



Design Review Subcommittee (DRSC)

Meeting Date: October 9, 2019

PLANNER: David Carrillo, Assistant Planner

SUBJECT: **Well Filtration Plant Rehabilitation Chemical Storage Building Project No. 16408**, a request for design feedback on a new 320 square-foot utility storage building that will serve the City's well water treatment system at the Municipal Golf Course.

BACKGROUND:

Project Description

The City's Well Filter Plant is located at the north corner of Avenida Santa Margarita and Calle Bahia in the Publicly and Privately Owned Golf Course (OSC) Zone. Refer to the location map in Attachment 1. The facility currently treats water from Wells 6 and 8 with gaseous Chlorine (Cl₂) and gaseous Sulfur Dioxide (SO₂), and supplies water to the City's 1-295 service zone (Reservoir 1). The project involves the construction of a chemical storage building to accommodate a safer water treatment method that will eliminate the use of gaseous chemicals and replace them with liquid Sodium Hypochlorite (NaOCl), liquid Sodium Bisulfite (NaHSO₃), and liquid Aqueous Ammonia (NH₃).

The first two chemicals will be housed in a new 320 square-foot chemical storage building located near the Well Filter Plant. An existing generator and gas scrubber will be removed to accommodate the location of the new storage building. The utility building is 16'-0" x 20'-0" in area and 12 feet, 8 inches in height. Proposed materials include brown concrete roof shingles and light brown stucco. See Attachment 2 for construction plans. The third chemical, ammonia, will be housed in an existing building constructed of CMU block located at the Reservoir 1 site. Both storage buildings are unmanned and will periodically be inspected by Utilities staff for routine equipment maintenance.

Why is DRSC Review Required?

Per Zoning Ordinance Section 17.28.230, capital improvement projects are subject to review procedures outlined in the City's Public Works Department policy (Policy No. 102-8). The policy encourages the Public Works Department to ensure projects are designed to meet City standards while collaborating with appropriate City divisions. The policy also gives the Public Works Director discretion on how to resolve design issues. Additionally, General Plan Policy UD-5.09, Public Buildings, states "We require Spanish Colonial Revival architecture for the development and major remodels of public buildings..."

The Public Works Director, Tom Bonigut, referred the project to the Design Review Subcommittee (DRSC) for feedback on the appropriateness of Spanish Colonial Revival architecture on the proposed utility building.

ANALYSIS:

The proposed utility building is designed to match other utility buildings in San Clemente consisting of brown concrete roof shingles and light brown stucco. The project would mimic the existing utility building shown in Attachment 3. The majority of all utility buildings with this design are located in areas not highly visible by the community. The project differs from other utility buildings in that it is centrally located between residential neighborhoods and the Municipal Golf Course. The proposed building is only intended to be occupied by the City Utilities Division, and not by members of the community. However, streets and pathways surrounding the project area make the proposed building visible by drivers, residents, and golfers. Image 1 below shows the project area and its relation between residences, streets, and pathways. See Attachment 4 for photos of the project area.

Image 1 – Project Site



The project is not located in an Overlay District, Specific Plan, or a Focus Area where a specific type of architecture is identified for new buildings. However, Policy UD-5.09 of the General Plan mentioned above requires Spanish Colonial Revival architecture for new public buildings. Recent examples of “public buildings” include the Talega fire station, Aquatics Center, and Vista Bahia Park restroom. It is unclear whether the policy applies to accessory utility structures, such as the new unmanned chemical storage building.

Various factors were considered in the development of the project's design, including: previously approved utility building designs, the approved CIP budget, ongoing maintenance costs, and potential damage to the building (i.e., golf balls hitting the roof). Staff assessed potential damage to the building and concluded that trees and shrubs provide a physical barrier between the project and nearest tee box, thereby alleviating any physical threats from golf balls. Additionally, golfers do not tee off towards the project area, and instead direct golf balls along the fairway towards Vista Bahia Park. Although golf balls are not intended to travel towards the proposed storage building, it is possible that mishit golf balls could make contact with the proposed building and damage roof materials. Per staff's assessment, deviation from typical Spanish Colonial Revival (SCR) materials and detail can be considered for durability purposes, while still achieving a SCR appearance.

