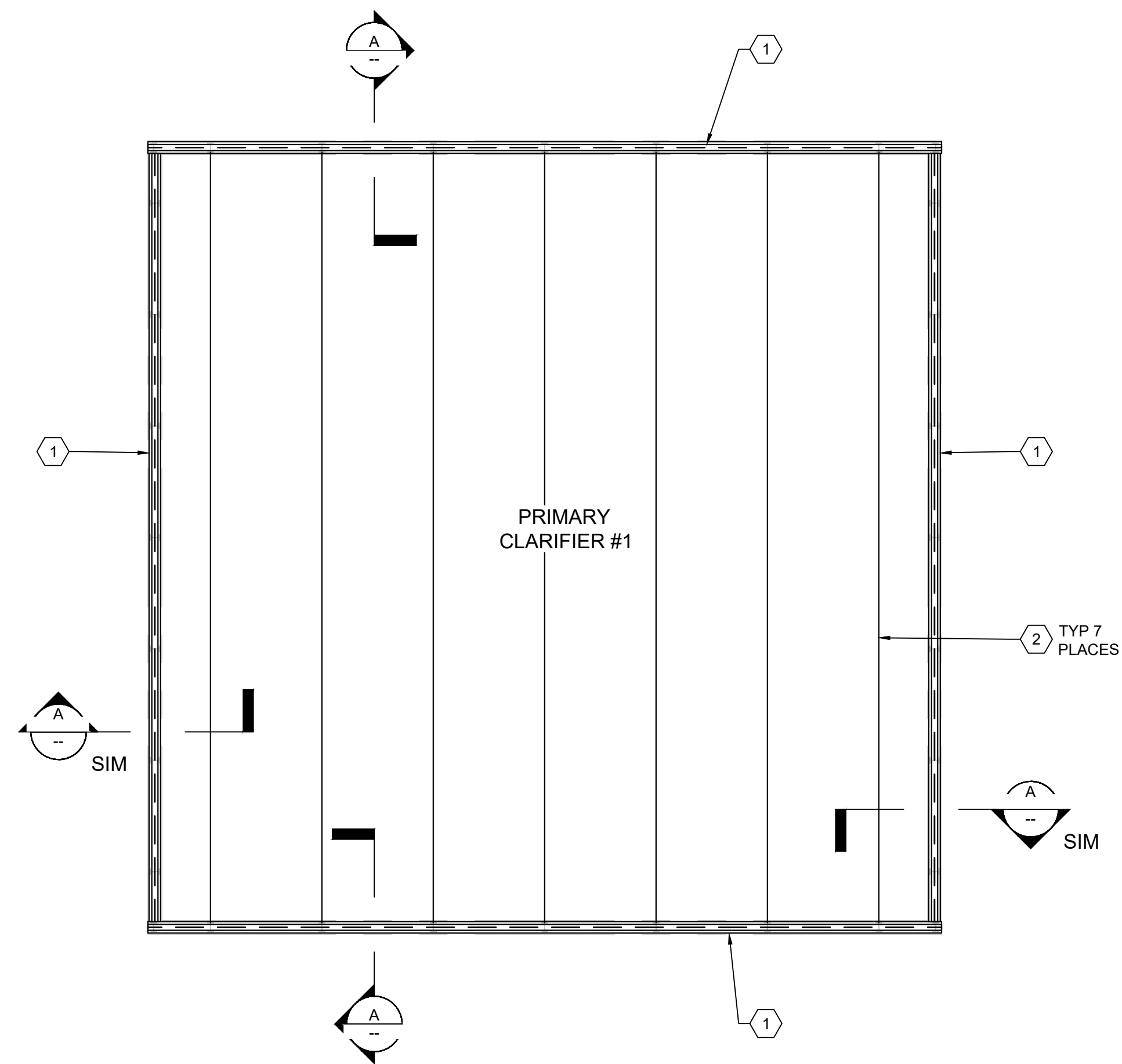
REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

STRUCTURAL
PRIMARY CLARIFIERS
GRATING AND FOUNDATION PLAN

CONTRACT NO: PROJECT NO:

Drawing
S-08

Sheet No.
26
46
Of Total



1. CONTRACTOR TO FIELD VERIFY CONDITIONS AND DIMENSIONS BEFORE STARTING WORK.
2. THE ENGINEER WILL IDENTIFY AREAS OF CONCRETE, STEEL, ANCHOR AND SEALANT JOINT REPAIRS TO BE COMPLETED AT THE BID RATE FOR EACH REPAIR AFTER THE ROOF PANELS HAVE BEEN REMOVED AND THE REMAINING EXISTING STRUCTURE HAS BEEN THOROUGHLY CLEANED. ANTICIPATED REPAIR DETAILS ARE PROVIDED IN THE DETAILS ON DRAWINGS S-03 THROUGH S-05.

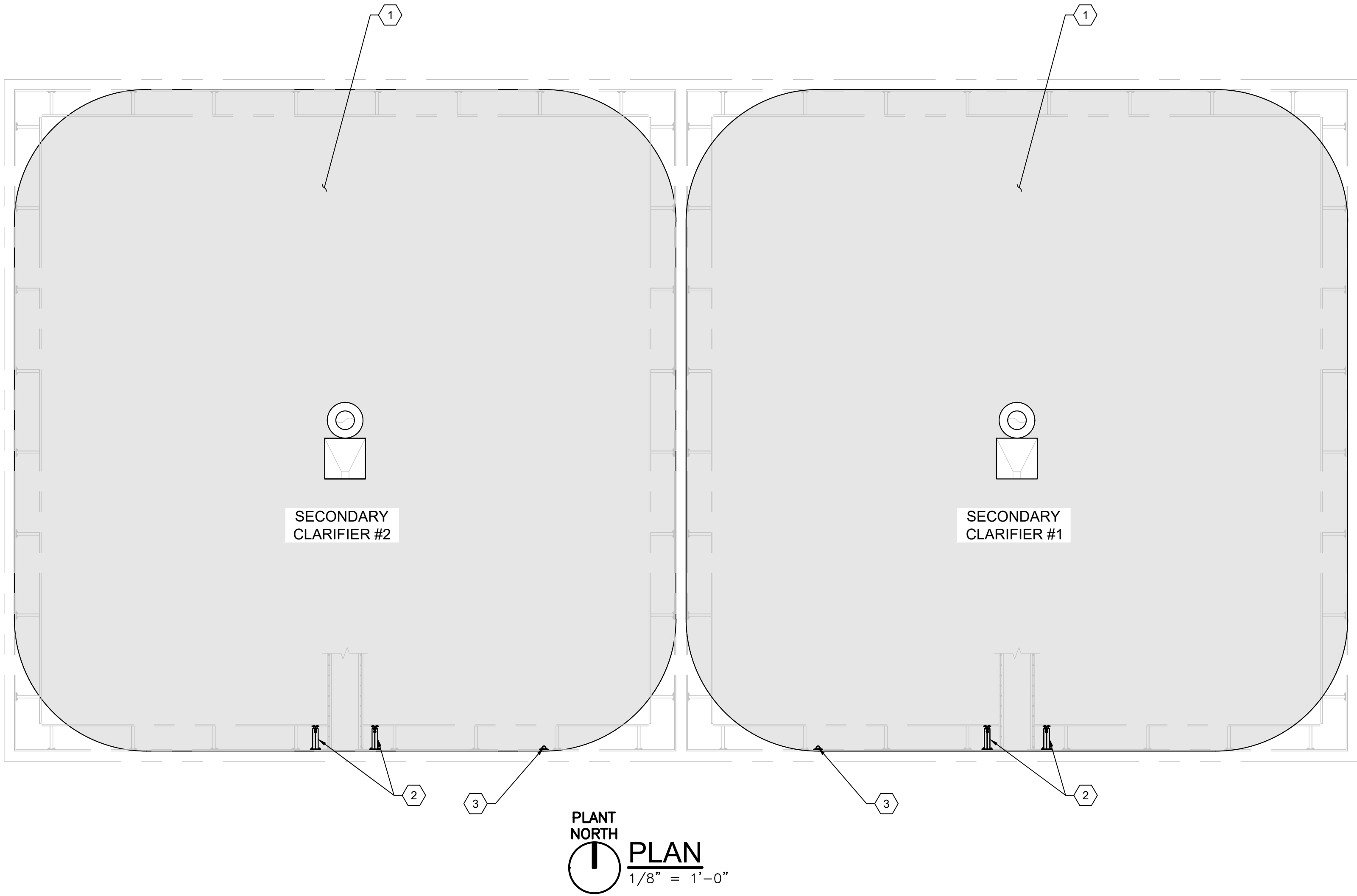
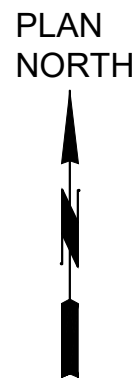
1. REMOVE AND REPLACE W8X18 AND C10X20 ROOF SUPPORT BEAM, TYP. SEE AS-09 FOR MORE INFORMATION.
2. AT PRIMARY CLARIFIERS ONLY, REMOVE ALL ROOF PANELS BEFORE PRECEDING TO REMOVE, SAVE, REINSTALL AND RE-TENSION WIRE ROPE TO EXISTING LENGTHS AT EACH LOCATION, TYP 7 WIRE ROPES FOR EACH PRIMARY CLARIFIER. SEE AS-09 FOR ADDITIONAL INFORMATION. COMPLETE WIRE ROPE TENSIONING BEFORE REINSTALLING ROOF PANELS. ALL WIRE ROPES SHALL BE REINSTALLED IN THEIR EXISTING LOCATION AND SHALL BE RESTORED TO THEIR EXISTING LENGTHS BY ADJUSTING THE TURNBUCKLES.



CONTRACT NO:	PROJECT NO:	10 Of Total
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Sheet No. 27 / 46
Of Total

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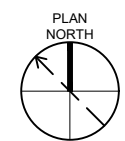


GENERAL NOTES:

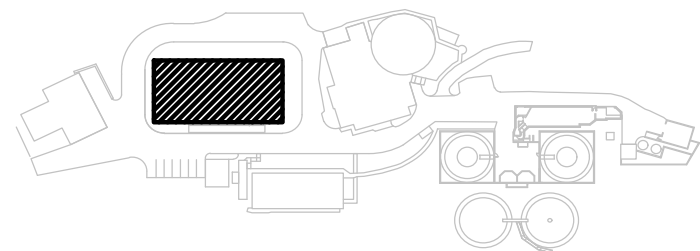
1. CONTRACTOR TO FIELD VERIFY CONDITIONS AND DIMENSIONS BEFORE STARTING WORK.
2. REPLACE GRATING, AS REQUIRED FOR NEW MECHANISM WALKWAY BRIDGE, TO MATCH EXISTING GRATING TYPE, SIZE AND FINISH. PROVIDE 4 1/2" SQUARE OPENING @ REMOVABLE PIPE SLEEVE. BAND EDGES @ OPENING. (GRATING OMITTED FOR DRAWING CLARITY)
3. THE ENGINEER WILL IDENTIFY AREAS OF CONCRETE, STEEL, ANCHOR AND SEALANT JOINT REPAIRS TO BE COMPLETED AT THE BID RATE FOR EACH REPAIR AFTER THE EXISTING STRUCTURE HAS BEEN THOROUGHLY CLEANED. ANTICIPATED REPAIR DETAILS ARE PROVIDED IN THE DETAILS ON DRAWINGS S-03 THROUGH S-05.

KEY NOTES:

1. +/-2" THICK TOPPING GROUT AS REQUIRED BY MECHANICAL MECHANISM MANUFACTURER. SEE GENERAL NOTE E ON DRAWING S-01.
2. WALKWAY SUPPORT BRACKET SEE DETAIL 1/S-07.
3. FALL PROTECTION WALL SLEEVE, REMOVABLE PLUG AND GRATING MODIFICATIONS. SEE DETAIL 2/ S-07. TYP 1 PER SECONDARY CLARIFIER TANK. COORDINATE LOCATION WITH THE OWNER.

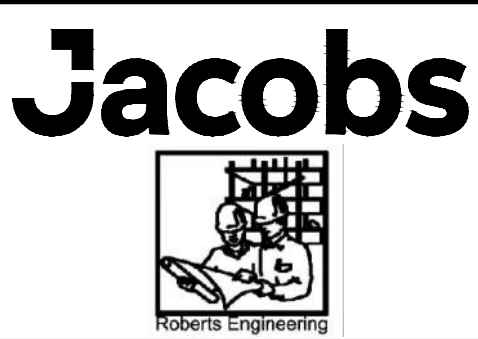
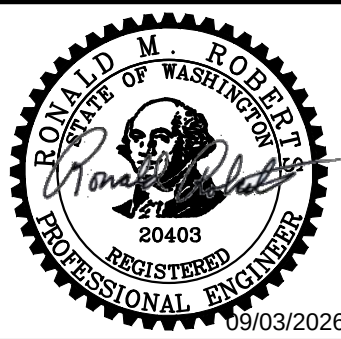


KEYPLAN
SCALE: NTS



NO.	DATE	BY	APRVD	REVISION					
PLANS ISSUED FOR									
BID				CONST			RECORD		
ACTION	DATE	APRVD		ACTION	DATE	APRVD	ACTION	DATE	APRVD

Designed	R. ROBERTS
Drawn	C. ROBERTS
Checked	A. PEREZ
Design Review Level	
ISSUED FOR BID	



REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

STRUCTURAL
SECONDARY CLARIFIERS
GRATING AND FOUNDATION PLAN

CONTRACT NO:

PROJECT NO:

Drawing

S-10

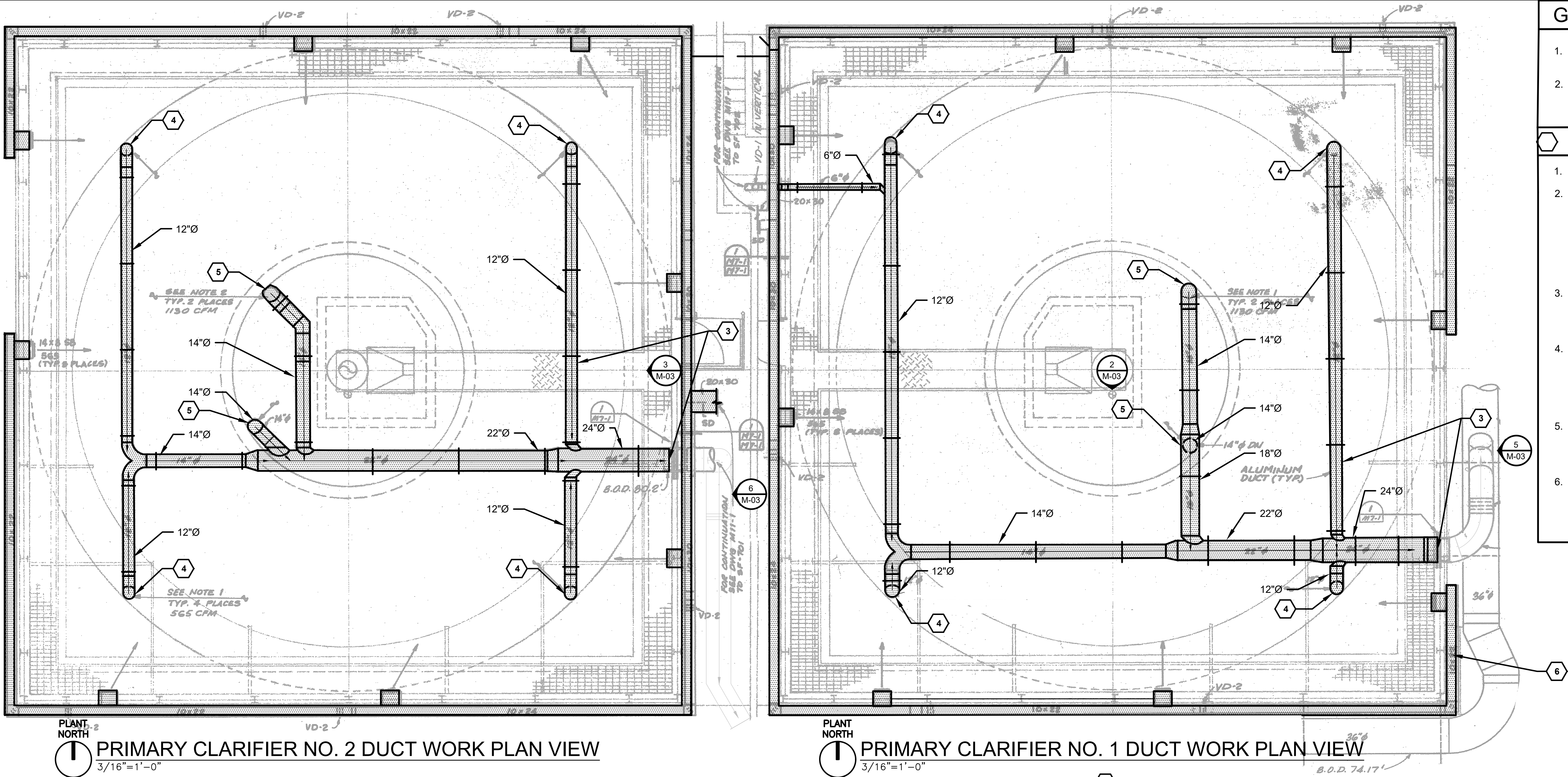
Sheet No.

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Of Total

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- GENERAL SHEET NOTES
1.

CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS.
2.

CLASS 1, DIV 1, GROUP D AREA. CONFINED SPACED ENTRY SAFETY REQUIREMENTS APPLY. HOT WORK PERMIT REQUIRED.
- SHEET KEYNOTES
1.

NOT USED.
2.

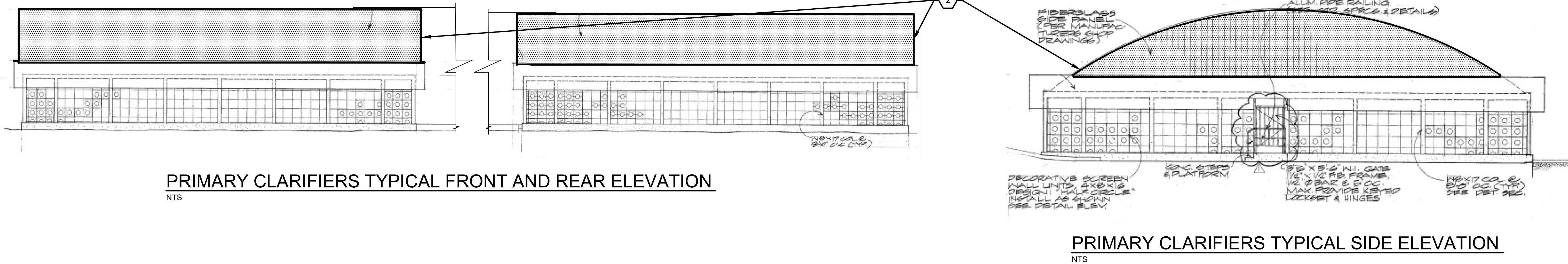
REINSTALL ROOF PANELS WITH NEW GASKETS: CLOSED CELL, 3/8" THICK X 1" SIDE NEOPRENE FOAM STRIP WITH ADHESIVE BACKING. MCMASTER CARR PART NO: 1061N124 OR EQUAL. REINSTALL WIRE ROPES AS PER S SHEETS. REINSTALL WIRE ROPES BEFORE THE REINSTALLATION OF ROOF PANELS. SEE E AND S SHEETS FOR MORE DETAILS.
3.

AFTER REINSTALLATION OF ROOF PANELS, REINSTALL FOUL AIR DUCTWORK AND ASSOCIATED ROOF SUPPORTS. SEE SHEET S-06 FOR DUCT SUPPORT DETAILS.
4.

DESIGN AIRFLOW FOR 12" DIAMETER DROP LEGS IS 565 CFM. CONTRACTOR TO BALANCE FLOWS TO MATCH UPON REINSTALLATION OF DUCTWORK. DROP LEGS REQUIRE ADDITIONAL BRACING. SEE S SHEETS FOR MORE INFORMATION.
5.

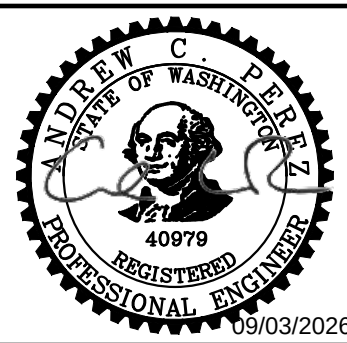
DESIGN AIRFLOW FOR 14" DIAMETER DROP LEGS IS 1130 CFM. CONTRACTOR TO BALANCE FLOWS TO MATCH UPON REINSTALLATION OF DUCTWORK.
6.

AFTER REINSTALLATION OF ROOF PANELS, REINSTALL FRESH SUPPLY AIR DUCTWORK AND ASSOCIATED ROOF SUPPORTS. SEE SHEET S-06 FOR DUCT SUPPORT DETAILS.



NO.	DATE	BY	APRVD	REVISION
PLANS ISSUED FOR				
BID	DATE	APRVD	CONST	DATE
ACTION	DATE	APRVD	ACTION	DATE

Designed
B. PINEROS
Drawn
L. GOUDEAU
Checked
A. PEREZ
Design Review Level
ISSUED FOR BID



Jacobs



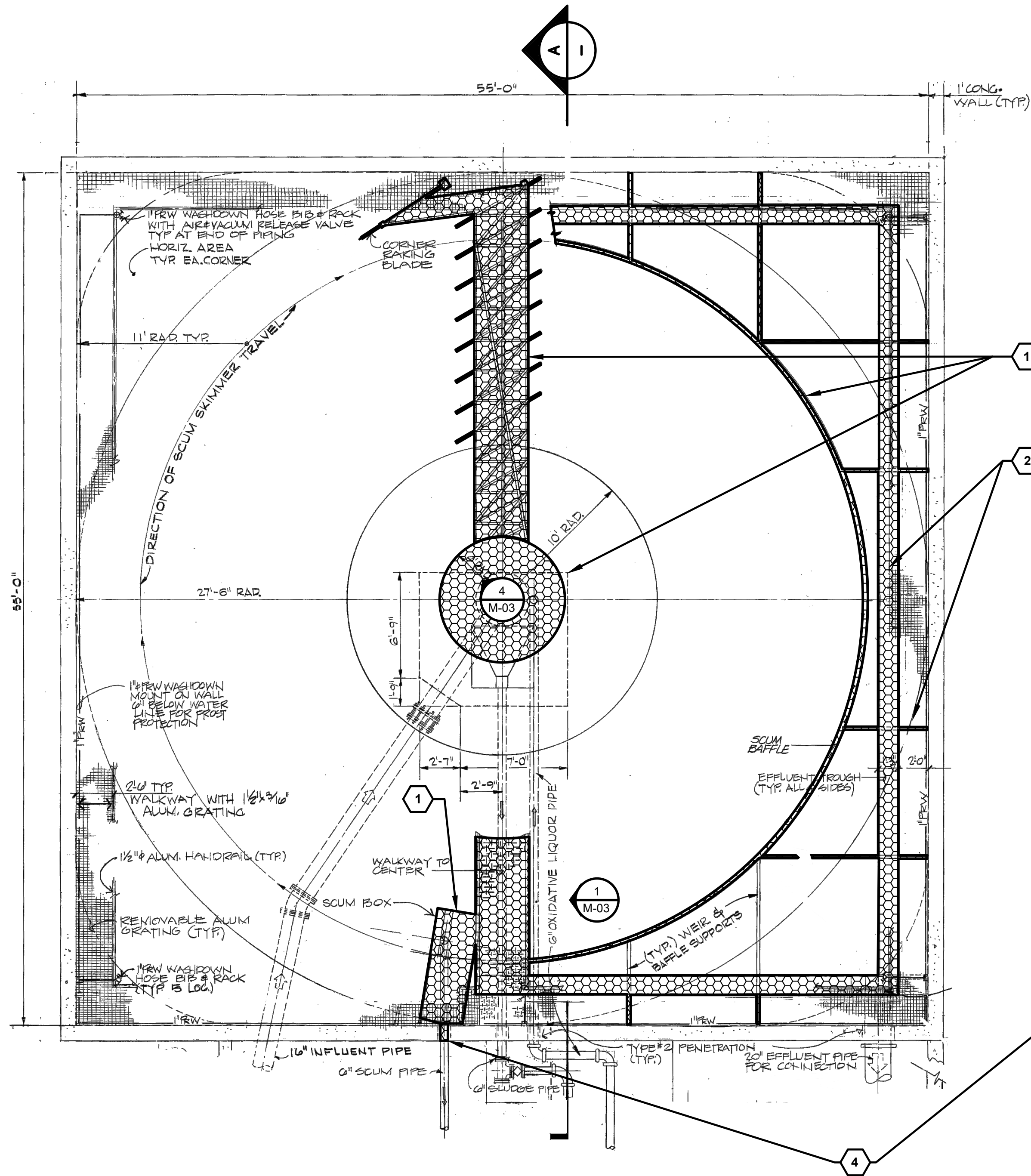
REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

PRIMARY CLARIFIER ROOFS
AND AIR DUCTWORK

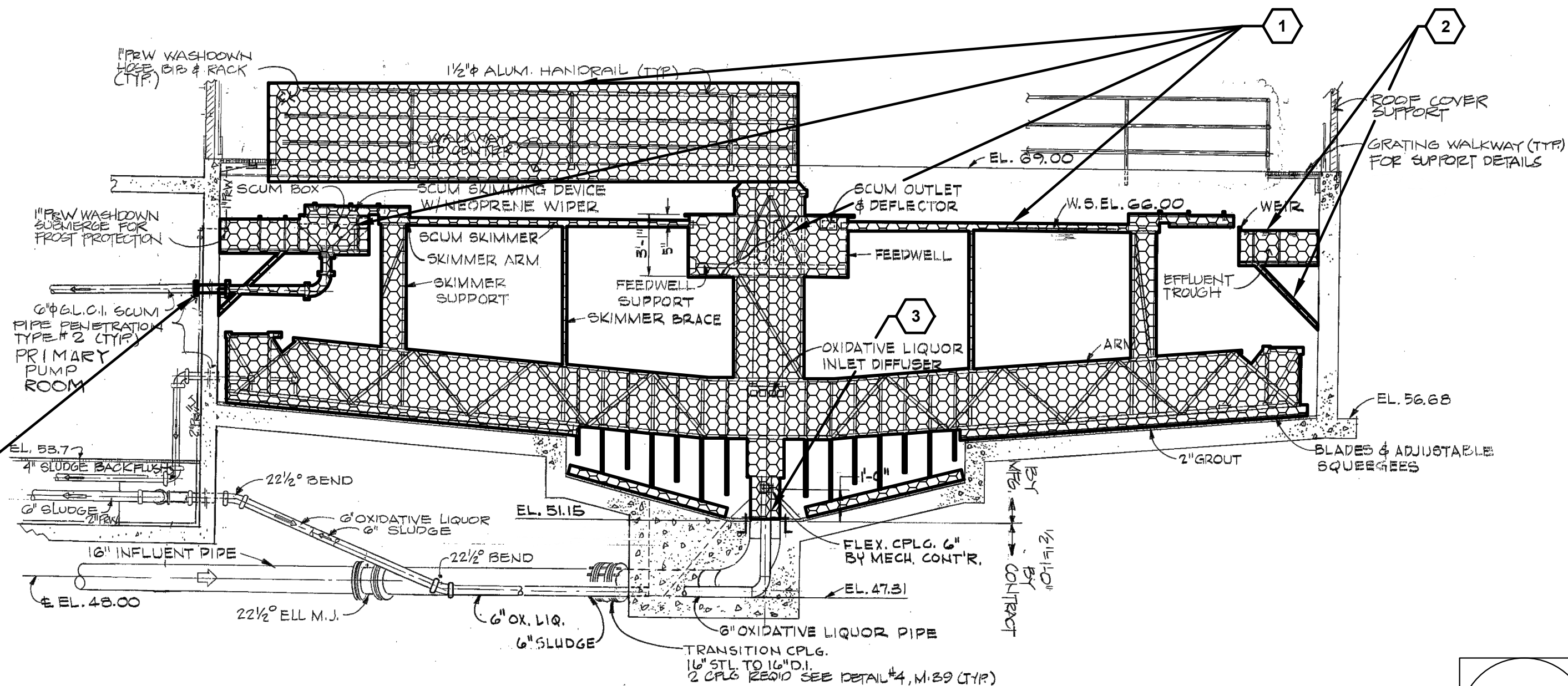
CONTRACT NO: PROJECT NO:

Drawing
M-01
Sheet No.
29
46
Of Total

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PRIMARY CLARIFIERS NO. 1 AND 2 - PLAN
3/16" = 1'-0"



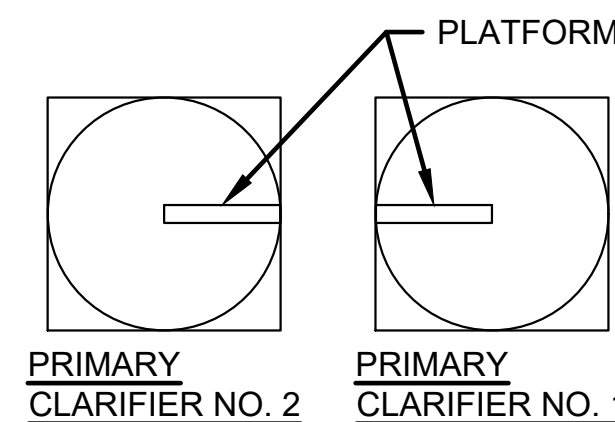
SECTION "A"
3/16" = 1'-0"

GENERAL SHEET NOTES

1. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS.
2. THE CONCRETE SURFACES OF THE TANK WILL BE INSPECTED BY THE OWNER'S INSPECTOR WHEN THE TANK HAS BEEN DRAINED AND CLEANED. AREAS REQUIRING CONCRETE REPAIR WILL BE IDENTIFIED AND BE REPAIRED USING THE DETAILS ON SHEET S-03.
3. CONFINED SPACE REQUIREMENTS ASSOCIATED WITH THESE TYPES OF SPACES.
4. CLASS 1, DIV 1, GROUP D AREA. HOT WORK PERMIT REQUIRED. FOLLOW LOCK OUT/TAG OUT PROCEDURES.
5. REFER TO SPECIFICATION SECTION 44 42 28 FOR INFORMATION ON EFFLUENT TROUGHS AND SPECIFICATION SECTION 44 42 24 FOR INFORMATION ON THE CLARIFIER MECHANISM AND PLATFORM.

SHEET KEYNOTES

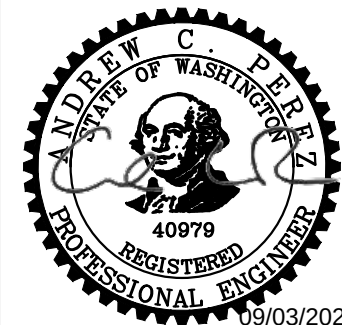
1. FURNISH AND INSTALL NEW SQUARE CIRCULAR CLARIFIER MECHANISM, SCUM SKIMMER, SCUM BOX, FEEDWELL, WALKWAY TO CENTER COLUMN WITH HANDRAIL, AND ASSOCIATED STAINLESS STEEL SUPPORTS. SEE SPECIFICATION SECTION 44 42 24 AND S SHEETS FOR MORE DETAILS.
2. FURNISH AND INSTALL NEW FRP EFFLUENT TROUGHS, ASSOCIATED STAINLESS STEEL SUPPORTS, AND ANCHORS. SEE SPECIFICATION SECTION 44 42 28 AND SHEET S-05 FOR MORE DETAILS.
3. EXTEND 6" DIAMETER OXIDIZED LIQUOR PIPE INTO CENTER COLUMN USING PVC PIPE.
4. INSTALL PIPE THROUGH THE WALL TO THE FLANGE IN THE PRIMARY PUMP ROOM.



PLANT
NORTH
KEY PLAN
NTS

NO.	DATE	BY	APRVD	REVISION
PLANS ISSUED FOR				
BID	DATE	APRVD	CONST	DATE
ACTION	DATE	APRVD	ACTION	DATE

Designed	B. PINEROS
Drawn	L. GOUDEAU
Checked	A. PEREZ
Design Review Level	
ISSUED FOR BID	



Jacobs



REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

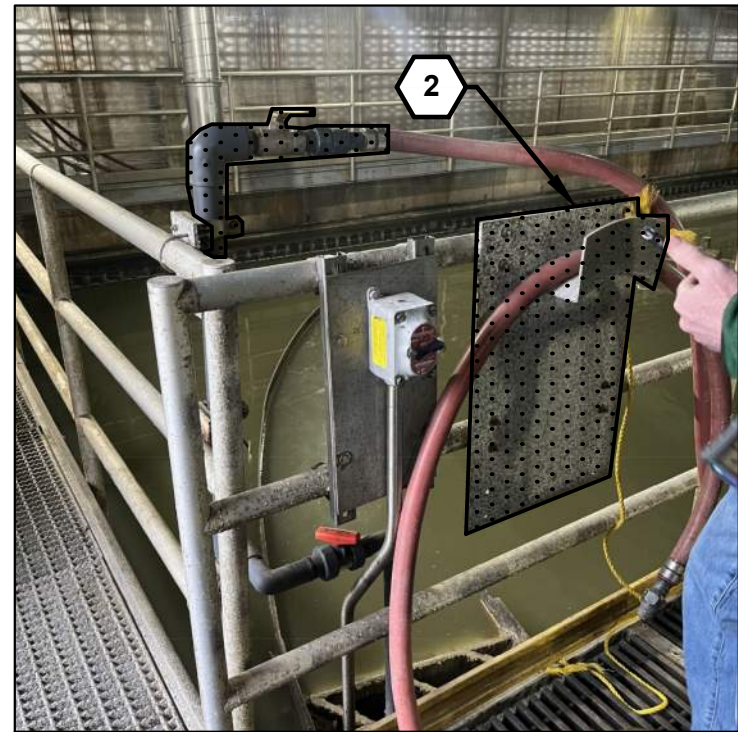
PRIMARY CLARIFIERS PLAN AND SECTION

CONTRACT NO:

PROJECT NO:

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Sheet No.	30
Of Total	46

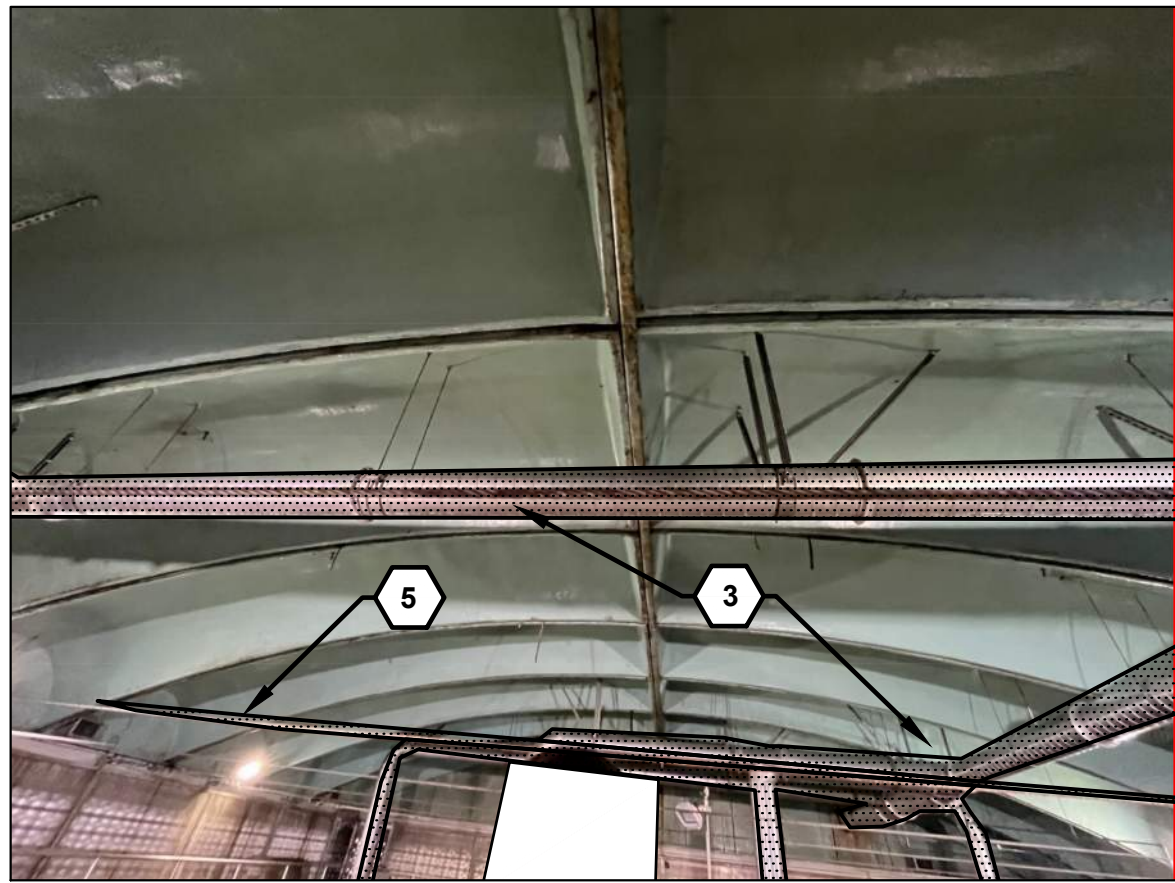
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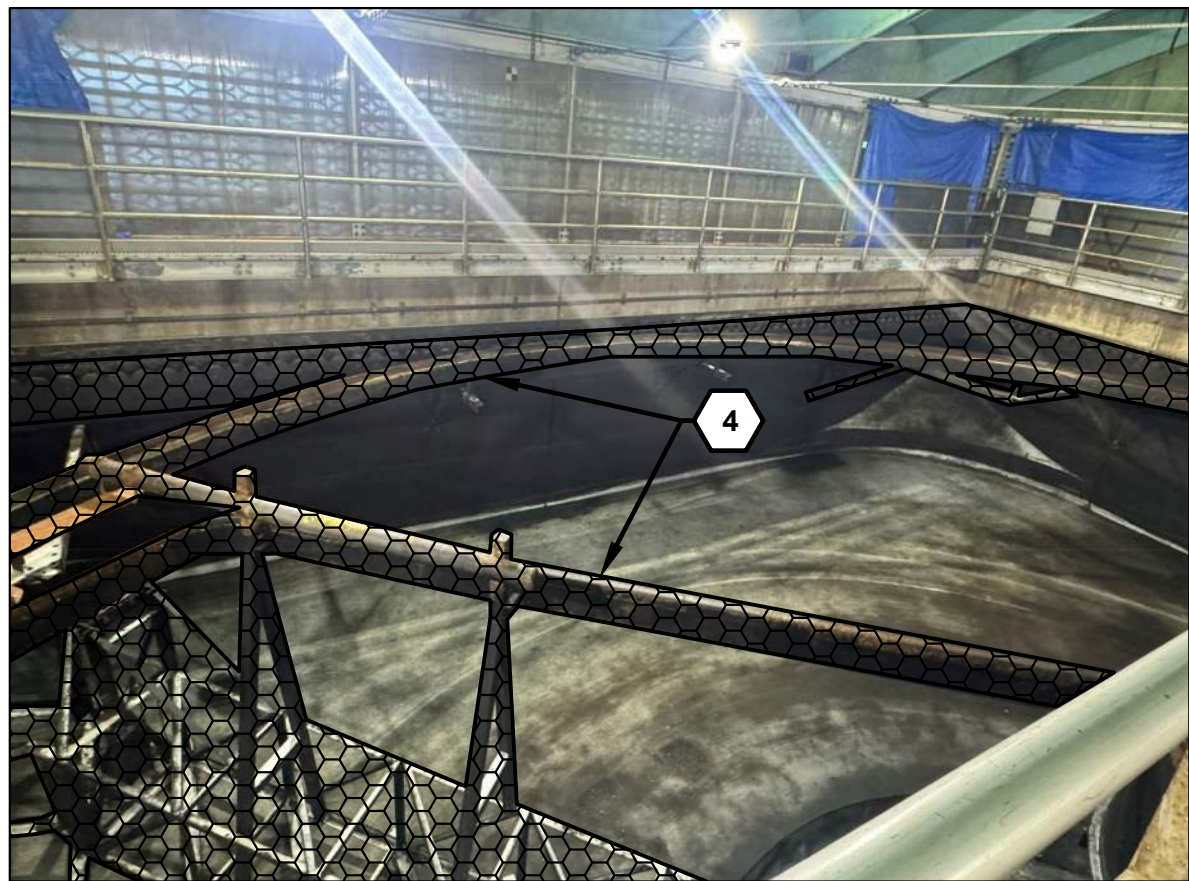
1
M-02
**PRIMARY CLARIFIER
PROCESS WATER
WASHDOWN STATION**



2
M-01
**PRIMARY CLARIFIER
FOUL AIR DUCTING**



3
M-01
**PRIMARY CLARIFIER
FOUL AIR DUCTING**



4
M-02
**PRIMARY CLARIFIER
MECHANISM, RAKE ARM
AND EFFLUENT TROUGH**



5
M-01
**PRIMARY CLARIFIER #1
FOUL AIR CONNECTION**



6
M-01
**PRIMARY CLARIFIER #2
FOUL AIR CONNECTION**

GENERAL SHEET NOTES

1. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS.
2. CONFINED SPACE REQUIREMENTS ASSOCIATED WITH THESE TYPES OF SPACES.
3. CLASS 1, DIV 1, GROUP D AREA. HOT WORK PERMIT REQUIRED. FOLLOW LOCK OUT/TAG OUT PROCEDURES.
4. REFER TO SPECIFICATION SECTION 44 42 28 FOR INFORMATION ON EFFLUENT TROUGHS AND SPECIFICATION SECTION 44 42 24 FOR INFORMATION ON THE CLARIFIER MECHANISM AND PLATFORMS.

SHEET KEYNOTES

1. UPON INSTALLATION OF NEW ROOF BEAM AND REINSTALLATION OF ROOF PANELS, REINSTALL FOUL AIR DUCTWORK ON EXTERIOR OF BUILDING.
2. REINSTALL PROCESS WATER WASHDOWN STATION. EXISTING WASHDOWN STATION SHOWN.
3. UPON INSTALLATION OF NEW ROOF BEAM AND REINSTALLATION OF ROOF PANELS, AND FRESH AIR DUCTWORK, REINSTALL FOUL AIR DUCTWORK AND ASSOCIATED SUPPORTS. SEE S SHEETS FOR MORE DETAILS. DUCTWORK SHALL BE BALANCED TO MATCH DESIGN AIRFLOWS SPECIFIED ON SHEET M-01.
4. FURNISH AND INSTALL SQUARE CIRCULAR CLARIFIER MECHANISM AND FRP EFFLUENT TROUGHS AND ASSOCIATED STRUCTURAL SUPPORTS AND ANCHORS.
5. REINSTALL WIRE ROPES BEFORE THE REINSTALLATION OF ROOF PANELS. SEE S SHEETS FOR MORE DETAILS.

NO.	DATE	BY	APRVD	REVISION
PLANS ISSUED FOR				
BID	DATE	APRVD	CONST	DATE
ACTION	DATE	APRVD	ACTION	DATE

Designed
B. PINEROS
Drawn
L. GOUDEAU
Checked
A. PEREZ
Design Review Level
ISSUED FOR BID



Jacobs



REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

PRIMARY CLARIFIERS PHOTOS

CONTRACT NO:

PROJECT NO:

Drawing

M-03

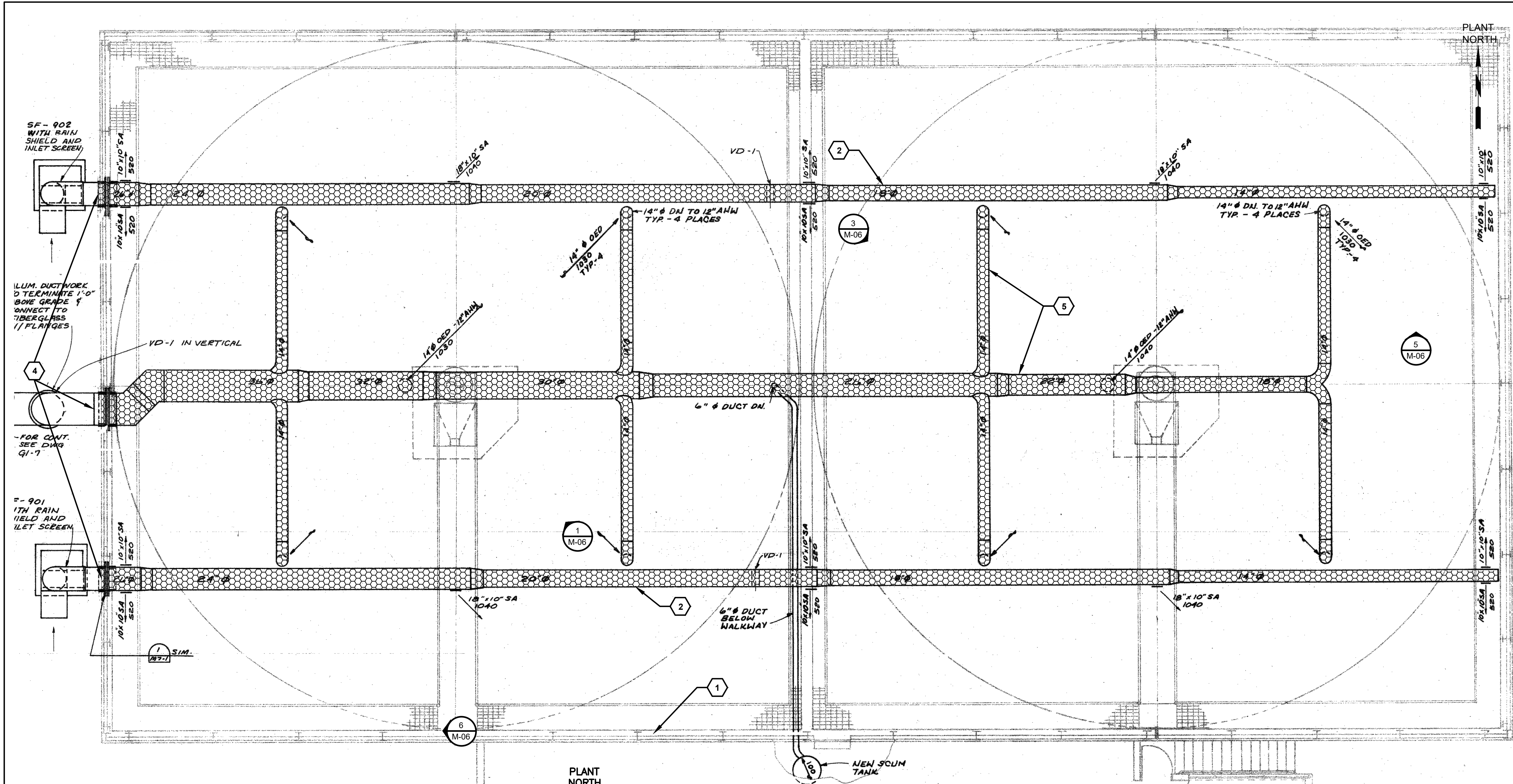
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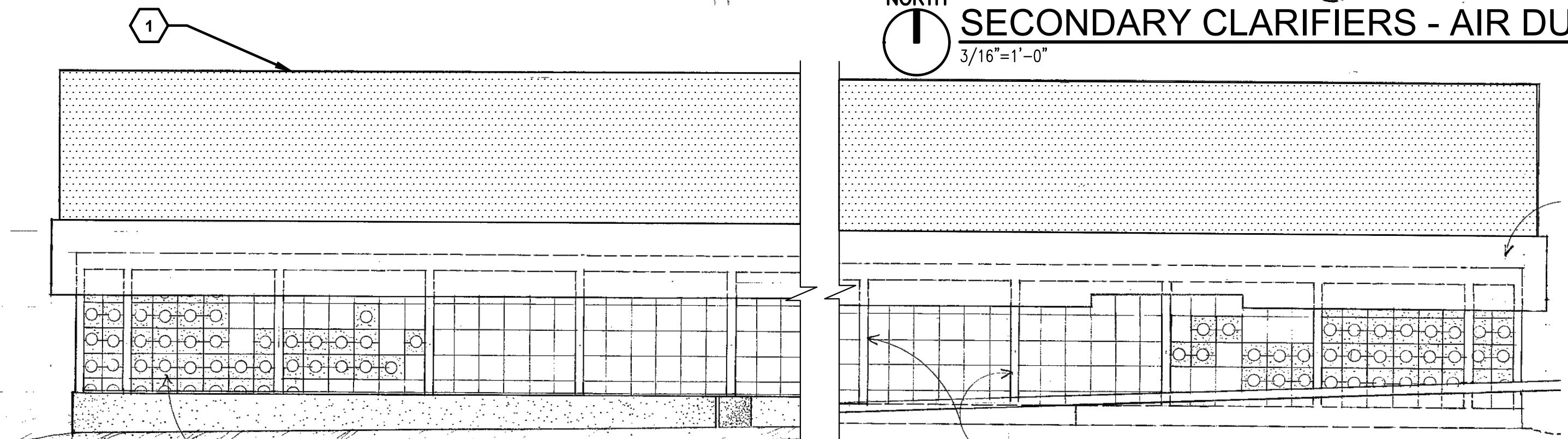
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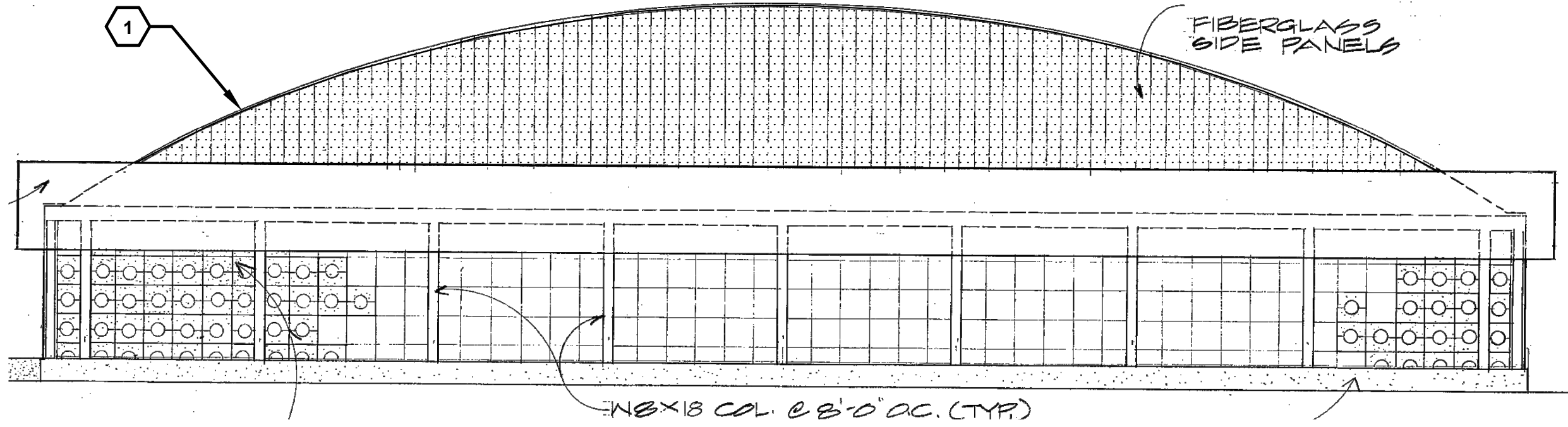
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PLANT NORTH
1
SECONDARY CLARIFIERS - AIR DUCTS PLAN
3/16"=1'-0"



SECONDARY CLARIFIERS - FRONT ELEVATION
NTS



SECONDARY CLARIFIERS - TYPICAL SIDE ELEVATION
NTS

GENERAL SHEET NOTES

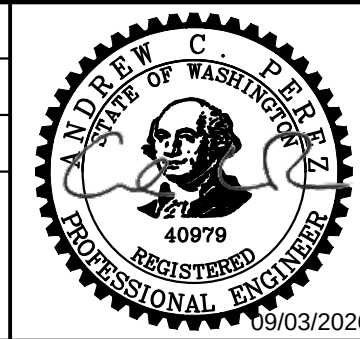
1. SCHEMATIC IS NOT TO SCALE
2. FOUL AIR EXHAUST SYSTEM AND FRESH SUPPLY AIR SYSTEM TO REMAIN ONLINE FOR ONLINE CLARIFIER. THIS MAY REQUIRE TEMPORARY DUCT WORK FROM SUPPLY/EXHAUST FANS LOCATED OUTSIDE OF BUILDING ADJACENT TO SECONDARY CLARIFIER 2 AND TEMPORARY PARTITIONING BETWEEN THE TWO CLARIFIERS. COORDINATE WITH OWNER FOR SHUTDOWNS TO FACILITATE DEMOLITION WORK.