RECOMMENDATIONS:

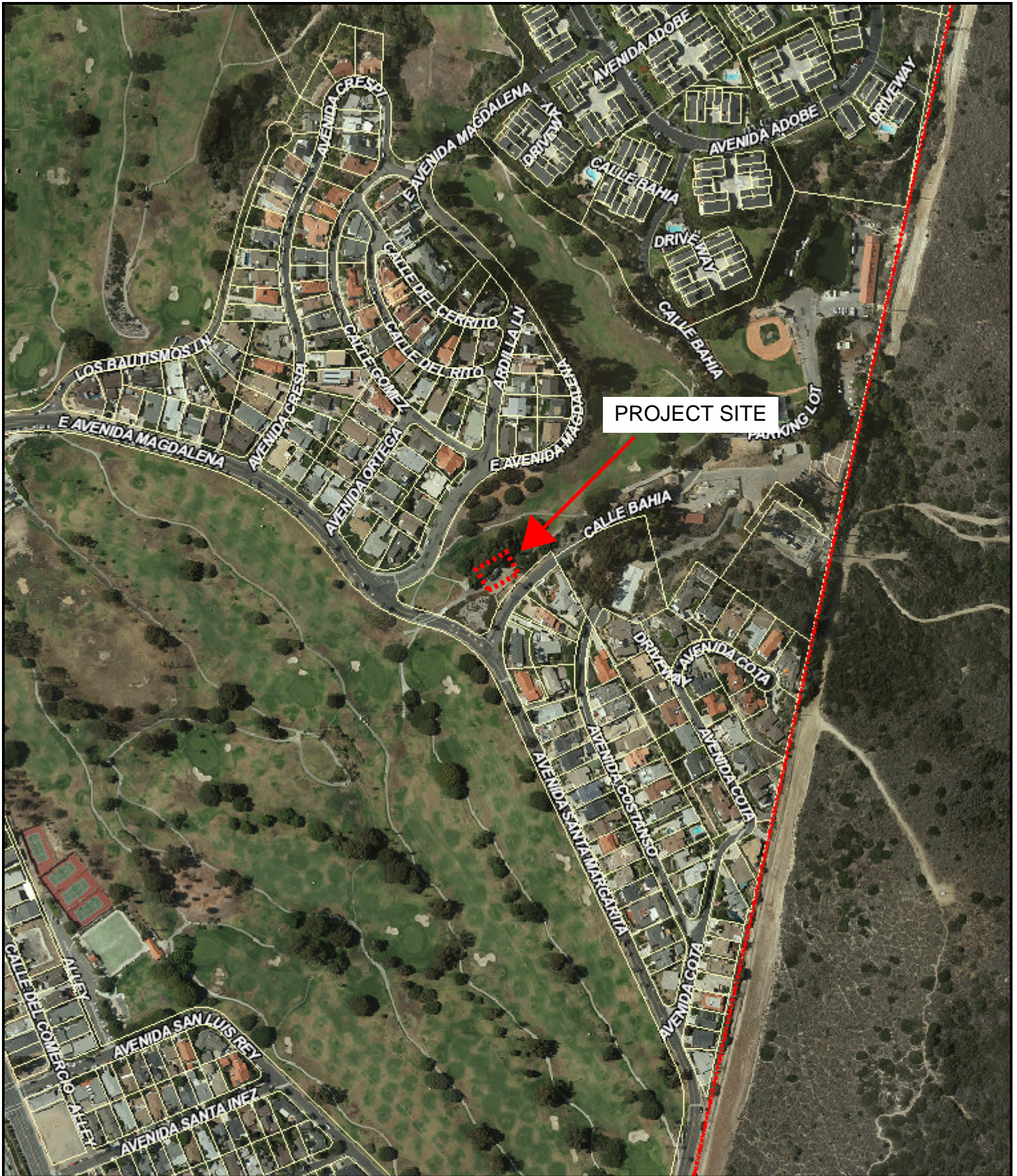
Staff seeks input from DRSC on the building design and a determination on whether the application of SCR architecture is appropriate. While the project is not a typical "public building," its location and visibility to the public warrant the need to incorporate some SCR design elements into the storage building. Staff recommends incorporating one or more basic SCR elements, such as (in order of highest to lowest priority):

1. White stucco;
2. Metal Spanish tile such as Decra Villa Metal Tile (see Attachment 5);
(Note: Typically, two-piece clay tile roofs are recommended for SCR buildings. However, in order to address cost, damage, and maintenance concerns, staff believes metal material is an appropriate alternative for the utility building.)
3. Exposed rafter tails;
4. Decorative clay tile gable vents; and/or
5. Vertical landscaping directly adjacent to the building.

The Subcommittee's recommendations will be forwarded to the Public Works Director for consideration in the final construction plans. The approved budget allows design improvements to the proposed utility building. However, full integration of Spanish Colonial Revival architectural elements may impact available funds for maintenance of existing utility buildings and future projects.

Attachments:

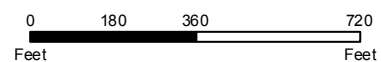
1. Location Map
2. Construction Plans
3. Photograph of Existing Utility Building
4. Photos of Project Area
5. Decra Villa Metal Tile Brochure

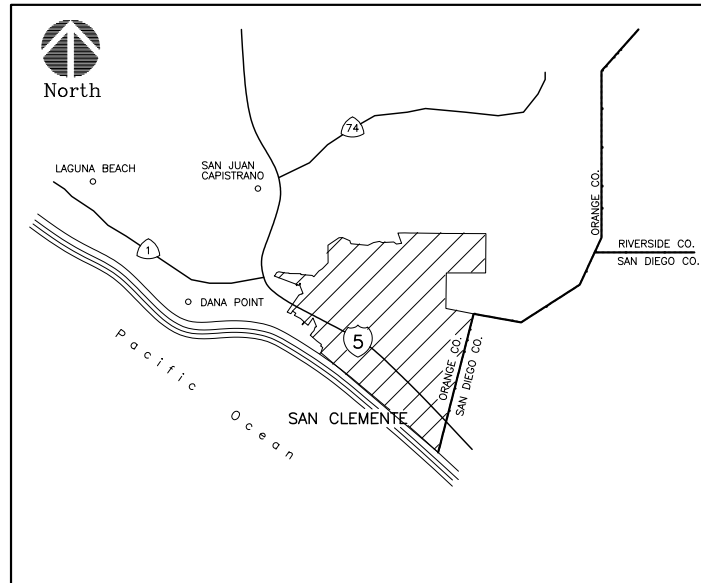


City of San Clemente

City of San Clemente: Project No. 16408

Well Filtration Plant Chemical Storage Building





VICINITY MAP

N.T.S.