SHEET KEYNOTES

1. REINSTALL REMOVED ROOF PANELS WITH NEW GASKETS: CLOSED CELL, 3/8" THICK X 1" SIDE NEOPRENE FOAM STRIP WITH ADHESIVE BACKING. MCMASTER CARR PART NO: 1061N124 OR EQUAL. REINSTALL WIRE ROPES BEFORE THE REINSTALLATION OF ROOF PANELS. SEE E AND S SHEETS FOR MORE DETAILS.
2. INSTALL NEW FRESH AIR DUCTING AND SUPPORTS AFTER REINSTALLATION OF ROOF PANELS. BALANCE SYSTEM TO AIR FLOWS MEASURED PRIOR TO DEMOLITION.
3. NOT USED.
4. FOUL AIR EXHAUST AND FRESH AIR SUPPLY FAN PHOTOS SHOWN IN SHEET G-09.
5. UPON REINSTALLATION OF ROOF PANELS, INSTALL NEW FOUL AIR DUCTING AND SUPPORTS AND BALANCE SYSTEM TO AIR FLOW MEASURED PRIOR TO AIR FLOWS MEASURED PRIOR TO DEMOLITION.

NO.	DATE	BY	APRVD	REVISION
PLANS ISSUED FOR				
BID	DATE	APRVD	CONST	DATE
ACTION	DATE	APRVD	ACTION	DATE

Designed
B. PINEROS
Drawn
L. GOUDEAU
Checked
A. PEREZ
Design Review Level
ISSUED FOR BID



Jacobs

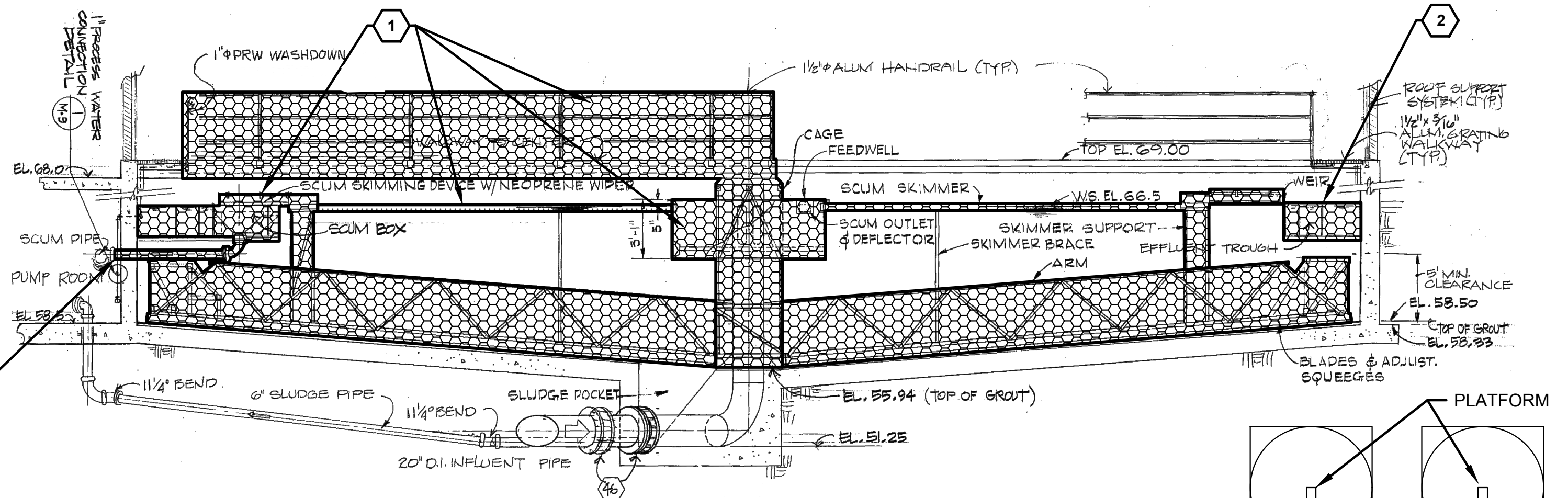


REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

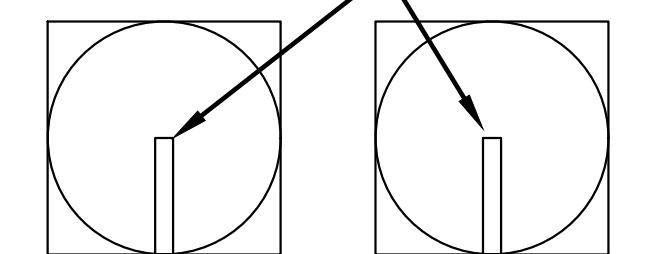
SECONDARY
CLARIFIER AIR DUCTS

CONTRACT NO: PROJECT NO:

Drawing
M-04
Sheet No.
32
46
Of Total



SECTION "A"

$$\underline{3/16'' = 1'-0''}$$


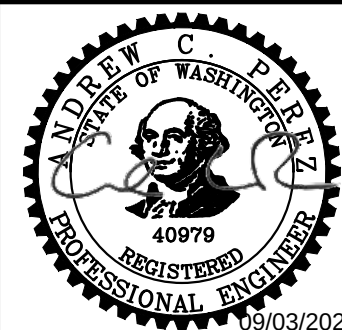
SECONDARY
CLARIFIER NO. 1



1. FURNISH AND INSTALL NEW SQUARE CIRCULAR CLARIFIER MECHANISM, SCUM SKIMMER, SCUM BOX, FEEDWELL, FRP EFFLUENT TROUGHS, WALKWAY TO CENTER COLUMN WITH HANDRAIL AND ASSOCIATED STAINLESS STEEL SUPPORTS. SEE SPECIFICATION SECTION 44 42 24.01 AND S SHEETS FOR MORE DETAILS.
2. FURNISH AND INSTALL NEW FRP EFFLUENT TROUGHS, ASSOCIATED COATED STEEL SUPPORTS, AND ANCHORS. SEE SPECIFICATION SECTION 44 42 28 AND SHEET S-05 FOR MORE DETAILS.
3. INSTALL PIPE THROUGH THE WALL TO THE FLANGE IN THE SECONDARY PUMP ROOM.

[illegible]

Designed	B. PINEROS
Drawn	L. GOUDEAU
Checked	A. PEREZ
Design Review Level	
ISSUED FOR BID	



Jacobs



REDONDO WWTP

PRIMARY AND SECONDARY CLARIFIER REHABILITATION

SECONDARY CLARIFIERS PLAN AND SECTION

Drawing

M-05

Sheet No. /

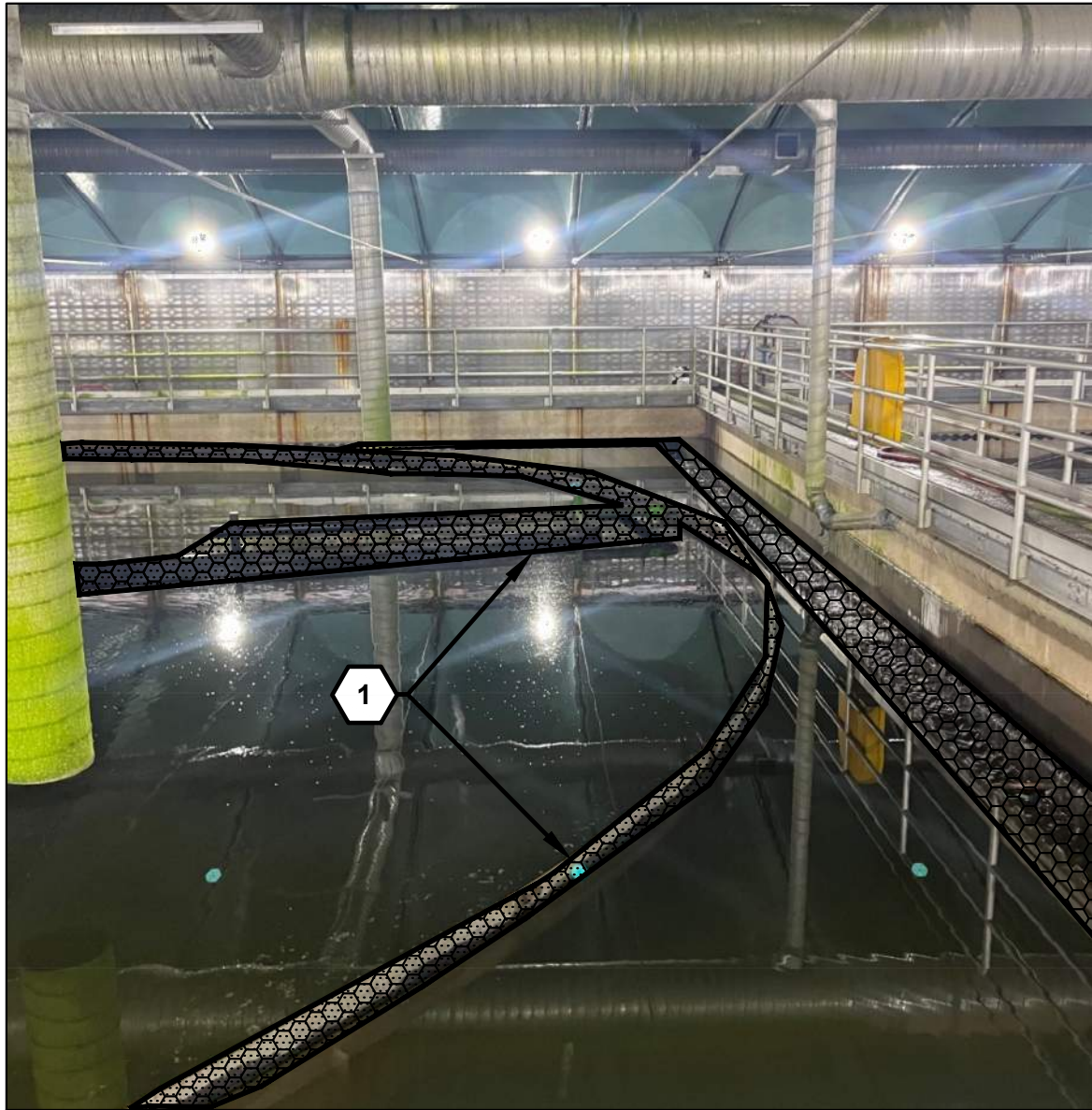
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1 SECONDARY CLARIFIER
FOUL AIR DUCTING (TYP)



2 SECONDARY CLARIFIER RAKE ARM
AND EFFLUENT TROUGH (TYP)



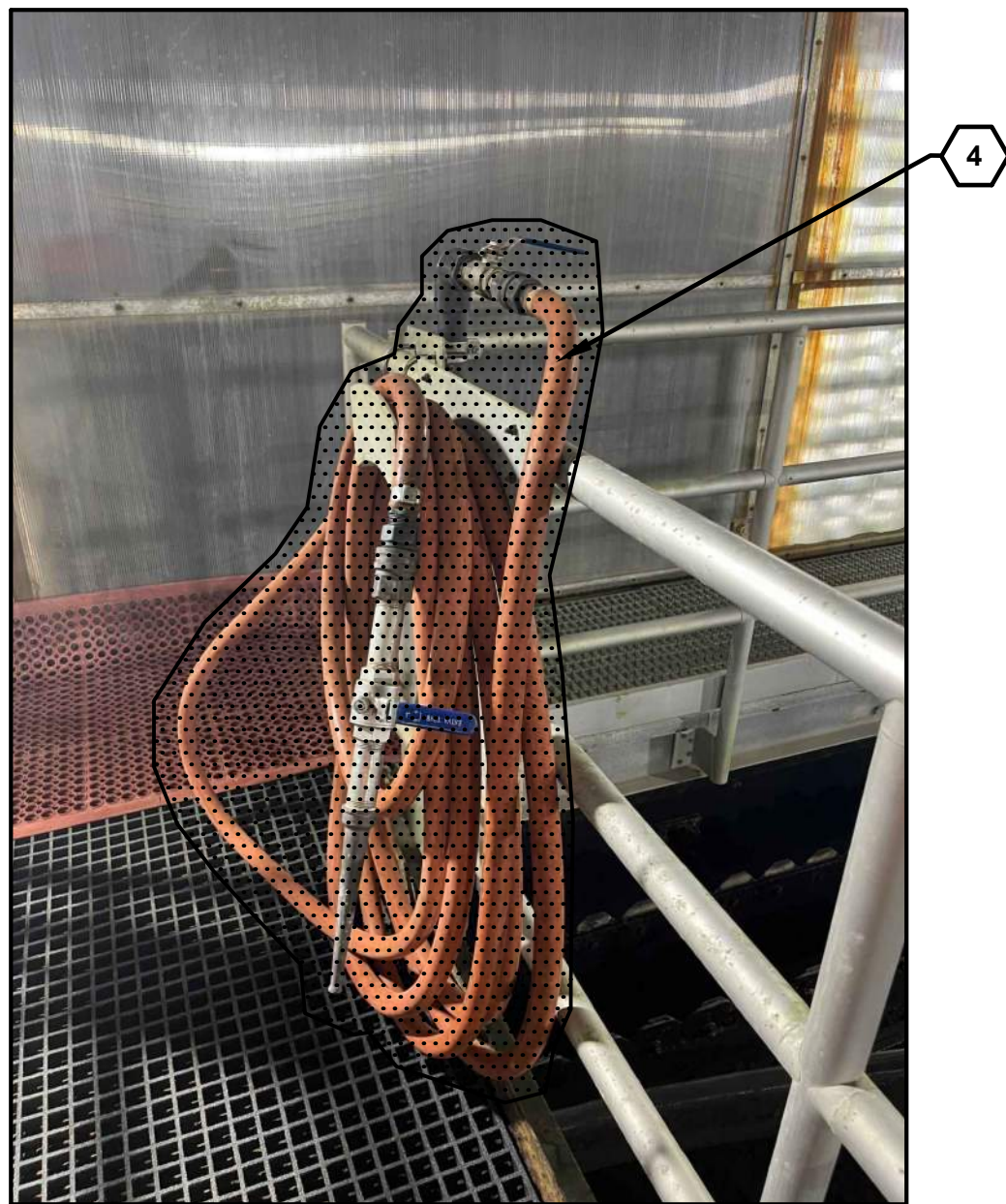
3 SECONDARY CLARIFIER
FOUL AIR DUCTING (TYP)



4 SECONDARY CLARIFIER RAKE
ARM AND PLATFORM (TYP)



5 SECONDARY CLARIFIER
FOUL AIR DUCTING (TYP)



6 PRIMARY CLARIFIERS
PROCESS WATER
WASH-DOWN STATION

GENERAL SHEET NOTES

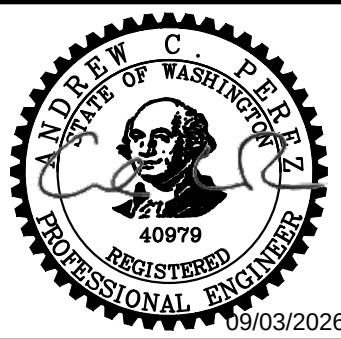
1. CONTRACTOR TO FIELD VERIFY ALL DIMENSIONS.
2. CONFINED SPACE REQUIREMENTS ASSOCIATED WITH THESE TYPES OF SPACES.
3. UNCLASSIFIED AREA. HOT WORK PERMIT REQUIRED. FOLLOW LOCK OUT/TAG OUT PROCEDURES.
4. REFER TO SPECIFICATION SECTION 44 42 28 FOR INFORMATION ON EFFLUENT TROUGHS AND SPECIFICATION SECTION 44 42 24.01 FOR INFORMATION ON THE CLARIFIER MECHANISM AND PLATFORM.

SHEET KEYNOTES

1. FURNISH AND INSTALL NEW SQUARE CIRCULAR CLARIFIER MECHANISM, SCUM SKIMMER, SCUM BOX, FEEDWELL, EFFLUENT TROUGH WALKWAY TO CENTER COLUMN WITH HANDRAIL AND ASSOCIATED STAINLESS STEEL SUPPORTS. SEE SPECIFICATION SECTION 44 42 24 AND S SHEETS FOR MORE DETAILS.
2. UPON REINSTALLATION OF ROOF PANELS, AND WIRE ROPES, INSTALL NEW FOUL AIR, FRESH AIR DUCTWORK, AND ASSOCIATED SUPPORTS. SEE S SHEETS FOR MORE DETAILS.
3. REINSTALL WIRE ROPES BEFORE THE REINSTALLATION OF ROOF PANELS. SEE S SHEETS FOR MORE DETAILS.
4. REINSTALL WASHDOWN STATION. EXISTING WASHDOWN STATION SHOWN.

NO.	DATE	BY	APRVD	REVISION
PLANS ISSUED FOR				
BID	DATE	APRVD	CONST	DATE
ACTION	DATE	APRVD	ACTION	DATE

Designed
B. PINEROS
Drawn
L. GOUDEAU
Checked
A. PEREZ
Design Review Level
ISSUED FOR BID



Jacobs



REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

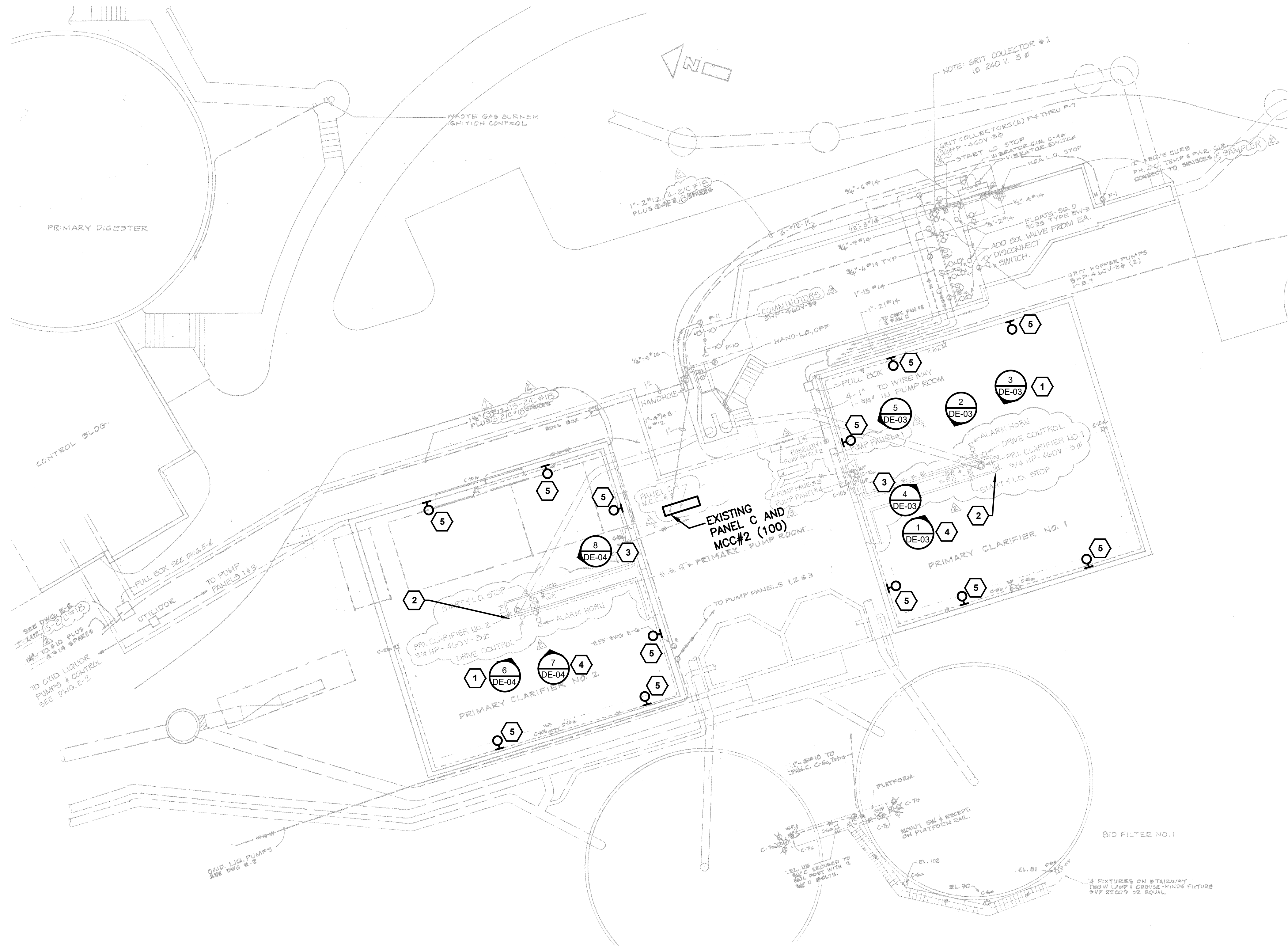
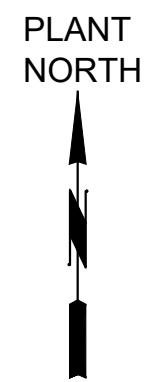
SECONDARY CLARIFIERS PHOTOS

CONTRACT NO: PROJECT NO:

Drawing
M-06

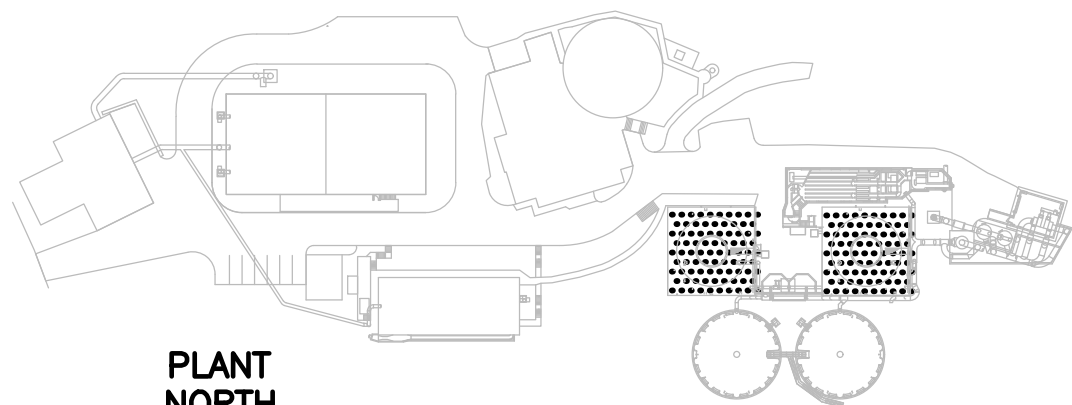
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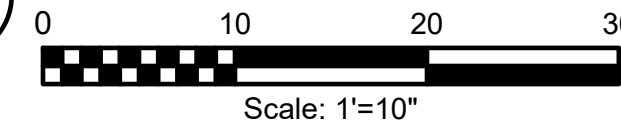


POWER PLAN - PRIMARY CLARIFIERS

1"=10'-0"



KEY PLAN



GENERAL SHEET NOTES

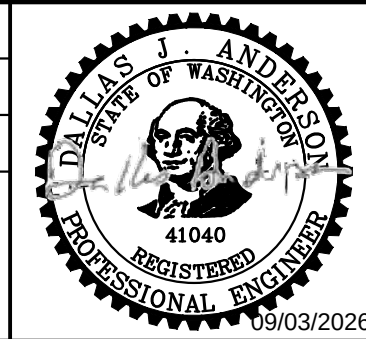
1. ALL ITEMS DESCRIBED IN KEY NOTES ARE TYPICAL FOR BOTH PRIMARY CLARIFIERS.