CITY OF SAN CLEMENTE

WELL FILTER PLANT REHABILITATION

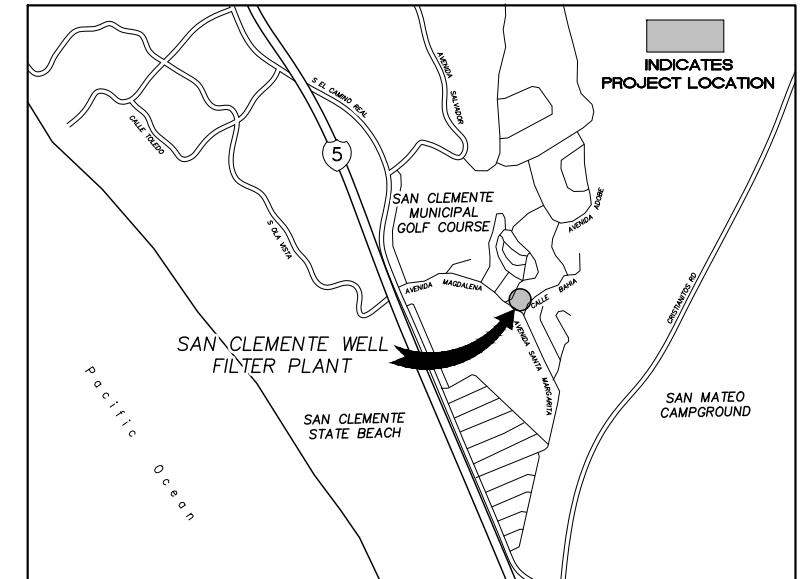
CHEMICAL STORAGE BUILDING

PROJECT NO. 16408



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FP-9	12	WELL FILTER PLANT – FILTRATION PLANT MECHANICAL PLAN			
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FP-11	14	WELL FILTER PLANT – CHEMICAL BUILDING CONDUIT PLAN			
FP-12	15	WELL FILTER PLANT – CHEMICAL BUILDING LIGHTING AND RECEPTACLE PLAN			