SHEET KEYNOTES

1. DEMOLISH CONNECTION TO MOTOR. DEMOLISH CONDUIT BACK TO A POINT NEAR THE PERIMETER WALL FOR EQUIPMENT REPLACEMENT.
2. REMOVE CONNECTION TO LUMINAIRE. REMOVE, SALVAGE, AND PROTECT CONDUIT, AND CONDUCTORS, IF SALVAGEABLE, BACK TO A POINT NEAR THE PERIMETER WALL FOR EQUIPMENT REPLACEMENT.
3. REMOVE, SALVAGE, AND PROTECT LIGHT SWITCH. REMOVE, SALVAGE, AND PROTECT CONDUIT AND CONDUCTORS IF SALVAGEABLE.
4. REMOVE, SALVAGE, AND PROTECT THE DISCONNECT, START/STOP CONTROL STATION, AND SERVICE RECEPTACLE. DEMOLISH HORN, SILENCER, AND STROBE. REMOVE CONDUIT AND CONDUCTORS BACK TOWARDS THE PERIMETER WALL FOR CLARIFIER EQUIPMENT REPLACEMENT.
5. REMOVE, SALVAGE, AND PROTECT PERIMETER LUMINAIRES FOR STEEL REHAB WORK. DEMOLISH CONDUIT AND CONDUCTORS.

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BID	DATE	APRVD	CONST	DATE
ACTION	DATE	APRVD	ACTION	DATE

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Drawn	L. GOUDEAU
Checked	A. PEREZ
Design Review Level	
ISSUED FOR BID	



Jacobs



REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

PRIMARY CLARIFIER SITE
POWER DEMOLITION PLAN

CONTRACT NO:

PROJECT NO:

Drawing

DE-01

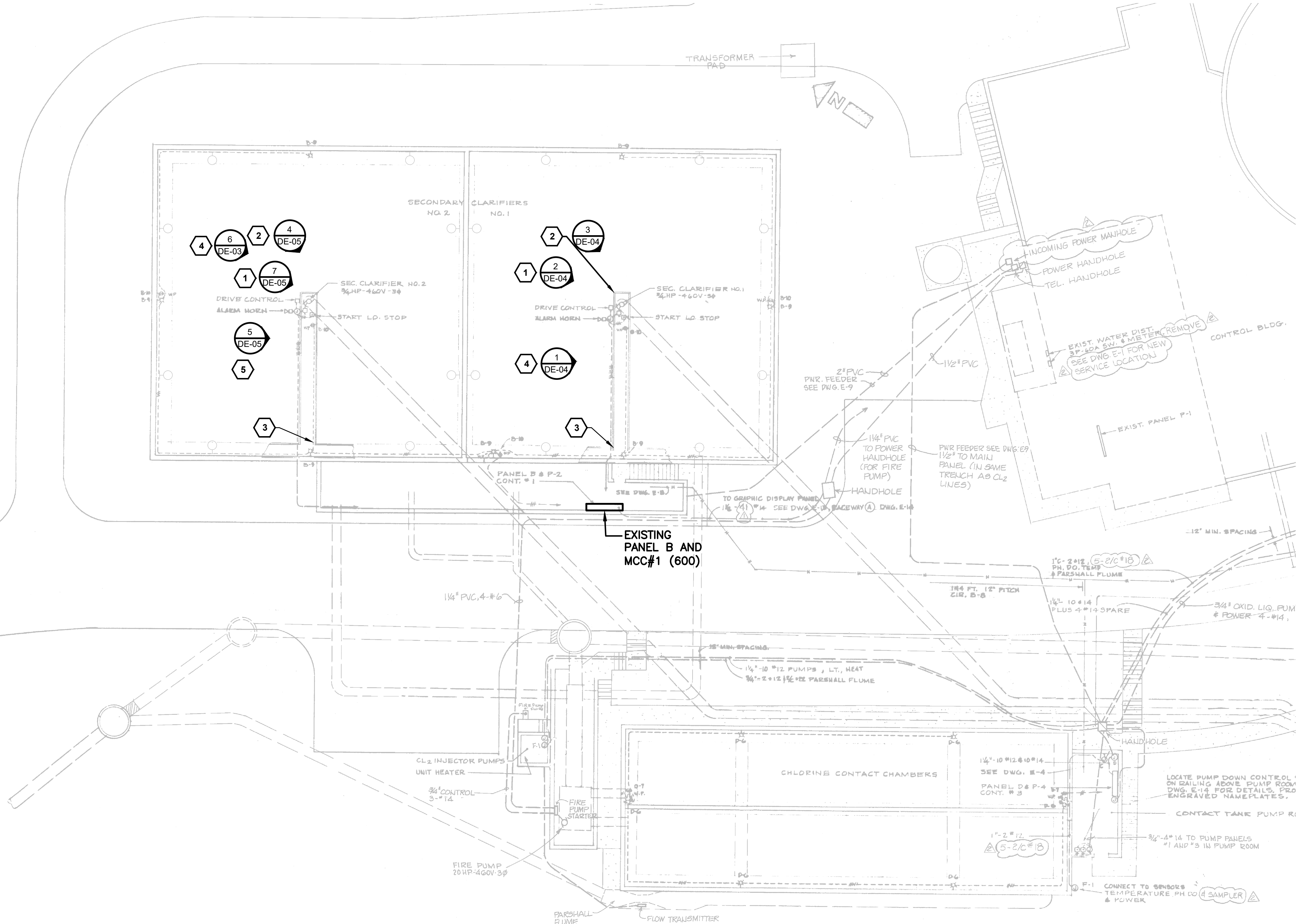
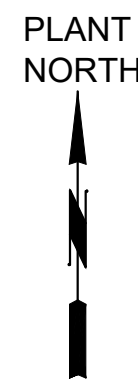
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SITE POWER PLAN - SECONDARY CLARIFIERS
1"=10'-0"

- GENERAL SHEET NOTES**
1.

ALL ITEMS DESCRIBED IN KEY NOTES ARE TYPICAL FOR BOTH SECONDARY CLARIFIERS.
- SHEET KEYNOTES**
1.

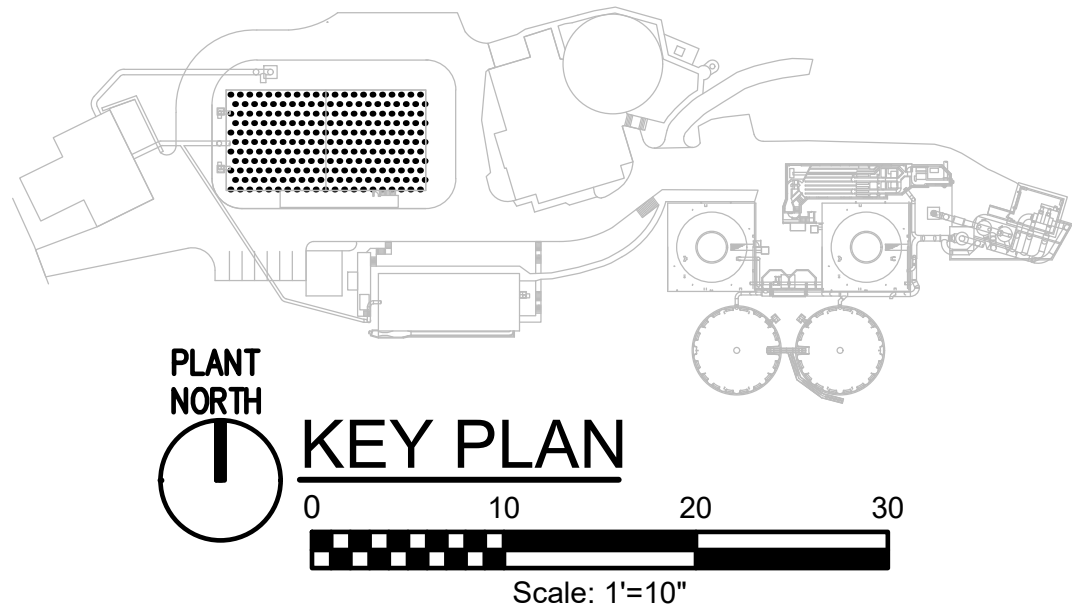
DEMOLISH CONNECTION TO MOTOR. DEMOLISH CONDUIT BACK TO A POINT NEAR THE PERIMETER WALL FOR EQUIPMENT REPLACEMENT.
2.

DEMOLISH CONNECTION TO LUMINAIRE. DEMOLISH CONDUIT BACK TO A POINT NEAR THE PERIMETER WALL FOR EQUIPMENT REPLACEMENT.
3.

DEMOLISH LIGHT SWITCH, CONDUIT, AND CONDUCTORS TO A POINT NEAR THE PERIMETER WALL.
4.

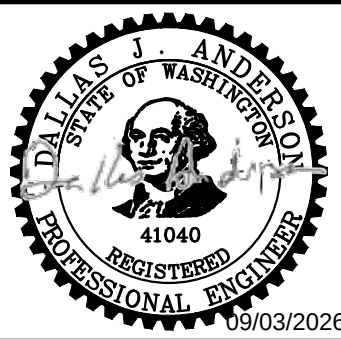
DEMOLISH DISCONNECT, START/STOP CONTROL STATION, AND SERVICE RECEPTACLE. REMOVE ALL POWER AND CONTROL WIRING FROM THE CLARIFIER MOTOR THROUGH MCC-600. MAINTAIN THE RESTART FUNCTION AS SHOWN IN THE SECONDARY CONTROL DETAILS ON SHEET E-07. DEMOLISH HORN, SILENCER, AND STROBE.
5.

REMOVE CONNECTION TO TACHOMETER DISPLAY. DELIVER TO OWNER.



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Designed
D. ANDERSON
Drawn
L. GOUDEAU
Checked
A. PEREZ
Design Review Level
ISSUED FOR BID



Jacobs



REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

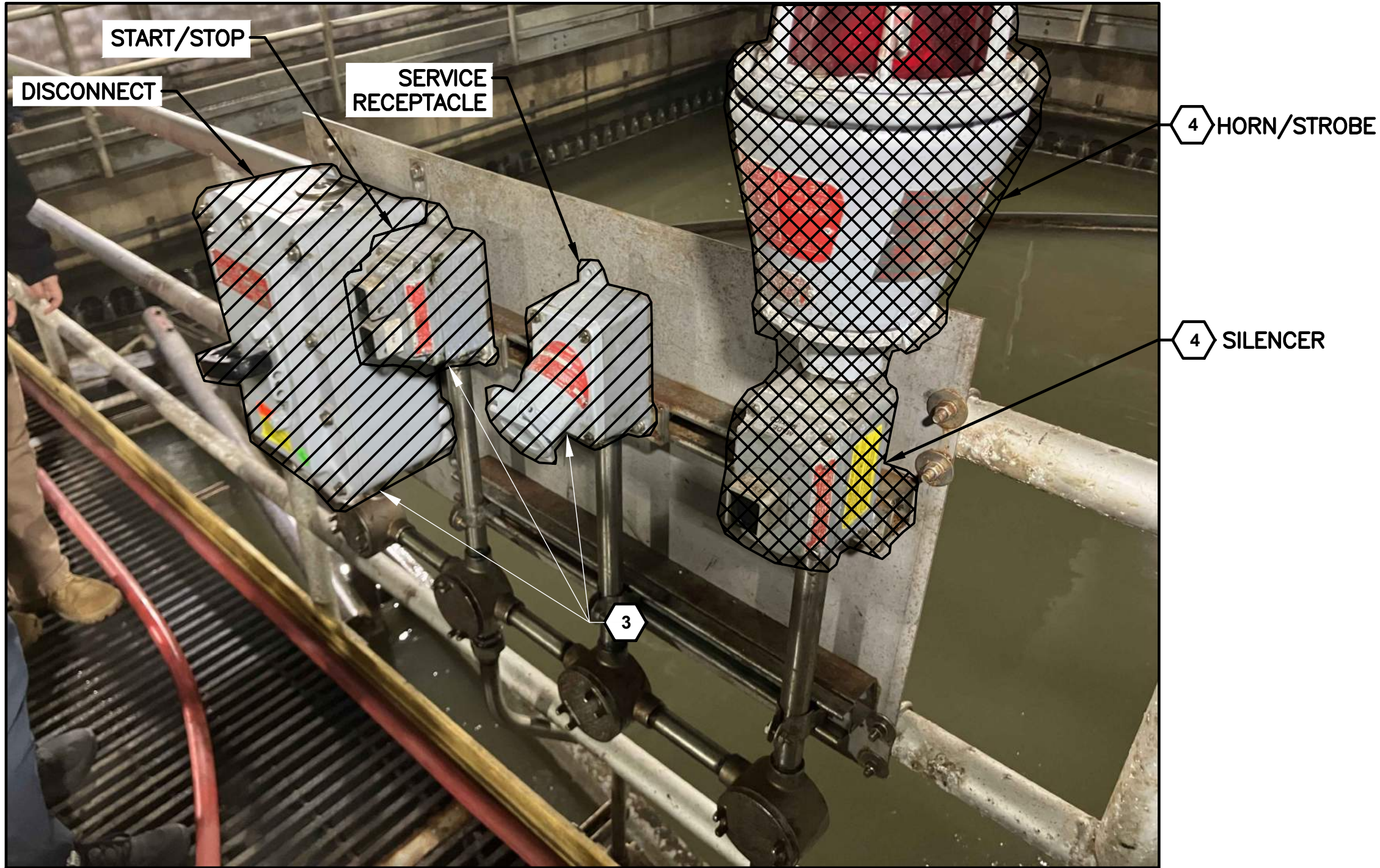
**SECONDARY CLARIFIER SITE
POWER DEMOLITION PLAN**

CONTRACT NO: PROJECT NO:

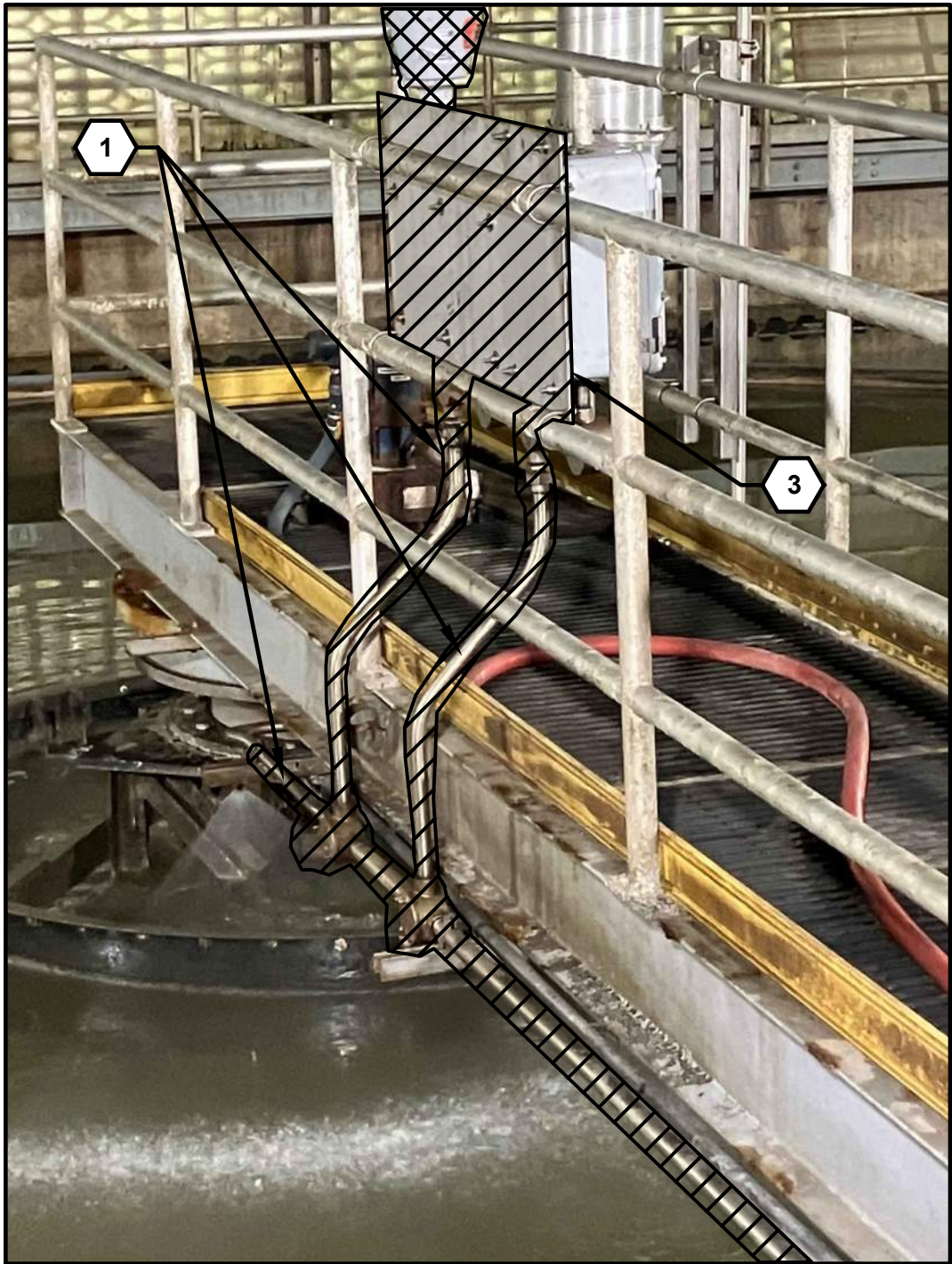
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DE-02

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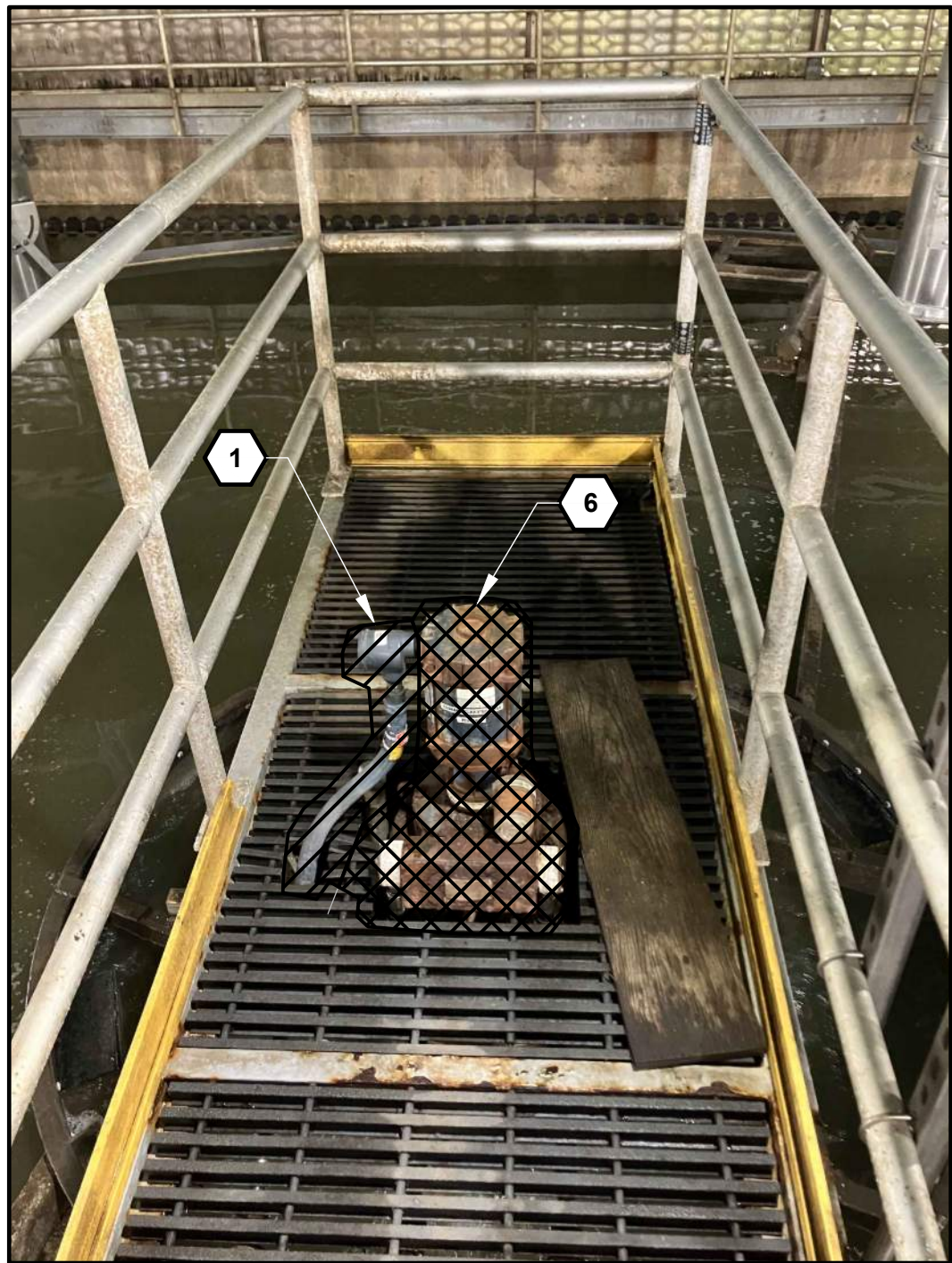
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1 PRIMARY CLARIFIER NO 1
DE-01 PLATFORM DEVICES



2 PRIMARY CLARIFIER NO 1
DE-01 PLATFORM CONDUIT ROUTING



3 PRIMARY CLARIFIER NO 1
DE-01 DRIVE MOTOR



4 PRIMARY CLARIFIER NO 1
DE-01 PLATFORM WALKWAY LIGHT SWITCH



5 PRIMARY CLARIFIER
DE-01 PERIMETER LUMINAIRES

GENERAL SHEET NOTES

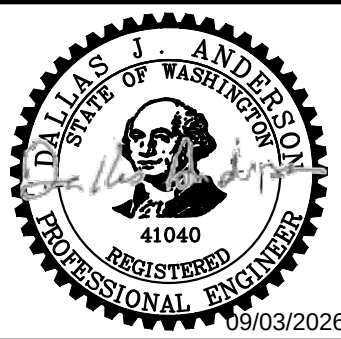
1. IF A SEAL-OFF IS REQUIRED TO BE CUT OUT OF THE CONDUIT RUN FOR REPLACEMENT, REPLACE CONDUCTORS FROM SOURCE TO LOAD SO THERE ARE NO SPLICES.

SHEET KEYNOTES

1. REMOVE CONNECTION TO MOTOR. REMOVE, SALVAGE, AND PROTECT CONDUIT AND CONDUCTORS BACK TO A POINT NEAR THE PERIMETER WALL FOR EQUIPMENT REPLACEMENT. TYPICAL FOR BOTH PRIMARY CLARIFIERS.
2. REMOVE, SALVAGE, AND PROTECT LIGHT SWITCH. TYPICAL FOR BOTH PRIMARY CLARIFIERS.
3. REMOVE, SALVAGE, AND PROTECT LOCAL DISCONNECT, START/STOP CONTROL STATION AND SERVICE RECEPTACLE. REMOVE, SALVAGE, AND PROTECT CONDUIT AND CONDUCTORS BACK TOWARDS THE PERIMETER WALL FOR CLARIFIER EQUIPMENT REPLACEMENT. TYPICAL FOR BOTH PRIMARY CLARIFIERS.
4. DEMOLISH HORN, STROBE, AND SILENCER. TYPICAL FOR BOTH PRIMARY CLARIFIERS. TYPICAL FOR BOTH PRIMARY CLARIFIERS.
5. REMOVE, SALVAGE, AND PROTECT PERIMETER LUMINAIRES TO FACILITATE ROOF BEAM DEMOLITION AND REPLACEMENT. TYPICAL FOR BOTH PRIMARY CLARIFIERS. DEMOLISH CONDUITS AND CONDUCTORS.
6. DEMOLISH MOTOR. TYPICAL FOR BOTH PRIMARY CLARIFIERS.

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Designed
D. ANDERSON
Drawn
L. GOUDEAU
Checked
A. PEREZ
Design Review Level
ISSUED FOR BID



Jacobs



REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

PRIMARY CLARIFIER ELECTRICAL
DEMOLITION PHOTOS

CONTRACT NO:

PROJECT NO:

Drawing

DE-03

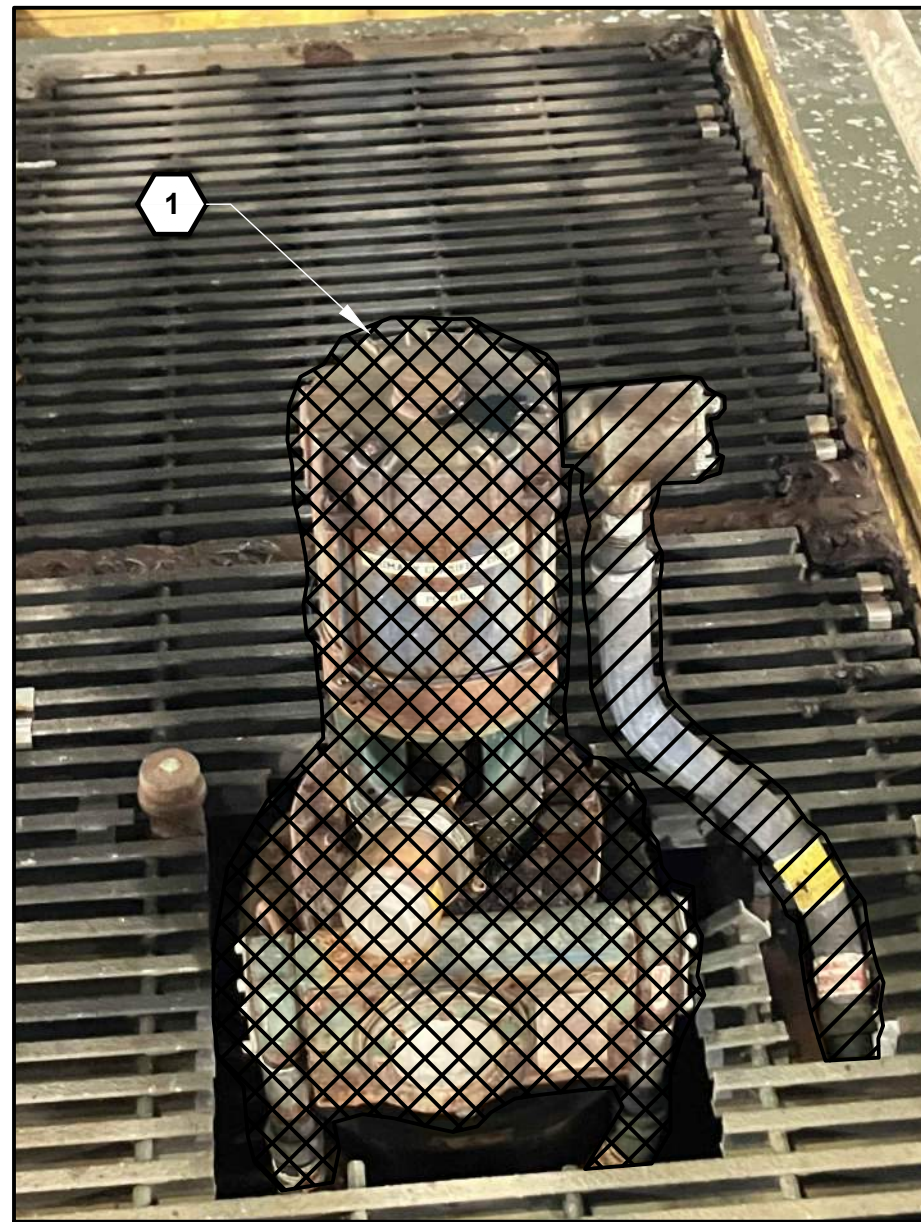
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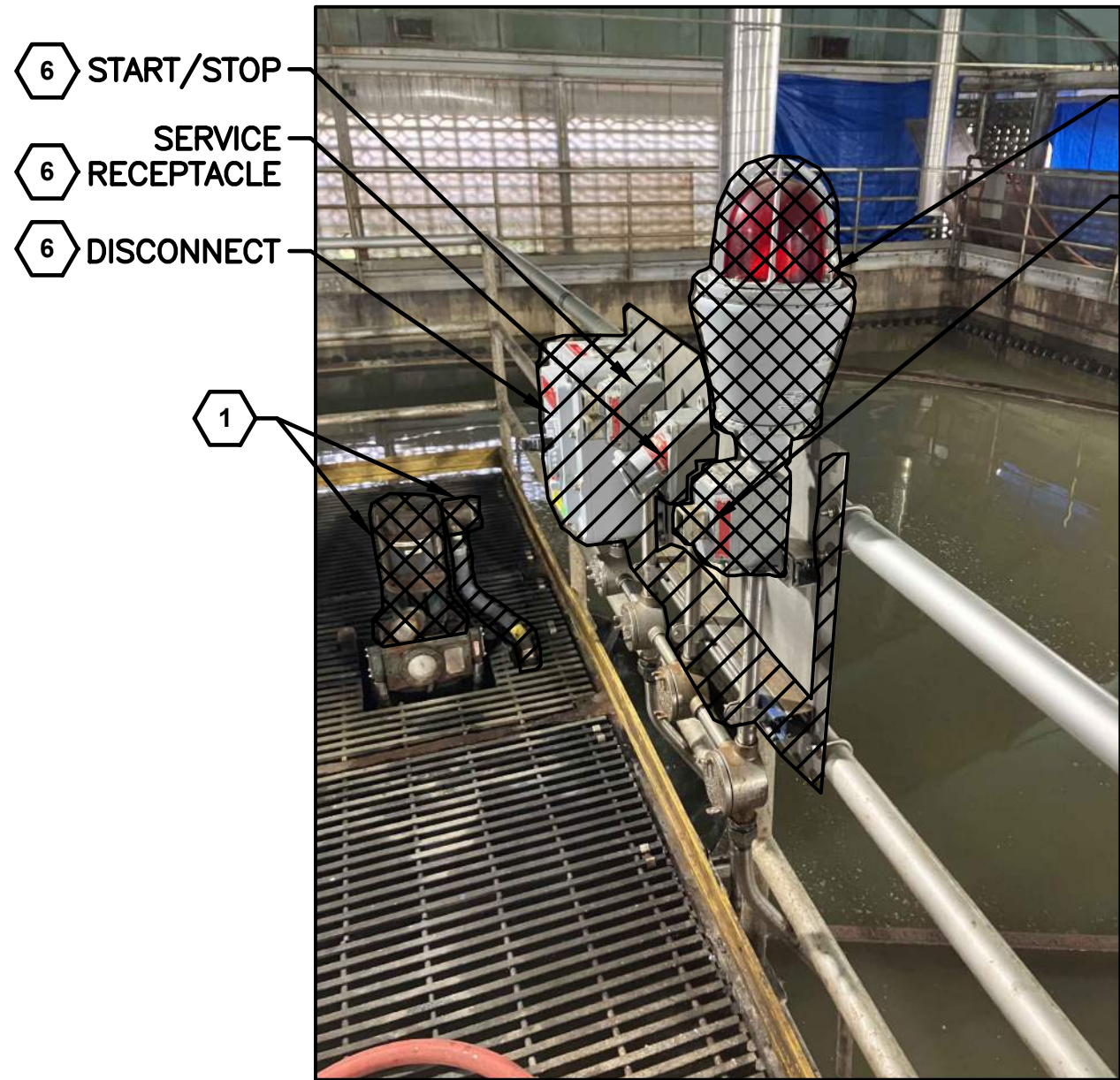
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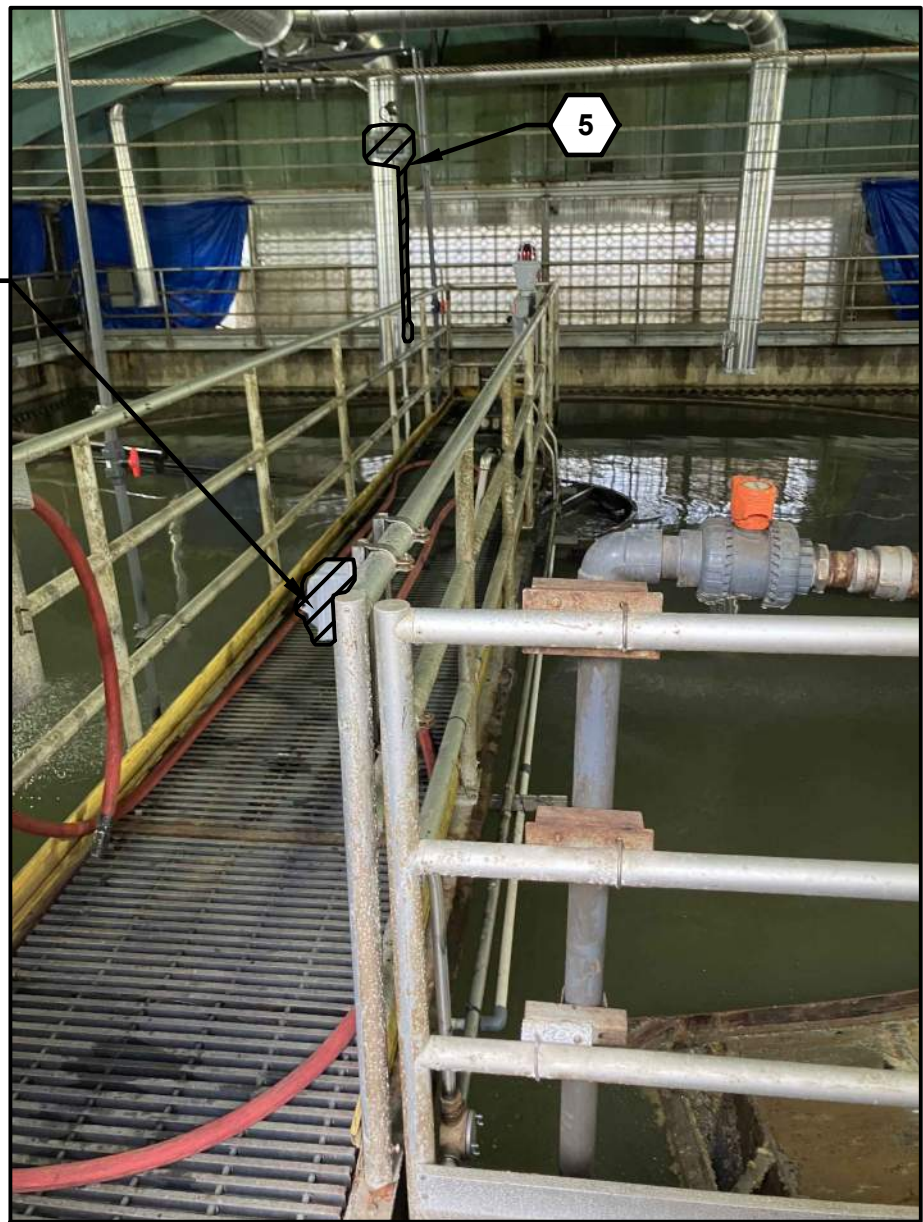
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6 PRIMARY CLARIFIER NO 2
DE-01 DRIVE MOTOR



7 PRIMARY CLARIFIER NO 2
DE-01 PLATFORM ELECTRICAL DEVICES



8 PRIMARY CLARIFIER NO 2
DE-01 LIGHT SWITCH

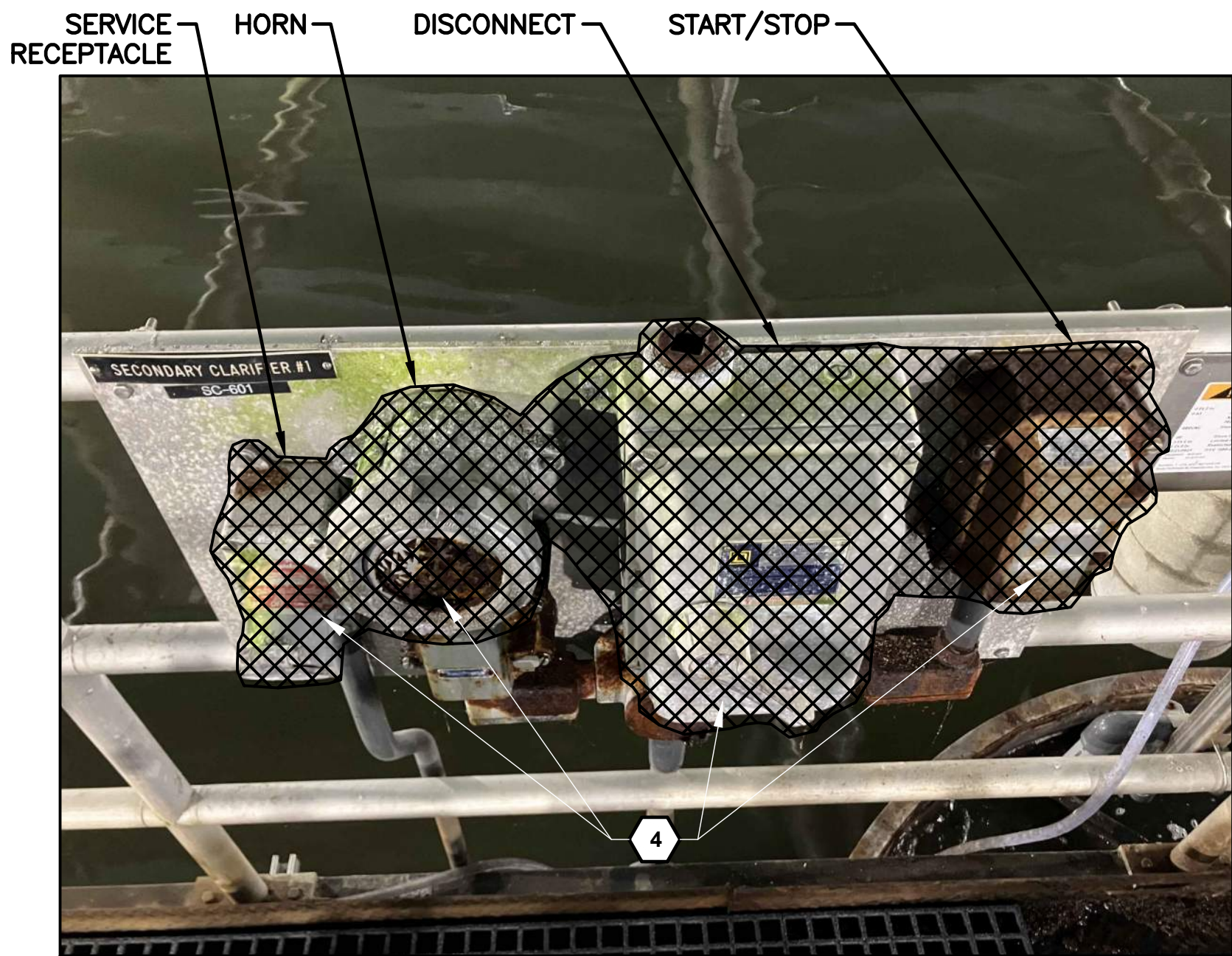
GENERAL SHEET NOTES

1. IF A SEAL-OFF IS REQUIRED TO BE CUT OUT OF THE CONDUIT RUN FOR REPLACEMENT, REPLACE CONDUCTORS FROM SOURCE TO LOAD SO THERE ARE NO SPLICES.

SHEET KEYNOTES

1. DEMOLISH MOTOR AND CONNECTION TO MOTOR. REMOVE, SALVAGE, AND PROTECT CONDUIT AND CONDUCTORS BACK TO POINT NEAR THE PERIMETER WALL FOR EQUIPMENT REPLACEMENT. TYPICAL FOR BOTH PRIMARY CLARIFIERS.
2. DEMOLISH LUMINAIRE AND DEMOLISH CONDUIT BACK TO A POINT NEAR THE PERIMETER WALL. TYPICAL FOR SECONDARY CLARIFIERS.
3. REMOVE, SALVAGE, AND PROTECT LIGHT SWITCH. REMOVE, SALVAGE, AND PROTECT CONDUIT AND CONDUCTORS IF SALVAGEABLE. TYPICAL FOR BOTH PRIMARY CLARIFIERS.
4. DEMOLISH DISCONNECT, START/STOP CONTROL STATION, HORN, AND SERVICE RECEPTACLE. DEMOLISH THE EXISTING CONDUITS BACK TO THE PERIMETER WALL. DEMOLISH ALL POWER AND CONTROL WIRING FROM THE NEW CLARIFIER MOTOR THROUGH MCC-600. MAINTAIN THE RESTART FUNCTION AS SHOWN ON SHEET E-07. TYPICAL FOR BOTH SECONDARY CLARIFIERS.
5. REMOVE, SALVAGE, AND PROTECT LIGHTING MAST. TYPICAL FOR BOTH PRIMARY CLARIFIERS.
6. REMOVE, SALVAGE, AND PROTECT LOCAL DISCONNECT, START/STOP CONTROL STATION, SERVICE RECEPTACLE. REMOVE, SALVAGE, AND PROTECT CONDUIT AND CONDUCTORS BACK TOWARDS THE PERIMETER WALL FOR CLARIFIER EQUIPMENT REPLACEMENT. TYPICAL FOR BOTH PRIMARY CLARIFIERS.
7. DEMOLISH HORN, STROBE, AND SILENCER. TYPICAL FOR BOTH PRIMARY CLARIFIERS.
8. DEMOLISH MOTOR AND ASSOCIATED CONDUIT AND CONDUCTORS BACK TO A POINT NEAR THE PERIMETER WALL. TYPICAL FOR BOTH SECONDARY CLARIFIERS.

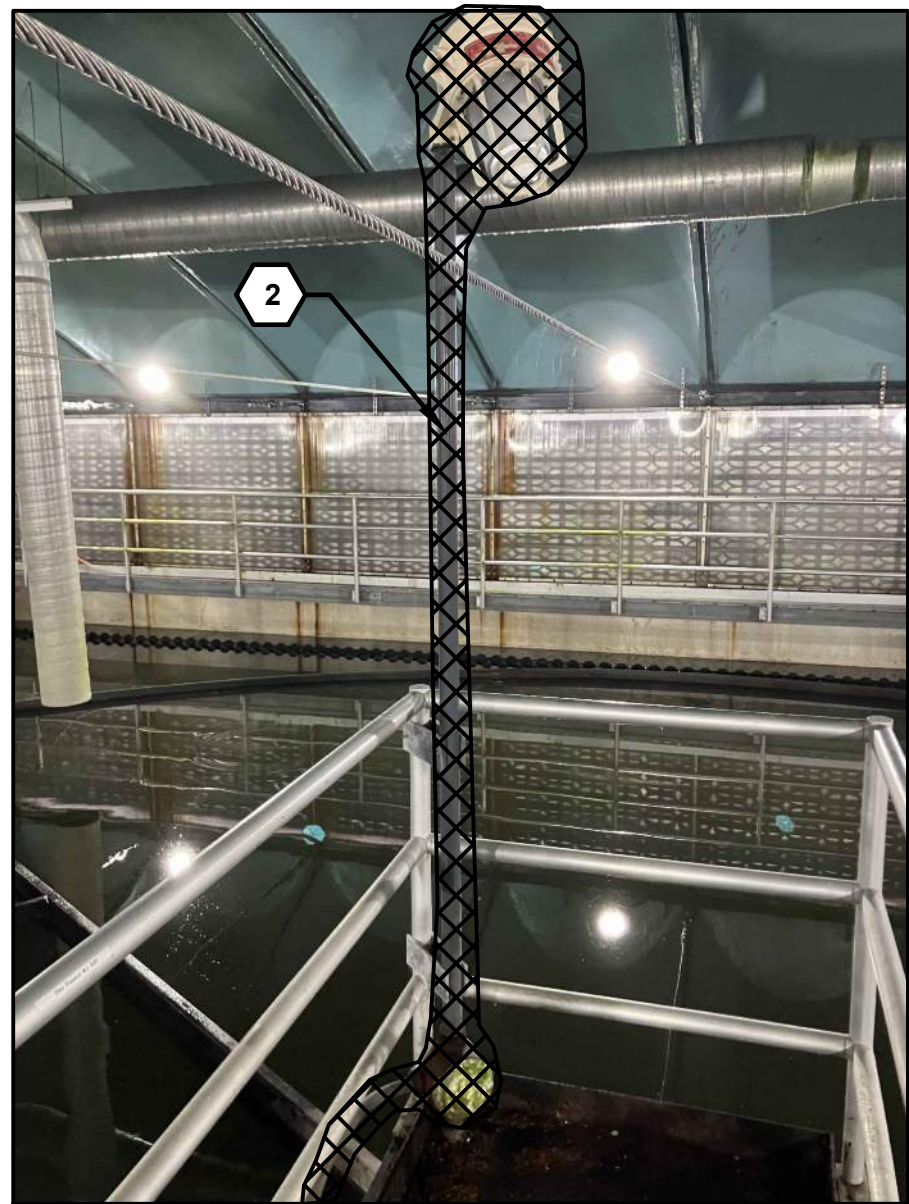
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1 SECONDARY CLARIFIER NO 1
DE-02 PLATFORM DEVICES



2 SECONDARY CLARIFIER NO 1
DE-02 SCRAPER MOTOR

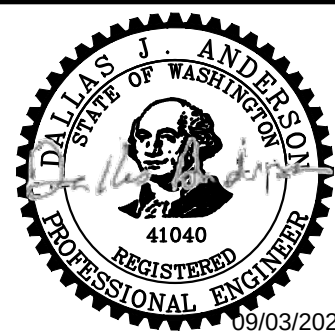


3 SECONDARY CLARIFIER NO 1
DE-02 LIGHTING MAST

PHOTO DETAILS - SECONDARY CLARIFIER NO. 1
NTS

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PLANS ISSUED FOR									
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Designed
D. ANDERSON
Drawn
L. GOUDEAU
Checked
A. PEREZ
Design Review Level
ISSUED FOR BID



Jacobs



REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

PRIMARY CLARIFIER AND
SECONDARY CLARIFIER
ELECTRICAL DEMOLITION PHOTOS

CONTRACT NO:

PROJECT NO:

Drawing
DE-04

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4 SECONDARY CLARIFIER NO 2
DE-02 LIGHTING MAST



5 SECONDARY CLARIFIER NO 2
DE-02 TACHOMETER DISPLAY

SHEET KEYNOTES

1. DEMOLISH LUMINAIRE AND DEMOLISH CONDUIT BACK TO A POINT NEAR THE PERIMETER WALL. TYPICAL FOR BOTH SECONDARY CLARIFIERS.
2. DEMOLISH CONNECTION TO TACHOMETER DISPLAY. DELIVER TO OWNER.
3. DEMOLISH DISCONNECT, START/STOP CONTROL STATION, DISCONNECT, HORN, RESET, AND SERVICE RECEPTACLE. DEMOLISH THE EXISTING CONDUITS BACK TO THE PERIMETER WALL. DEMOLISH ALL POWER AND CONTROL WIRING FROM THE NEW CLARIFIER MOTOR THROUGH MCC-600. MAINTAIN THE RESTART FUNCTION AS SHOWN IN THE SECONDARY CONTROL DETAILS ON SHEET E-07. TYPICAL FOR BOTH SECONDARY CLARIFIERS.
4. DEMOLITION MOTOR, CONNECTION TO MOTOR AND CONDUIT BACK TO A POINT NEAR THE PERIMETER WALL FOR EQUIPMENT REPLACEMENT. TYPICAL FOR BOTH SECONDARY CLARIFIERS.