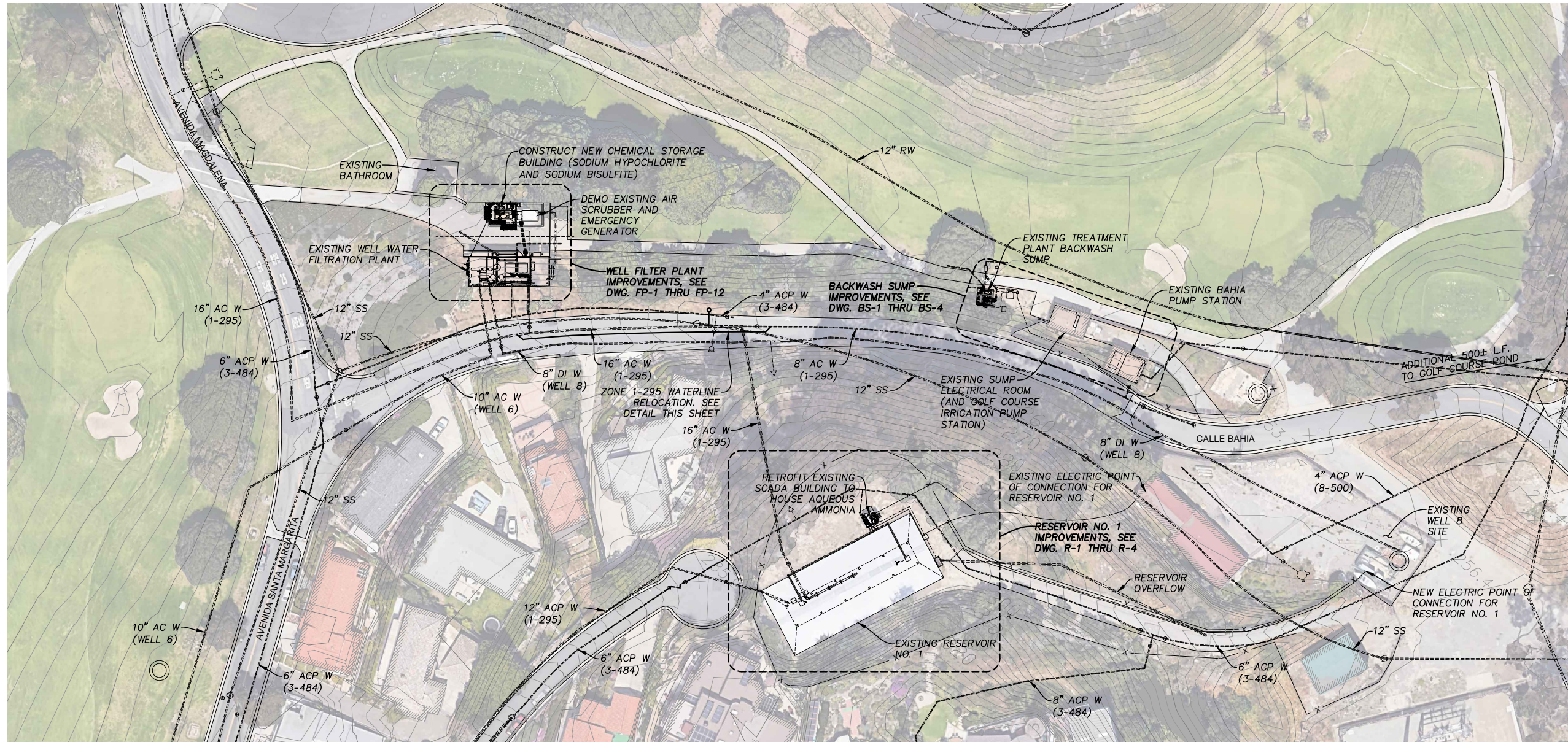


LOCATION MAP

N.T.S.

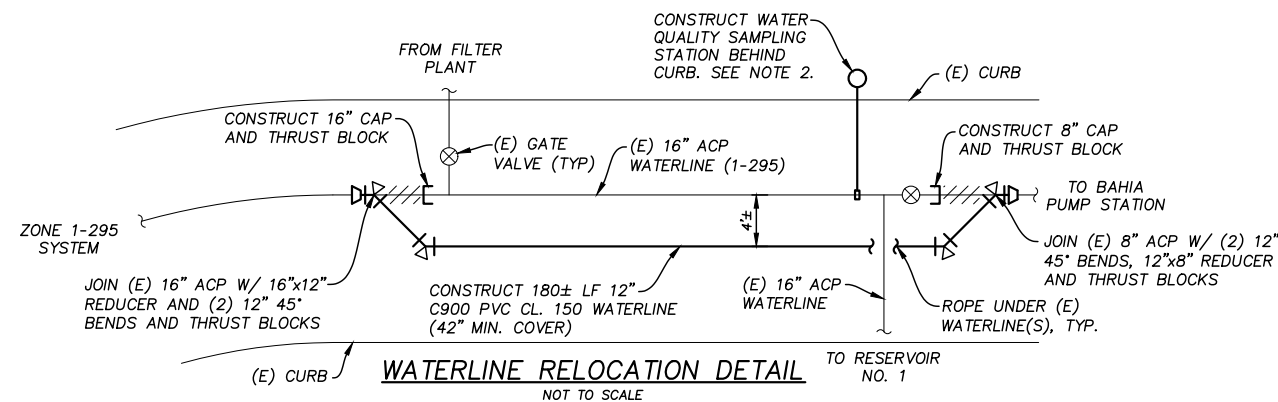


REVISIONS		REFERENCES		APPROVALS		ENGINEERING SCALE : DRAWN BY : D.B. DESIGNED BY : D.B. DATE: 8/29/19 CHECKED BY : GARY J. HOBSON APPROVED : D.T. REBENSORF RCE C60091 DATE DEPUTY PUBLIC WORKS DIRECTOR	WELL FILTER PLANT REHABILITATION CHEMICAL STORAGE BUILDING PROJECT NO. 16408 TITLE SHEET, VICINITY AND LOCATION MAPS, AND SHEET INDEX CITY OF SAN CLEMENTE	DRAWING NO: T-1 SHEET 1 OF 24
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OVERALL SITE PLAN

SCALE: 1" = 40'