6 SECONDARY CLARIFIER NO 2
DE-02 PLATFORM DEVICES

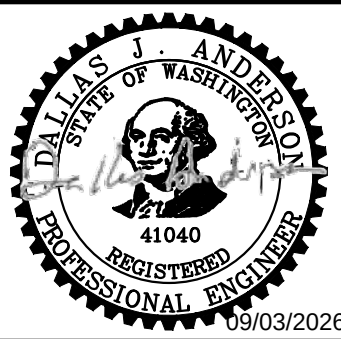


7 SECONDARY CLARIFIER NO 2
DE-02 SCRAPER MOTOR

PHOTO DETAILS - SECONDARY CLARIFIER NO. 2
NTS

NO.	DATE	BY	APRVD	REVISION					
PLANS ISSUED FOR									
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ACTION	DATE		APRVD	ACTION	DATE	APRVD	ACTION	DATE	APRVD

Designed
D. ANDERSON
Drawn
L. GOUDEAU
Checked
A. PEREZ
Design Review Level
ISSUED FOR BID



Jacobs



REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

SECONDARY CLARIFIER
ELECTRICAL DEMOLITION PHOTOS

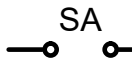
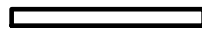
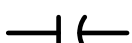
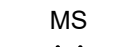
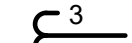
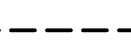
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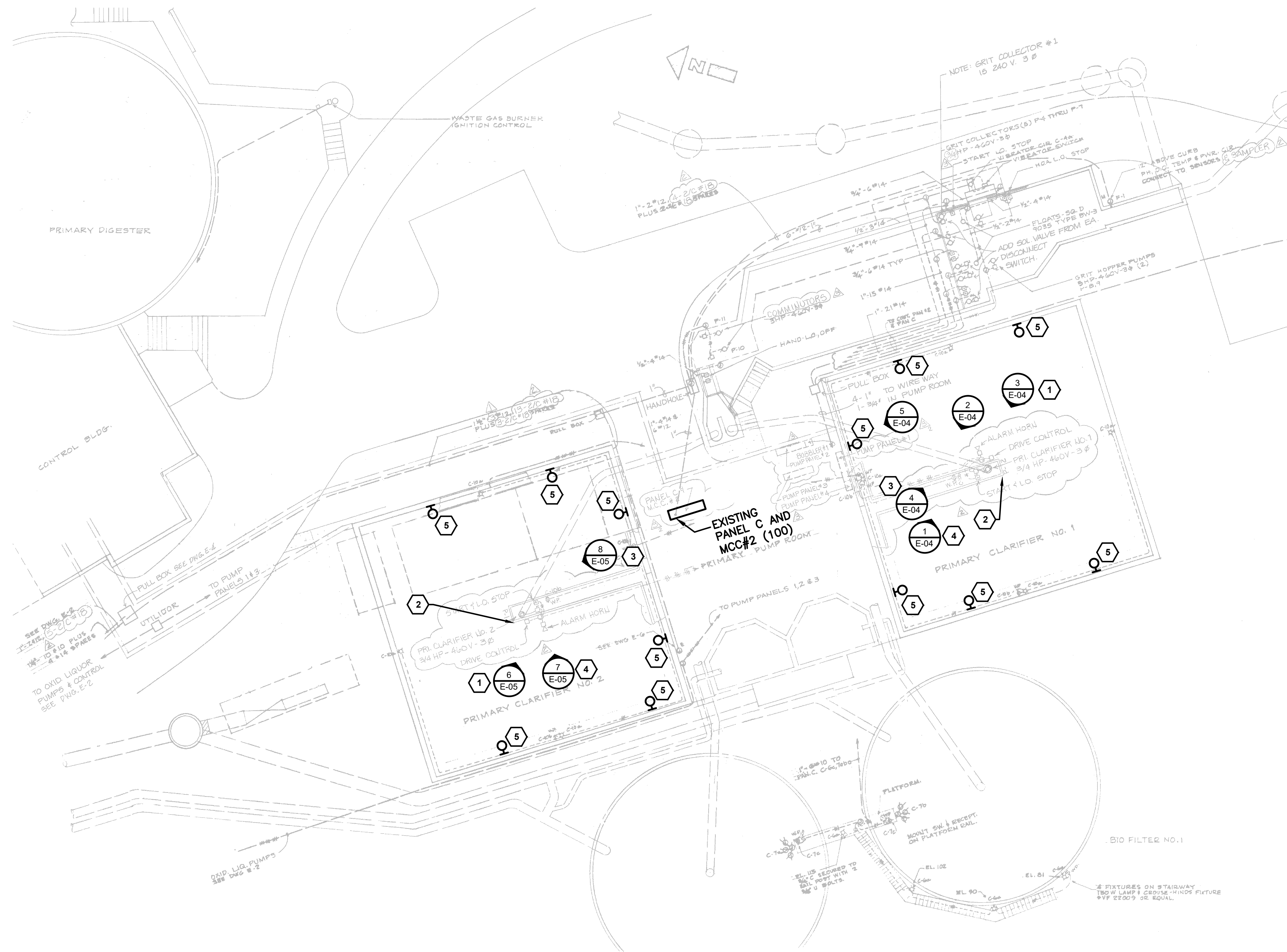
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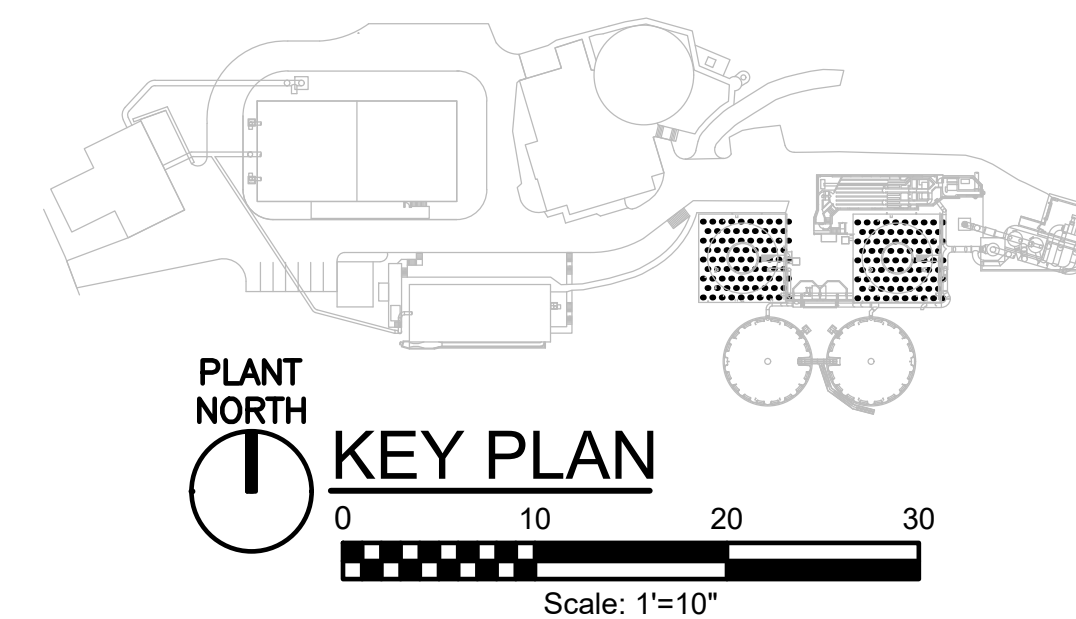
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MOTORS AND POWER EQUIPMENT										RACEWAY SYMBOLS										LIGHTING & RECEPTACLE SYMBOLS										ABBREVIATIONS											
	GROUND ROD IN GROUND ROD BOX										SURGE ARRESTER										LIGHTING FIXTURE									A, AMP	AMPERE					M	METER, MOTOR				
	TRANSFORMER										DISCONNECT OR SWITCH										STRIP LIGHTING FIXTURE									AC	AIR COMPRESSOR, ALTERNATING CURRENT					MCC	MOTOR CONTROL CENTER				
	MOTOR STARTER W/ DISCONNECT										TRANSFORMER										WALL MOUNTED FIXTURE (SURFACE OR ARM)									AF	AMPERE FRAME					MFCR	MANUFACTURER				
	DISCONNECT SWITCH, NON FUSED (60A) INDICATES AMPERAGE RATING										THERMAL MAGNETIC CIRCUIT BREAKER, RATING/NO. POLES MO = MAGNETIC ONLY										POLE ARM MOUNTED FIXTURE									AFF	ABOVE FINISHED FLOOR					MH	MANHOLE				
	DISCONNECT SWITCH, FUSED 100=SWITCH RATING, 80=FUSE RATING										THERMAL OVERLOAD RELAY										RECESSED LIGHT FIXTURE									AI	ANALOG INPUT POINT (PLC)					MO	MAGNETIC ONLY (CIRCUIT BREAKER)				
	UTILITY METERING										ATS - AUTOMATIC TRANSFER SWITCH MTS - MANUAL TRANSFER SWITCH										INFRARED FLOOD LIGHT FIXTURE									AIC	AMPERES INTERRUPTING CAPACITY					MOV	MOTOR OPERATED VALVE				
	MOTOR										POWER CAPACITOR WITH KVAR RATING										EXIT LIGHT FIXTURE WALL MOUNTED									AIL	AMBER INDICATING LIGHT					MS	MOTOR STARTER				
	EXHAUST FAN										VFD = VARIABLE FREQUENCY DRIVE VSD = VARIABLE SPEED DRIVE SSS = SOLID STATE STARTER										REMOTE EXIT LIGHT FIXTURE									AL	ALARM					MTS	MANUAL TRANSFER SWITCH				
	PANELBOARD, SWITCHBOARD, MCC										MOTOR - NUMBER "15" INDICATES HORSEPOWER										OCCUPANCY SENSOR CEILING MOUNTED									ALT	ALTERNATOR					N	NEUTRAL				
	FUSE WITH AMPERE RATING										MS OR M = MOTOR STARTER CONTACTOR C = CONTACTOR, BP = BYPASS CONTACTOR IC = ISOLATION CONTACTOR																			AM	AMMETER					NC	NORMALLY CLOSED				
	PACKAGED POWER AND CONTROL PANEL										CURRENT TRANSFORMER , NUMBER "3" INDICATES NUMBER OF CTS																			AO	ANALOG OUTPUT POINT (PLC)					NEC	NATIONAL ELECTRICAL CODE				
	UTILITY METERING										PULL OUT SWITCH/PLUG-RECEPTACLE CONNECTION										CONDUIT CAPPED									AS	AMPERE SWITCH					NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION				
	GROUND										THERMOSTAT, HVAC										CORD OR FLEXIBLE CONDUIT									AT	AMPERE TRIP					NF	NON FUSED				
	SURGE PROTECTIVE DEVICE										THERMOSTAT AND PRESSURE TRANSMITTER, HVAC																			ATS	AUTOMATIC TRANSFER SWITCH					N.O.	NORMALLY OPEN				
ELEMENTARY WIRING DIAGRAM SYMBOLS										WIRE DIAGRAMS, ONE-LINES, MISC										SWITCHES										ABBREVIATIONS											
	N.O. NORMALLY OPEN										EXISTING										DIMMER									2	DOUBLE POLE										
	N.O. NORMALLY CLOSED										FUTURE										EXISTING SWITCH									3	THREE WAY										
	SWITCH										PROPOSED WORK/EQUIPMENT										KEY OPERATED SWITCH									4	FOUR WAY										
	PUSH BUTTON										CONDUCTORS NOT CONNECTED										MOTOR RATED																				
	CONTACT										CONDUCTORS CONNECTED										MOMENTARY CONTACT, THREE POSITION									a	LOWER CASE = SWITCH LEG										
	FLOW SWITCH										REFERENCE SYMBOLS										SWITCH WITH PILOT LIGHT																				
	LEVEL SWITCH										CONDUIT										RHEOSTAT - SPEED CONTROL																				
	PRESSURE SWITCH										LIGHTS										EXPLOSION PROOF																				
	TEMPERATURE SWITCH										EQUIPMENT TAG										MAGNETIC LIMIT SWITCH																				
	LIMIT SWITCH										CONSTRUCTION NOTE										KEY SWITCH																				
	INSTRUMENT - FS = FLOW SWITCH, FT = FLOW XMTR, PS= PRESSURE SWITCH, PT = PRESSURE XMTR, ZS = LIMIT SWITCH, VS = VIBRATION SWITCH, VT = VIBRATION XMTR, MS = MOISTURE SWITCH, FE = FLOW ELEMENT, LE = LEVEL ELEMENT, TE = TEMP ELEMENT										INSTRUMENT TYPE / FUNCTION																														
	INSTRUMENT - LS = LEVEL SWITCH, TS = TEMPERATURE SWITCH,										INSTRUMENT DESIGNATION																														
	HEATER - HEAT TRACE										INSTRUMENT NUMBER																														
	JUNCTION BOX																																								
	KIRK KEY INTERLOCK																																								
										</																															



PLANT
NORTH
 POWER PLAN - PRIMARY CLARIFIERS
1"=10'-0"

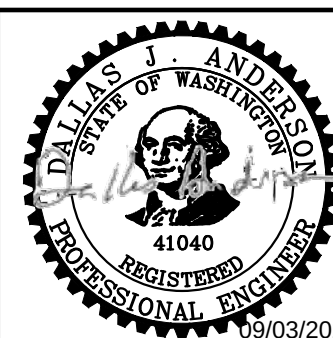


1. ALL ITEMS DESCRIBED IN KEY NOTES ARE TYPICAL FOR BOTH PRIMARY CLARIFIERS.
2. IF A SEAL-OFF IS REQUIRED TO BE CUT OUT OF THE CONDUIT RUN FOR REPLACEMENT, REPLACE CONDUCTORS FROM SOURCE TO LOAD SO THERE ARE NO SPLICES.

1. REINSTALL SALVAGED CONDUIT AND CONDUCTORS TO NEW MOTOR. IF CONDUIT AND CONDUCTOR ARE NOT SALVAGEABLE, FURNISH AND INSTALL NEW CONDUIT, CONDUCTORS, AND FITTINGS.
2. REINSTALL LUMINAIRE. REINSTALL SALVAGED CONDUIT AND CONDUCTORS BACK TO PANEL. IF CONDUIT AND CONDUCTORS ARE NOT SALVAGEABLE, FURNISH AND INSTALL NEW CONDUIT, CONDUCTORS, AND FITTINGS.
3. REINSTALL LIGHT SWITCH. REINSTALL SALVAGED CONDUIT AND CONDUCTORS. IF NECESSARY, FURNISH AND INSTALL NEW CONDUIT, CONDUCTORS, AND FITTINGS.
4. REINSTALL DISCONNECT. START/STOP CONTROL STATION AND SERVICE RECEPTACLE. MAINTAIN RESTART AS SHOWN IN THE PRIMARY CONTROL DETAIL ON SHEET E-07. REUSE CONDUIT, CONDUCTORS, AND FITTINGS IF SALVAGEABLE. IF NECESSARY, FURNISH AND INSTALL NEW CONDUIT, CONDUCTORS, AND FITTINGS.
5. FURNISH AND INSTALL NEW STAINLESS CONDUIT AND CONDUCTORS SUITABLE FOR A CLASS 1 DIV 1 AREA AS NEEDED FOR REINSTALLATION OF LUMINAIRES.

NO.	DATE	BY	APRVD	REVISION							
PLANS ISSUED FOR											
BID				CONST			RECORD				
ACTION	DATE	APRVD	ACTION	DATE	APRVD	ACTION	DATE	APRVD	DATE	APRVD	

Designed	D. ANDERSON
Drawn	L. GOUDEA
Checked	A. PERE
Design Review Level	
ISSUED FOR BIDDING	



Jacobs



REDONDO WWTP

PRIMARY AND SECONDARY CLARIFIER REHABILITATION

PRIMARY CLARIFIER SITE POWER PLAN

CONTRACT NO:

PROJECT NO:

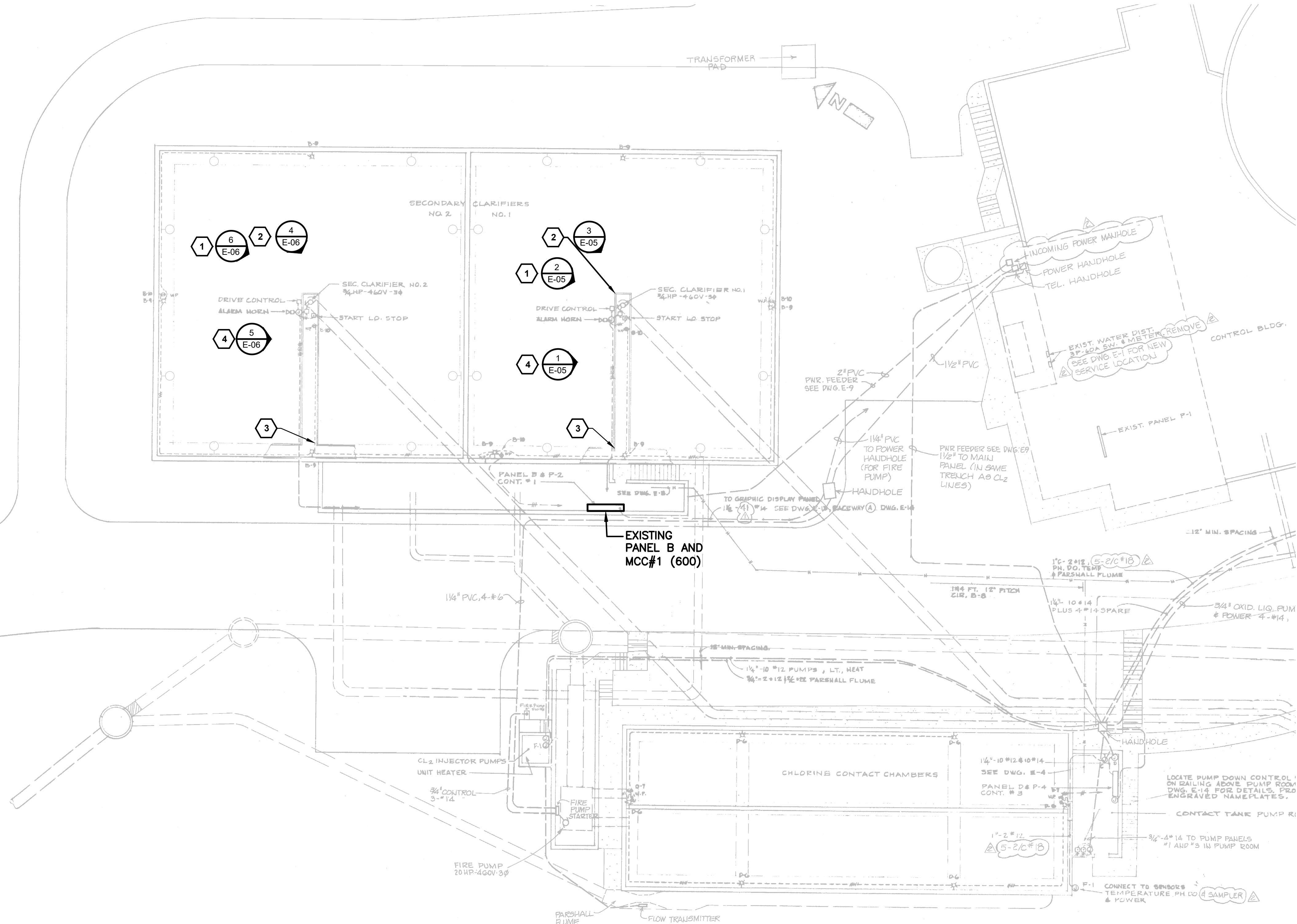
Drawing

E-02

Sheet No. 4

41 /

46
Total

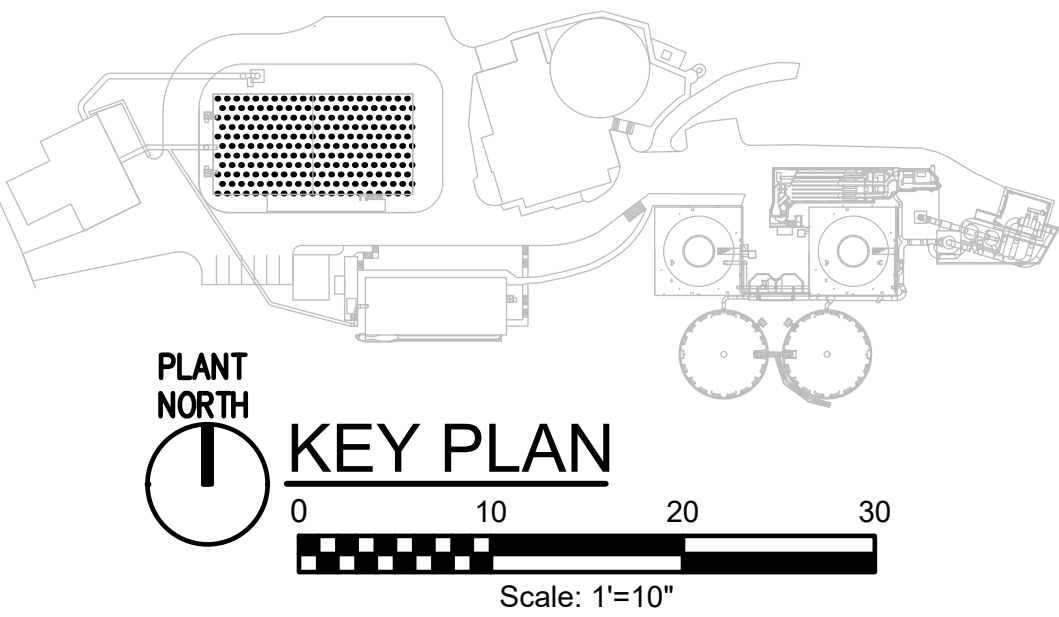


SITE POWER PLAN - SECONDARY CLARIFIERS

1. ALL ITEMS DESCRIBED IN KEY NOTES ARE TYPICAL FOR BOTH SECONDARY CLARIFIERS.

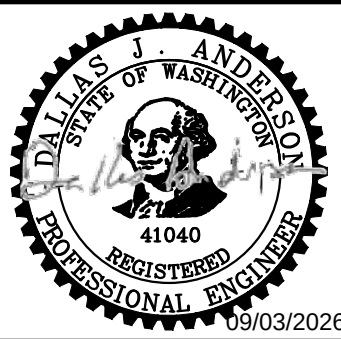
SHEET KEYNOTES

1. FURNISH AND INSTALL NEW CONDUIT TO NEW MOTOR AND REPLACE CONDUCTORS BACK TO PANEL.
2. FURNISH AND INSTALL NEW LUMINAIRE AS A KILLARK. VML-1-X-5-X-30-D-X-X-G-X. FURNISH AND INSTALL NEW CONDUIT AND CONDUCTORS FROM LUMINAIRE BACK TO PANEL.
3. FURNISH AND INSTALL NEW LIGHT SWITCH, CONDUIT, AND CONDUCTORS.
4. FURNISH AND INSTALL A NEW DISCONNECT, START/STOP CONTROL STATION, AND SERVICE RECEPTACLE. FURNISH AND INSTALL NEW CONDUITS AND CONDUCTORS. FURNISH AND INSTALL POWER AND CONTROL WIRING FROM THE NEW CLARIFIER MOTOR THROUGH MCC-600. MAINTAIN THE RESTART FUNCTION AS SHOWN IN THE SECONDARY CONTROL DETAILS ON SHEET E-07. NO NEW HORN, SILENCER, OR STROBE SHALL BE PROVIDED.



NO.	DATE	BY	APRVD	REVISION					
PLANS ISSUED FOR									
BID				CONST			RECORD		
ACTION	DATE	APRVD	ACTION	DATE	APRVD	ACTION	DATE	APRVD	

Designed	D. ANDERSON
Drawn	L. GOUDEAU
Checked	A. PEREZ
Design Review Level	
ISSUED FOR BID	



Jacobs



REDONDO WWTP

PRIMARY AND SECONDARY CLARIFIER REHABILITATION

SECONDARY CLARIFIER SITE POWER PLAN

CONTRACT NO:	PROJECT NO:
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Drawing

F-03

Sheet No.

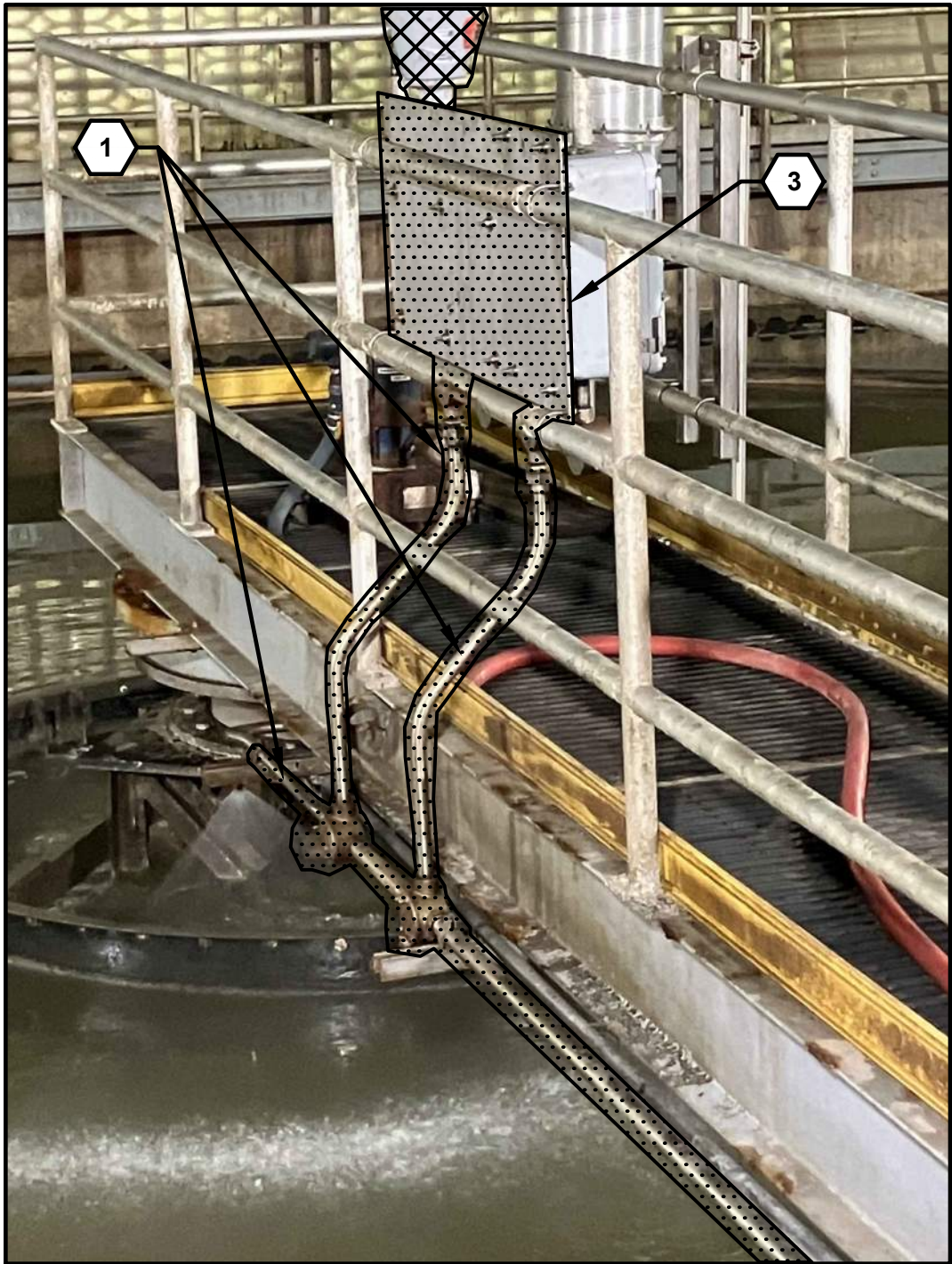
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of Total

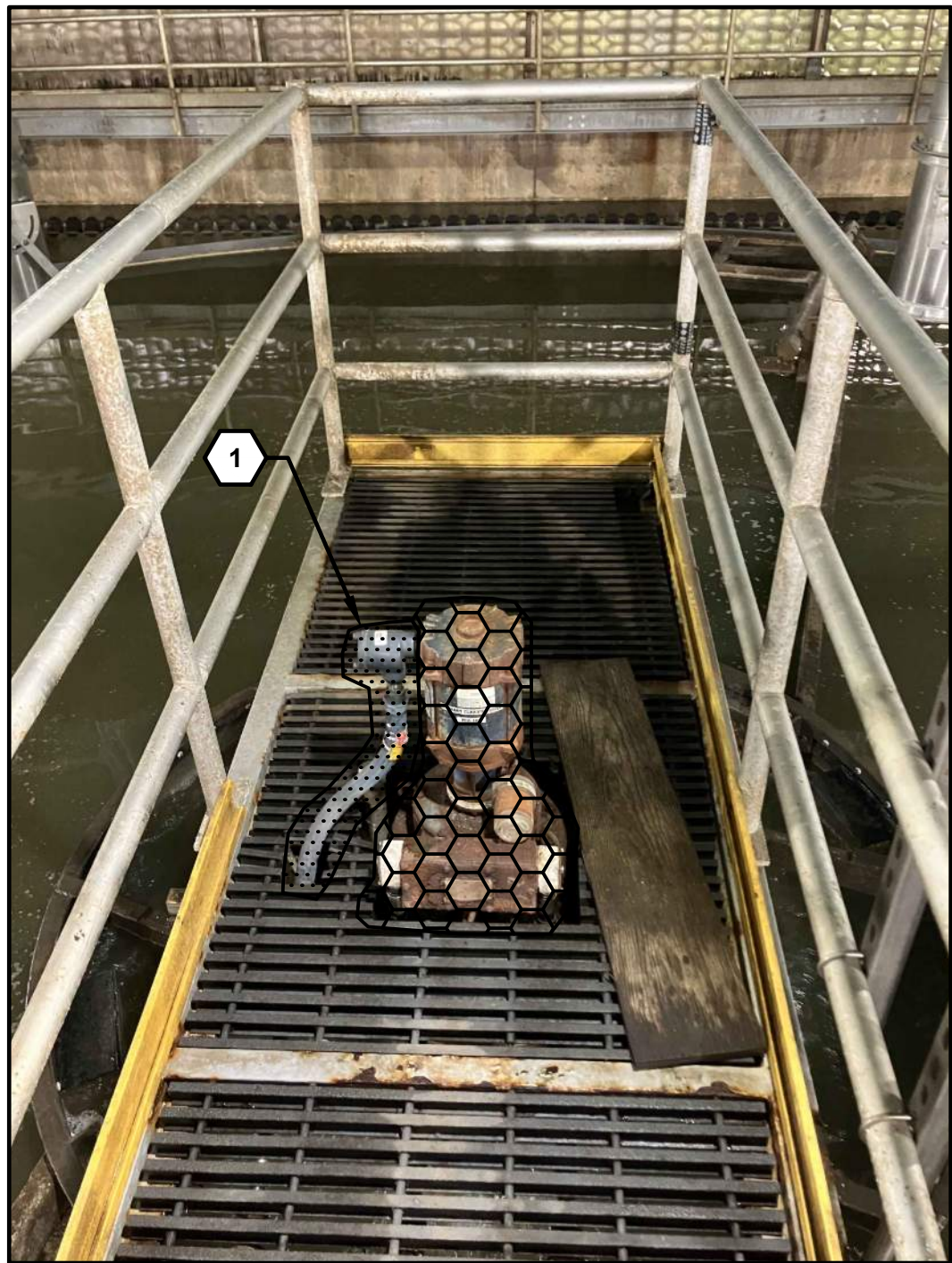
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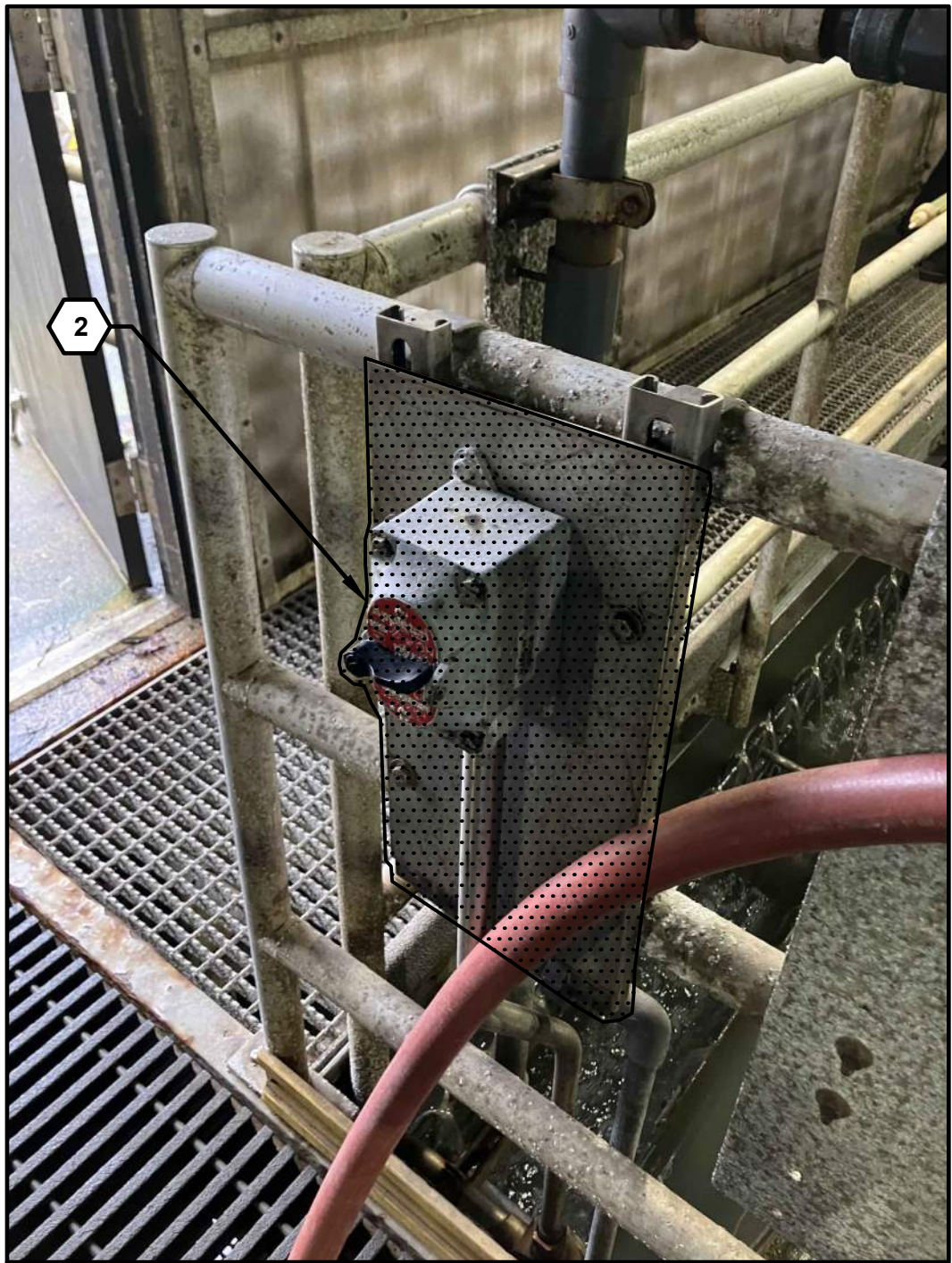
1 PRIMARY CLARIFIER NO 1
E-02 PLATFORM DEVICES



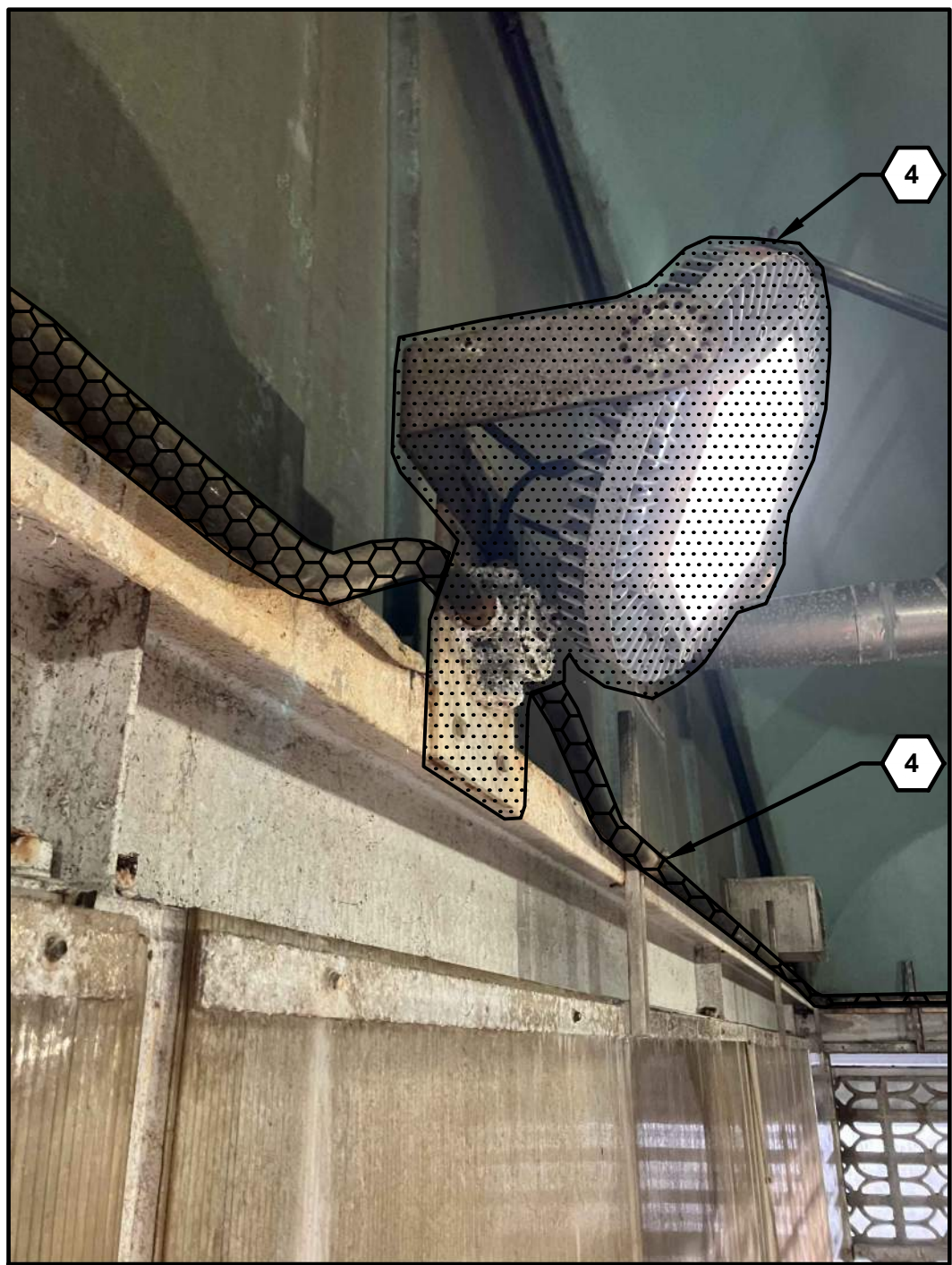
2 PRIMARY CLARIFIER NO 1
E-02 PLATFORM CONDUIT ROUTING



3 PRIMARY CLARIFIER NO 1
E-02 SCRAPER MOTOR



4 PRIMARY CLARIFIER NO 1
E-02 PLATFORM WALKWAY LIGHT SWITCH



5 PRIMARY CLARIFIER
E-02 PERIMETER LUMINAIRES

GENERAL SHEET NOTES

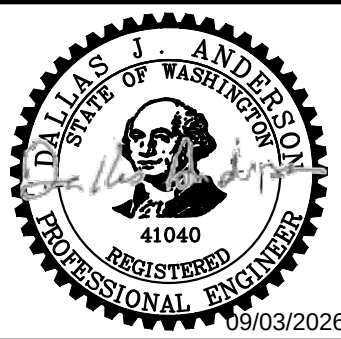
1. IF A SEAL-OFF IS REQUIRED TO BE CUT OUT OF THE CONDUIT RUN FOR REPLACEMENT, REPLACE CONDUCTORS FROM SOURCE TO LOAD SO THERE ARE NO SPLICES.

SHEET KEYNOTES

1. REINSTALL SALVAGED CONDUIT AND CONDUCTORS TO NEW MOTOR. IF CONDUIT AND CONDUCTOR ARE NOT SALVAGEABLE, FURNISH AND INSTALL NEW CONDUIT, CONDUCTORS, AND FITTINGS. TYPICAL FOR BOTH PRIMARY CLARIFIERS.
2. REINSTALL LIGHT SWITCH. INSTALL NEW CONDUITS AND CONDUCTORS AS NEEDED. TYPICAL FOR BOTH PRIMARY CLARIFIERS.
3. REINSTALL DISCONNECT, START/STOP CONTROL STATION, AND SERVICE RECEPTACLE. MAINTAIN RESTART AS SHOWN IN THE PRIMARY CONTROL DETAIL ON SHEET E-07. REUSE CONDUIT, CONDUCTORS, AND FITTINGS IF SALVAGEABLE. IF NECESSARY, FURNISH AND INSTALL NEW CONDUIT, CONDUCTORS, AND FITTINGS.
4. REINSTALL PERIMETER LUMINAIRES. PROVIDE NEW STAINLESS CONDUIT AND CONDUCTORS SUITABLE FOR A CLASS 1 DIV 1 AREA AS NEEDED FOR REINSTALLATION OF LUMINAIRES. FURNISH AND INSTALL NEW CONDUIT AND CONDUCTORS. TYPICAL FOR BOTH PRIMARY CLARIFIERS.
5. HORN, STROBE, AND SILENCER ARE TO BE DEMOLISHED AND NOT REINSTALLED. TYPICAL FOR BOTH PRIMARY CLARIFIERS.

NO.	DATE	BY	APRVD	REVISION
PLANS ISSUED FOR				
BID	DATE	APRVD	CONST	DATE
ACTION	DATE	APRVD	ACTION	DATE

Designed	D. ANDERSON
Drawn	L. GOUDEAU
Checked	A. PEREZ
Design Review Level	ISSUED FOR BID



Jacobs



REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

PRIMARY CLARIFIER
ELECTRICAL PHOTOS

CONTRACT NO:

PROJECT NO:

Drawing

E-04

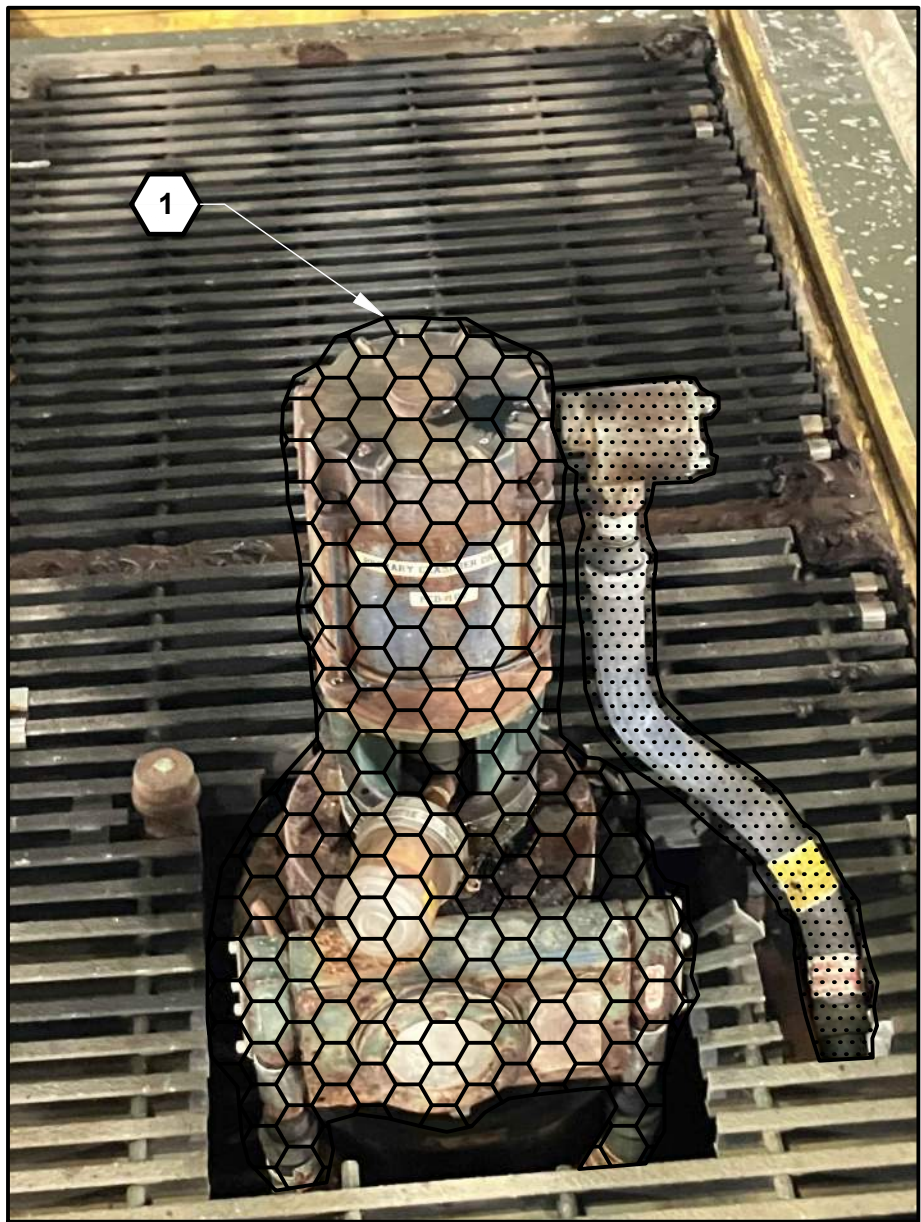
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43

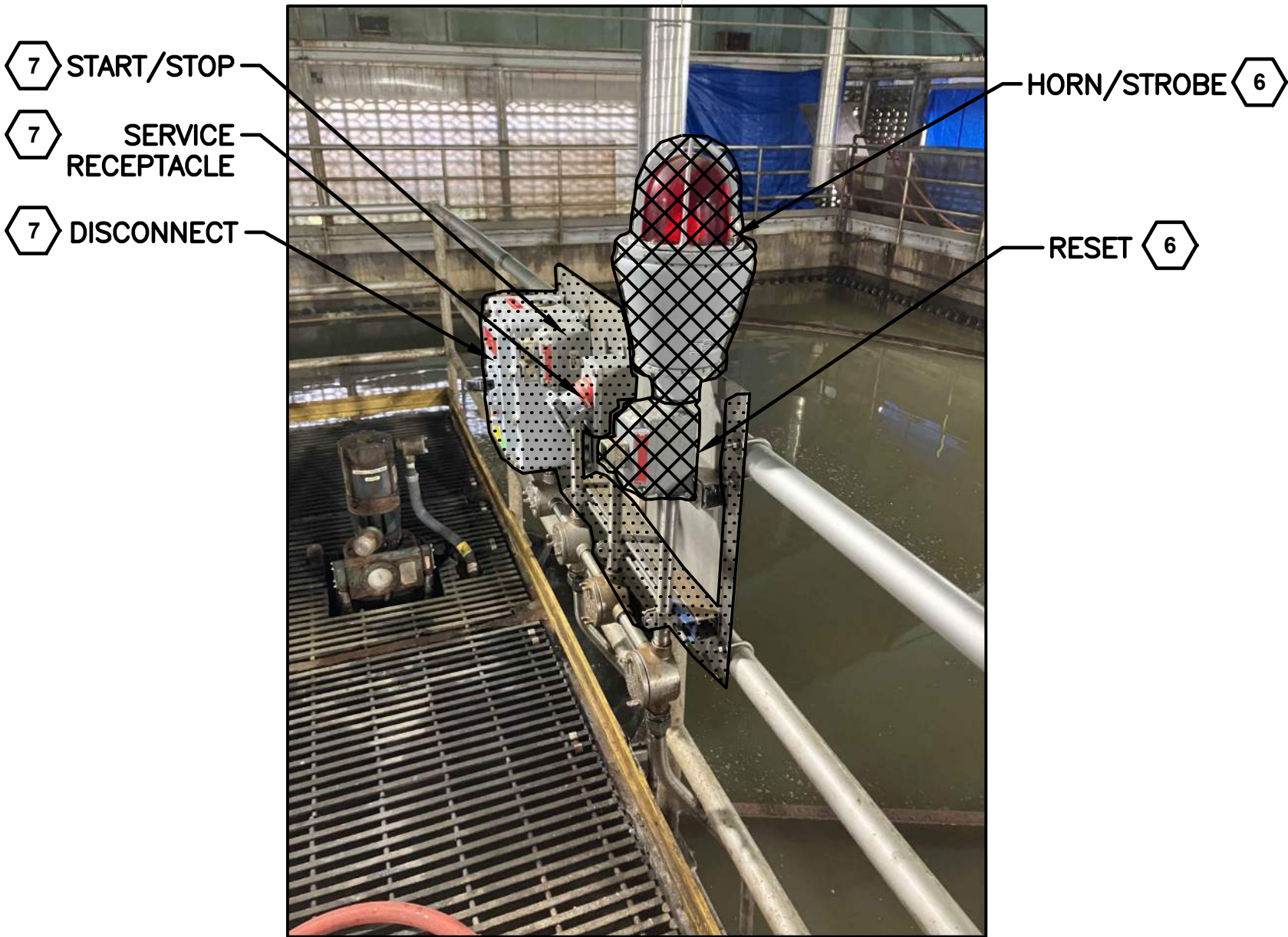
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Of Total

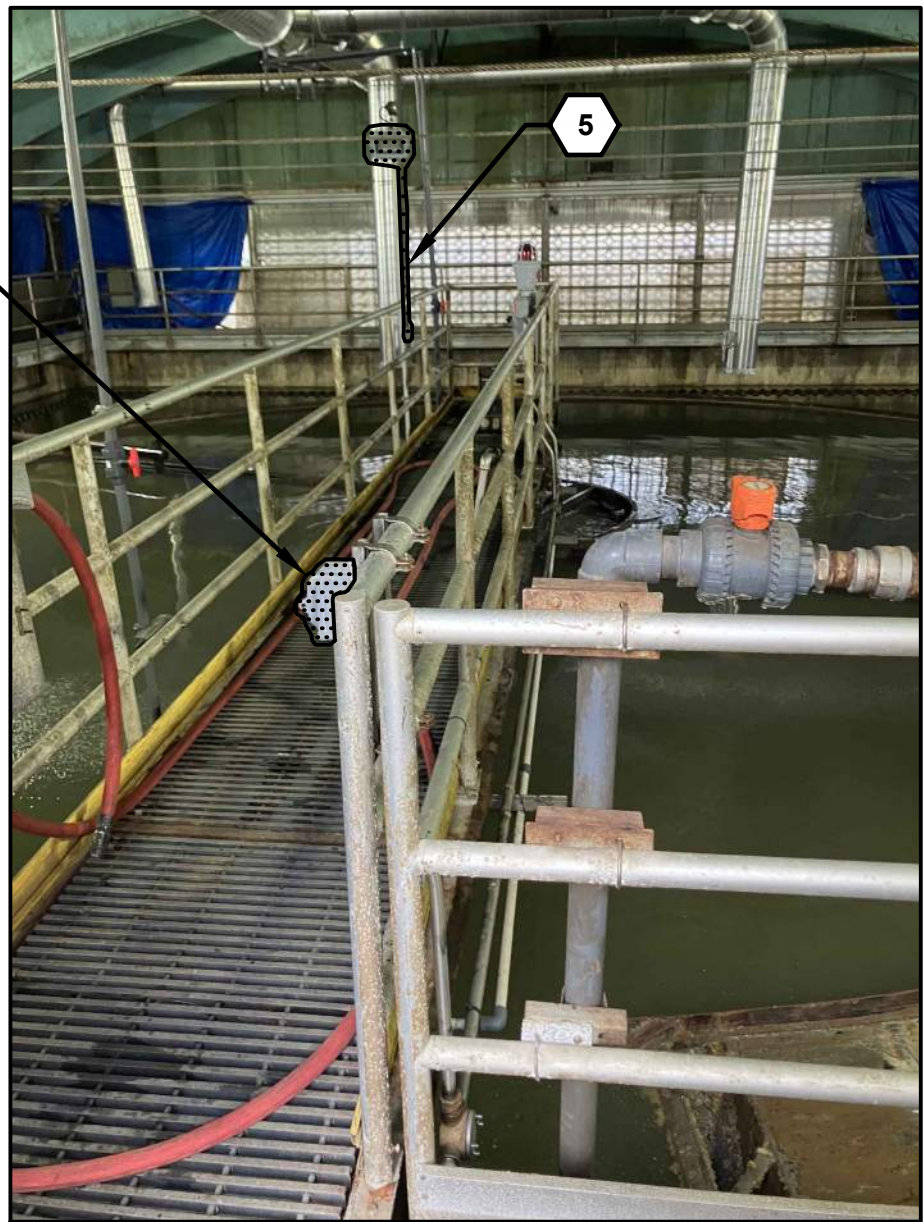
9/2/2026 10:18 AM C:\USERS\GOUDEAU\DC\ACCD\DCS\JACOBIUS.WA_D3730206_REDONDO WWTPS CLARIFIERS REHAB\PROJECT FILES\30 PROJECT DATA\REDONDO WWTP\EL\DRAWINGS\E-05.DWG



6 PRIMARY CLARIFIER NO 2
E-02 DRIVE MOTOR



7 PRIMARY CLARIFIER NO 2
E-02 PLATFORM ELECTRICAL DEVICES



8 PRIMARY CLARIFIER NO 2
E-02 LIGHT SWITCH



1 SECONDARY CLARIFIER NO 1
E-03 PLATFORM DEVICES



2 SECONDARY CLARIFIER NO 1
E-03 SCRAPER MOTOR



3 SECONDARY CLARIFIER NO 1
E-03 LIGHTING MAST

PHOTO DETAILS - SECONDARY CLARIFIER NO. 1
NTS

GENERAL SHEET NOTES

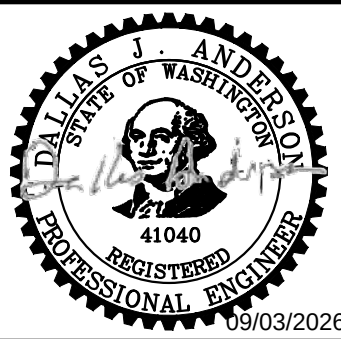
1. IF A SEAL-OFF IS REQUIRED TO BE CUT OUT OF THE CONDUIT RUN FOR REPLACEMENT, REPLACE CONDUCTORS FROM SOURCE TO LOAD SO THERE ARE NO SPLICES.