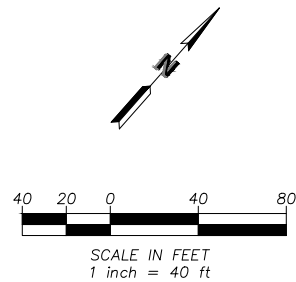
NOTES:

- RECORDS DRAWINGS ARE NOT AVAILABLE AND UTILITIES SHOWN ARE BASED ON ATLAS MAPS. CONTRACTOR SHALL CONTACT U.S.A. AND VERIFY LOCATION AND DEPTHS OF UTILITIES.
- CONSTRUCT WATER QUALITY SAMPLING STATION (TO BE FIELD LOCATED): INCLUDING 3/4" x 16" DOUBLE STRAP BRONZE SERVICE SADDLE, 3/4" BALL CORP STOP, 3/4" TYPE K COPPER TUBING, SAMPLING STATION METER BOX WITH 3/4" BALL VALVE AND 3/4" TYPE K COPPER TUBING FROM METER BOX TO 1/2" SS KORALEEN WATER QUALITY SAMPLING STATION (COMPLETE WITH 1/2" x 3/8" SHUT-OFF VALVE AND 3/8" SS SAMPLING TUBE), 3/4" x 1/2" DIELECTRIC FITTING TO CONNECT WATER QUALITY SAMPLING STATION TO COPPER TUBING, KORALEEN 6" O.D. ALUMINUM HOUSING AND LID WITH FLUSH MOUNTED LOCK, ALUMINUM HOUSING TO BE FILLED WITH PEA GRAVEL, AND MISCELLANEOUS FITTINGS AND BRASS NIPPLES. ALL INSTALLED PER KORALEEN ENTERPRISES, ESCONDIDO, CA, TELEPHONE (760) 743-0407, INSTALLATION INSTRUCTIONS USING CITY OF SAN CLEMENTE APPROVED MATERIALS.

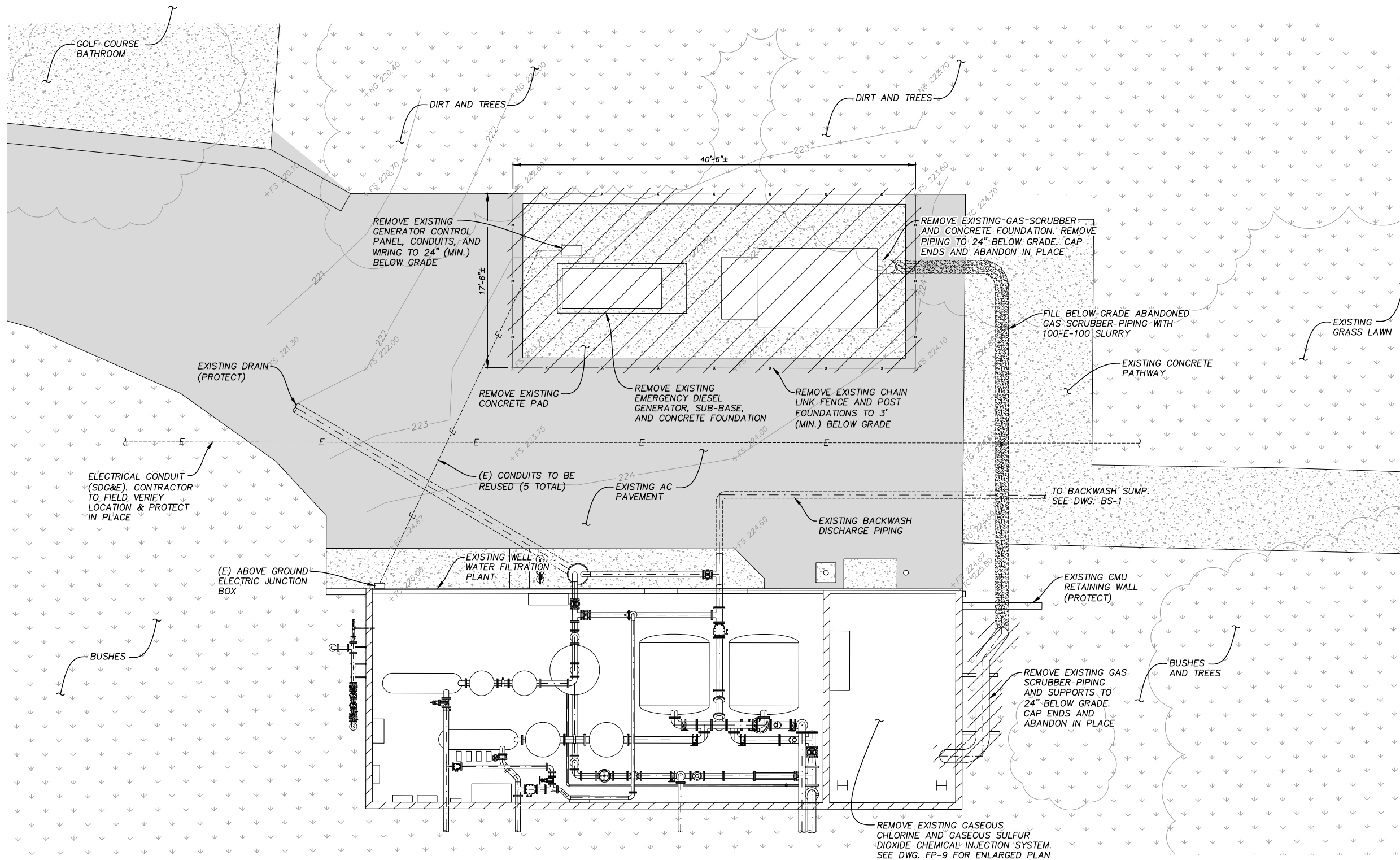
Underground Service Alert
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TWO WORKING DAYS BEFORE YOU DIG