SHEET KEYNOTES

1. REINSTALL SALVAGED CONDUIT AND CONDUCTORS TO NEW MOTOR. IF CONDUIT AND CONDUCTOR ARE NOT SALVAGEABLE, FURNISH AND INSTALL NEW CONDUIT, CONDUCTORS, AND FITTINGS. TYPICAL FOR BOTH PRIMARY CLARIFIERS.
2. PROVIDE NEW LUMINAIRE AS A KILLARK VML-1-X-5-X-30-D-X-X-G-X. FURNISH AND INSTALL NEW CONDUIT TO LUMINAIRE AND CONDUCTORS BACK TO PANEL. TYPICAL FOR BOTH SECONDARY CLARIFIERS.
3. REINSTALL LIGHT SWITCH. REINSTALL CONDUIT AND CONDUCTOR IF SALVAGEABLE BACK TO PERIMETER WALL. IF CONDUIT AND CONDUCTORS ARE NOT SALVAGEABLE, FURNISH AND INSTALL NEW CONDUIT AND CONDUCTORS.
4. FURNISH AND INSTALL NEW DISCONNECT, START/STOP CONTROL STATION, AND SERVICE RECEPTACLE. MAINTAIN RESTART AS SHOWN IN THE SECONDARY CONTROL DETAIL ON SHEET E-07. FURNISH AND INSTALL NEW CONDUIT AND CONDUCTORS BACK TO THE PERIMETER WALL. FURNISH AND INSTALL NEW POWER AND CONTROL WIRING FROM THE NEW FROM THE NEW CLARIFIER MOTOR THROUGH MCC-600. TYPICAL FOR BOTH SECONDARY CLARIFIERS.
5. REINSTALL LIGHT MAST. REINSTALL CONDUIT AND CONDUCTOR IF SALVAGEABLE BACK TO PERIMETER WALL. IF CONDUIT AND CONDUCTORS ARE NOT SALVAGEABLE, FURNISH AND INSTALL NEW CONDUIT AND CONDUCTORS. TYPICAL FOR BOTH PRIMARY CLARIFIERS.
6. HORN, STROBE, AND SILENCER ARE TO BE DEMOLISHED AND NOT REINSTALLED. TYPICAL FOR BOTH PRIMARY CLARIFIERS.
7. REINSTALL DISCONNECT, START/STOP CONTROL STATION AND SERVICE RECEPTACLE. MAINTAIN RESTART AS SHOWN IN THE PRIMARY CONTROL DETAIL ON SHEET E-07. REINSTALL SALVAGED CONDUIT AND CONDUCTORS. IF CONDUIT AND CONDUCTORS ARE NOT SALVAGEABLE, FURNISH AND INSTALL NEW CONDUIT CONDUCTORS. TYPICAL FOR BOTH PRIMARY CLARIFIERS.
8. FURNISH AND INSTALL NEW CONDUIT TO NEW MOTOR. FURNISH AND INSTALL NEW CONDUCTORS BACK TO PANEL. TYPICAL FOR BOTH SECONDARY CLARIFIERS.

NO.	DATE	BY	APRVD	REVISION
PLANS ISSUED FOR				
BID	DATE	APRVD	CONST	RECORD
ACTION	DATE	APRVD	ACTION	DATE

Designed	D. ANDERSON
Drawn	L. GOUDEAU
Checked	A. PEREZ
Design Review Level	ISSUED FOR BID



Jacobs



REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

Drawing E-05	
Sheet No. 44	46 Of Total
CONTRACT NO:	PROJECT NO:

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4 SECONDARY CLARIFIER NO 2
E-03 LIGHTING MAST



5 SECONDARY CLARIFIER NO 2
E-03 PLATFORM DEVICES



6 SECONDARY CLARIFIER NO 2
E-03 SCRAPER MOTOR

- SHEET KEYNOTES
1.

FURNISH AND INSTALL NEW LUMINAIRE AS A KILLARK VML-1-X-5-X-30-D-X-X-G-X FURNISH AND INTALL NEW CONDUIT TO LUMINAIRE AND CONDUCTORS BACK TO PANEL. TYPICAL FOR BOTH SECONDARY CLARIFIERS.
2.

NOT USED.
3.

FURNISH AND INSTALL NEW DISCONNECT, START/STOP CONTROL STATION, AND SERVICE RECEPTACLE. FURNISH AN INSTALL NEW CONDUITS BACK TO THE PERIMETER WALL. FURNISH AND INSTALL POWER AND CONTROL WIRING FROM THE NEW CLARIFIER MOTOR THROUGH MCC-600. MAINTAIN THE RESTART FUNCTION AS SHOWN IN THE SECONDARY CONTROL DETAILS ON SHEET E-07. NO NEW HORN, SILENCER, OR STROBE SHALL BE PROVIDED. TYPICAL FOR BOTH SECONDARY CLARIFIERS.
4.

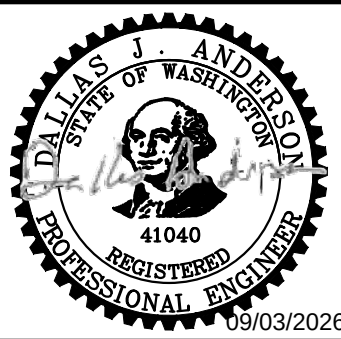
FURNISHED AND INSTALL NEW CONDUIT TO NEW MOTOR AND REPLACE CONDUCTORS BACK TO PANEL. SEE SHEET E-04 FOR MORE DETAILS. TYPICAL FOR BOTH SECONDARY CLARIFIERS.

PHOTO DETAILS - SECONDARY CLARIFIER NO. 2

NTS

NO.	DATE	BY	APRVD	REVISION					
PLANS ISSUED FOR									
BID				CONST			RECORD		
ACTION	DATE	APRVD		ACTION	DATE	APRVD	ACTION	DATE	APRVD

Designed
D. ANDERSON
Drawn
L. GOUDEAU
Checked
A. PEREZ
Design Review Level
ISSUED FOR BID



Jacobs



REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

SECONDARY CLARIFIER
ELECTRICAL PHOTOS

CONTRACT NO:

PROJECT NO:

Drawing

E-06

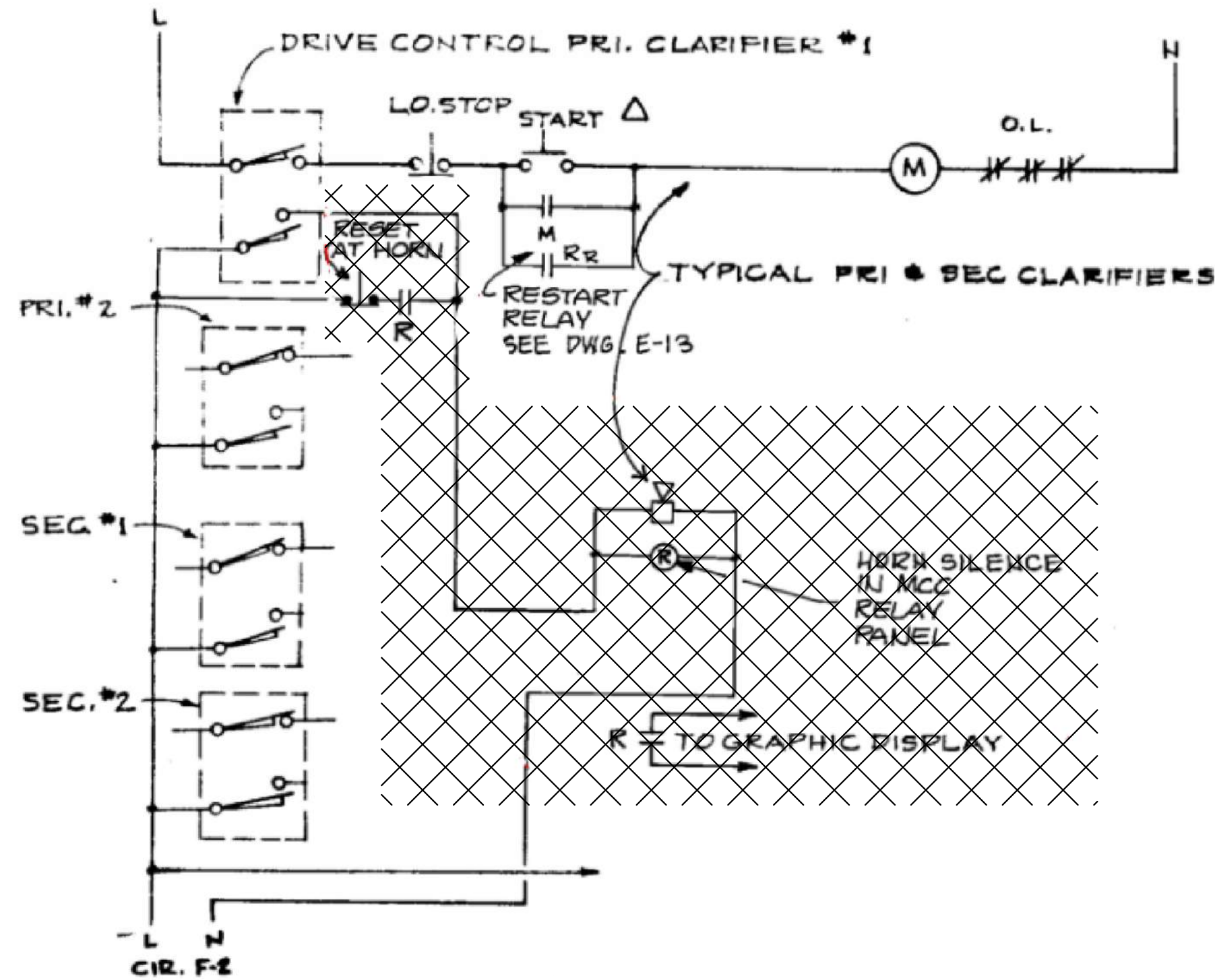
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45

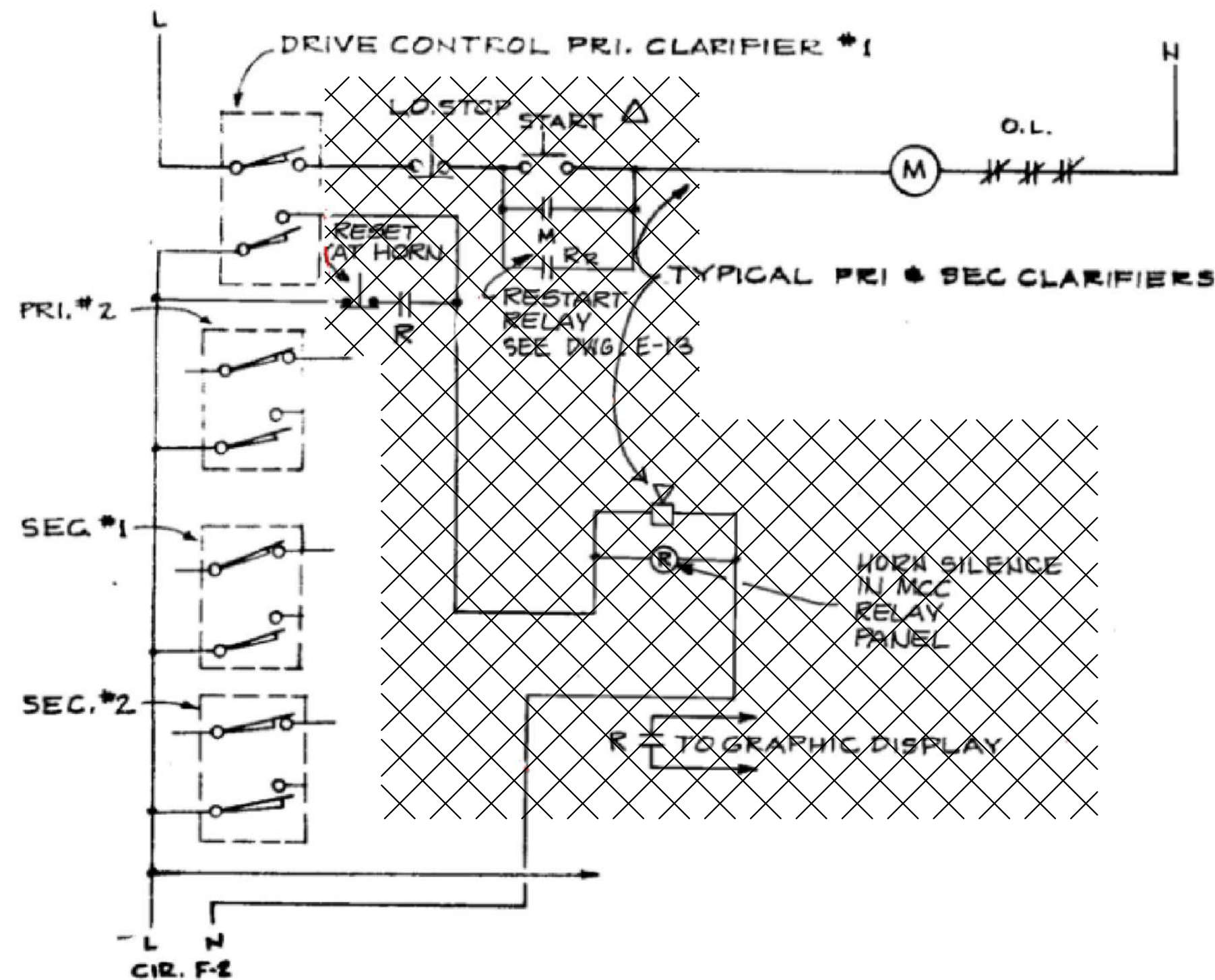
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Of Total

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PRIMARY CLARIFIER CONTROL AND ALARM



SECONDARY CLARIFIER CONTROL AND ALARM

SECONDARY PUMP ROOM
MOTOR CONTROL CENTER MCC-600
EXISTING ELEVATION FOR OXY PHOGG
ARC RATING PPE MIN 0.3 CAL/CM2
UPDATED AUGUST 1, 2022

SECTION #1	SECTION #2	SECTION #3	SECTION #4
6" WIRING ACCESS	6" WIRING ACCESS	6" WIRING ACCESS	6" WIRING ACCESS
6" UNUSABLE SPACE	6" UNUSABLE SPACE	6" UNUSABLE SPACE	EXHAUST FAN EF-601 & CONTROL RELAYS STARTERS (2) SIZE 1 O/L B 5.50
MAIN BREAKER 225AMP	HOT WATER HEATER HW-601 BREAKER 30AMP CP-601 P-607 P-608 BREAKER 15AMP	UNIT HEATER UH-601 BREAKER 20AMP UNIT HEATER UH-602 BREAKER 20AMP	
SECONDARY CLARIFIER SLUDGE PUMP #1 P-601/7A BRKR STARTER SIZE 1 O/L B 4.85	SECONDARY SCUM PUMP #2 P-606 STARTER SIZE 1 O/L B 7.70 15AMP	PANEL B	
SECONDARY CLARIFIER SLUDGE PUMP #2 P-602 30AMP	SECONDARY SCUM PUMP #1 P-605 STARTER SIZE 1 O/L B 7.70 15AMP		SLUDGE PUMP & SCUM PUMP CONTROLS RESETS
SECONDARY CLARIFIER SLUDGE PUMP #3 P-603 30AMP	SECONDARY CLARIFIER DRIVE #1 SCD-601 STARTER SIZE 1 O/L B 1.67 3AMP	10 KVA TRANSFORMER & BREAKER 30AMP	SUPPLY FAN SF-601 STARTER SIZE 1 O/L AR 3.62 7AMP
SPARE 30 AMP BREAKER	SECONDARY CLARIFIER DRIVE #2 SCD-602 STARTER SIZE 1 O/L B 0.871 3AMP		SUPPLY FAN SF-602 STARTER SIZE 1 O/L AR 3.62 7AMP
SPARE 30 AMP BREAKER	SECONDARY SCUM PUMP #4 P-604 STARTER SIZE 1 O/L B 4.85 7AMP		12" BLANK
6" WIRING ACCESS	6" WIRING ACCESS	6" WIRING ACCESS	6" WIRING ACCESS

UPDATED AUGUST 1, 2022

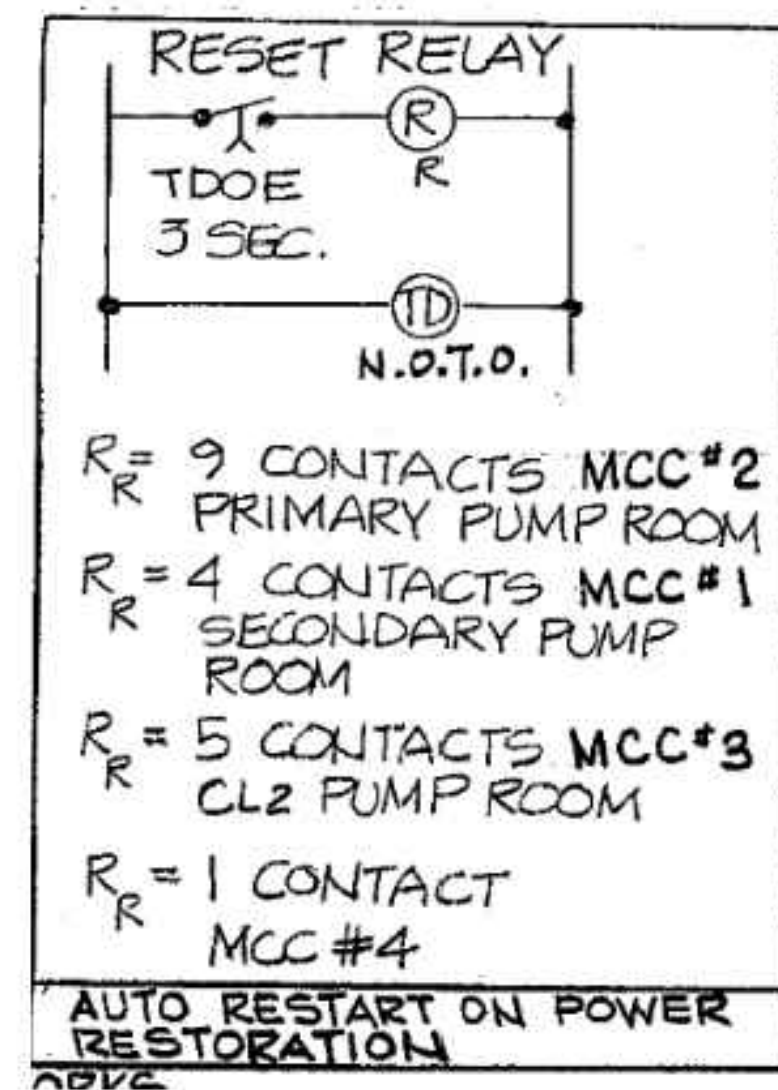
PRIMARY PUMP ROOM
MOTOR CONTROL CENTER MCC-100
SOUTH SIDE EXISTING (2020) ELEVATION FOR OXY I
ARC RATING PPE MIN 20.6 CAL/CM2
AUGUST 1, 2022

SECTION #1	SECTION #2	SECTION #3	SECTION #4
6" WIRING ACCESS	6" WIRING ACCESS	6" WIRING ACCESS	6" WIRING ACCESS
MAIN BREAKER SECTION 1000AMP	BIO-TOWER PUMP P-101 OXY LIQUOR PUMP P-808 BREAKER 150AMP	BIO-TOWER PUMP P-103 OXY LIQUOR PUMP P-809 BREAKER 150AMP	BIO-TOWER PUMP P-105 OXY LIQUOR PUMP P-810 BREAKER 150AMP
PRIMARY CLARIFIER DRIVE PCD-101 STARTER SIZE 1 O/L B 6.90 3AMP	GRIT COLLECTOR GC-101 STARTER SIZE 1 O/L AR 2.71 3 AMP	BAR SCREEN MCS-101 BREAKER 20AMP 30AMP	MAKE UP UNIT MU-101 BREAKER 20AMP
PRIMARY CLARIFIER DRIVE PCD-101 STARTER SIZE 1 O/L B 1.67 3AMP	GRIT COLLECTOR GC-102 STARTER SIZE 1 O/L B 1.88 3 AMP	SPARE STARTER SIZE 1 O/L B 3.00 7AMP	PRIMARY SCUM PUMP P-103 STARTER SIZE 1 O/L B 14 15AMP
6" BLANK	GRIT COLLECTOR GC-103 STARTER SIZE 1 O/L AR 1.88 3 AMP	SPARE STARTER SIZE 1 O/L B 3.00 7AMP	PRIMARY SCUM PUMP P-101 (P108?) STARTER SIZE 1 O/L B 8.20 20AMP
30 KVA TRANSFORMER	GRIT COLLECTOR GC-104 STARTER SIZE 1 O/L B 1.65 3 AMP	PRIMARY SLUDGE PUMP P-101 STARTER SIZE 1 O/L B 14 15AMP	PRIMARY SLUDGE PUMP P-102 (P109?) STARTER SIZE 1 O/L B 8.20 20AMP
	GRIT COLLECTOR GC-105 STARTER SIZE 1 O/L B 1.88 3 AMP	PRIMARY SLUDGE PUMP P-102 STARTER SIZE 1 O/L B 14 15AMP	MCC-100 POWER DISTR. PANEL #P-102 BREAKER 100AMP
			SPARE 100 AMP BREAKER
	6" WIRING ACCESS	6" WIRING ACCESS	6" WIRING ACCESS

UPDATED AUGUST 1, 2022

MCC ELEVATIONS

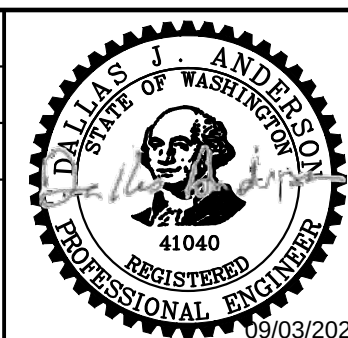
- REPLACE TYPE B OVERLOADS TO MATCH NEW CLARIFIER SCRAPER MOTOR REQUIREMENTS.
- DOCUMENT THE TERMINALS IN THE EXISTING CLARIFIER CONTROL AND ALARM DIAGRAMS PRIOR TO REMOVING CONDUCTORS FROM THE MCC BUCKETS TO THE PLATFORM DEVICES. ASSIGN TERMINAL NUMBERS TO THE DIAGRAMS. PROVIDE NEW CONDUCTORS FOR REINSTALLED/NEW DEVICES AND TERMINATE ON IDENTIFIED TERMINALS. LABEL CONDUCTORS AT BOTH ENDS. RECORD DRAWINGS SHALL BE PROVIDED TO THE OWNER UPON PROJECT COMPLETION. SUBMIT FIELD-VERIFIED AS-BUILT CONTROL DIAGRAMS TO THE OWNER FOR REVIEW AND APPROVAL PRIOR TO DISCONNECTING OR REMOVING ANY CONDUCTORS.
- PRESERVE AUTO RESTART FOR ALL CLARIFIERS.



AUTO RESTART

NO.	DATE	BY	APRVD	REVISION
				PLANS ISSUED FOR
BID				
ACTION	DATE	APRVD	ACTION	DATE

Designed
D. ANDERSON
Drawn
L. GOUDEAU
Checked
A. PEREZ
Design Review Level
ISSUED FOR BID



Jacobs



REDONDO WWTP
PRIMARY AND SECONDARY CLARIFIER
REHABILITATION

PRIMARY AND SECONDARY
CONTROLS, AUTO RESTART DIAGRAM,
AND MCC ELEVATIONS

CONTRACT NO:

PROJECT NO:

Drawing

E-07

Sheet No.

46

46

Of Total