ENGINEERING SCALE :		DATE:	CITY OF SAN CLEMENTE WELL FILTER PLANT REHABILITATION CHEMICAL STORAGE BUILDING PROJECT NO. 16408 OVERALL SITE PLAN CITY OF SAN CLEMENTE	DRAWING NO: C-1	
DRAWN BY : D.B.		DESIGNED BY : D.B.		8/29/19	SHEET 3
CHECKED BY : GARY J. HOBSON		APPROVED : SEE DRAWING T-1 D.T. REBENSORF RCE C60091 DEPUTY PUBLIC WORKS DIRECTOR		OF 24	
REV.	DATE:	DESCRIPTION	BY:	APP'VD:	REVISIONS
		REFERENCES			APPROVALS



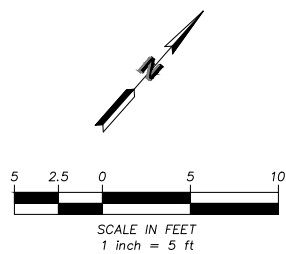
DEMOLITION PLAN
SCALE: 1" = 5'-0"

SHEET NOTES:

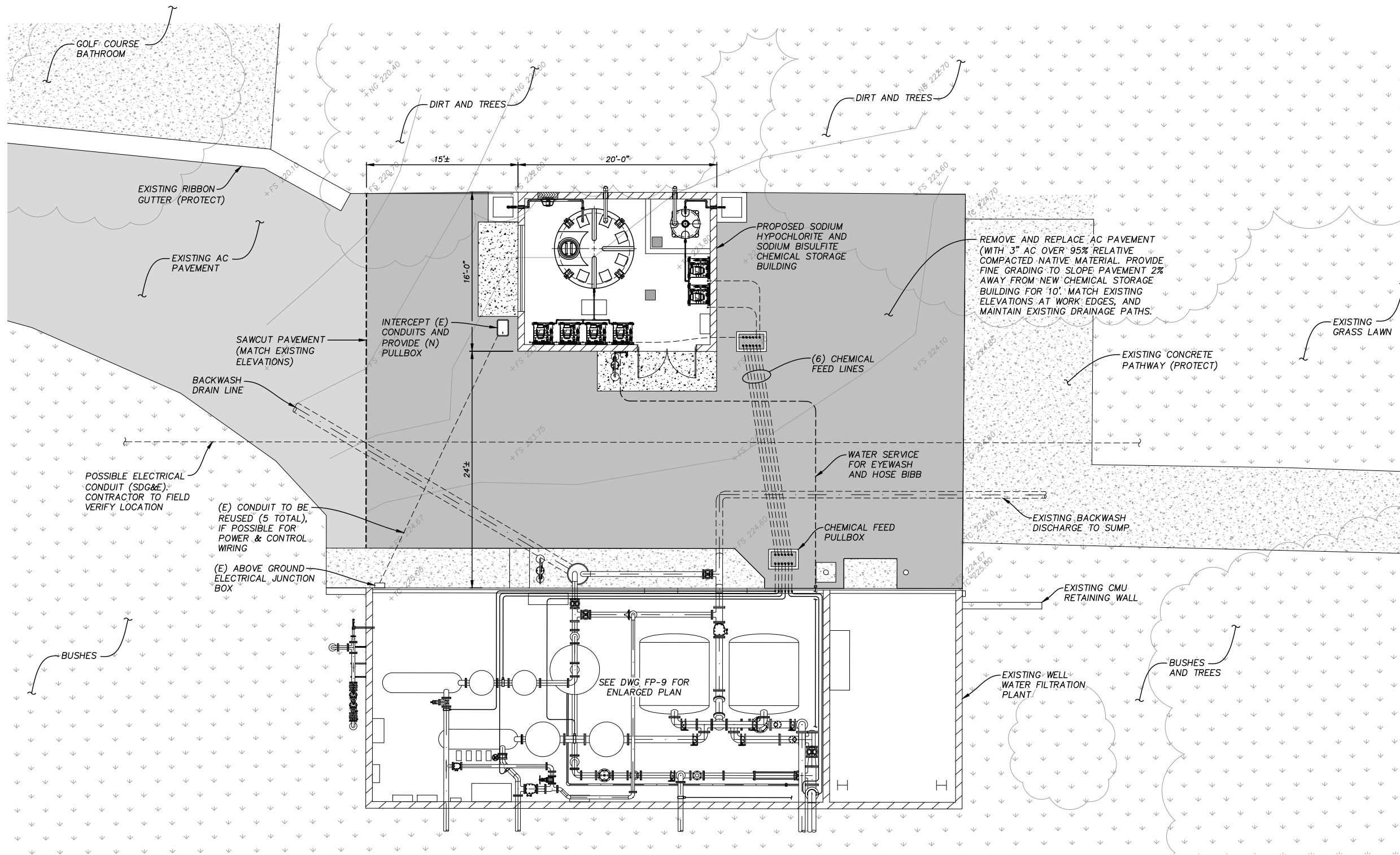
1. LEGALLY DISPOSE OF REMOVED ITEMS OFF-SITE IN ACCORDANCE WITH STATE, FEDERAL, AND LOCAL REQUIREMENTS; AND PROVIDE DOCUMENTATION TO CITY.
2. CONTRACTOR TO MAINTAIN TEMPORARY ACCESS THROUGH WORK AREA FOR GOLF CART ACCESS.

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				ENGINEERING SCALE :	DATE:
				DRAWN BY : D.B.	DESIGNED BY : D.B.
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				DEPUTY PUBLIC WORKS DIRECTOR	
CITY OF SAN CLEMENTE					DRAWING NO: FP-1
WELL FILTER PLANT REHABILITATION CHEMICAL STORAGE BUILDING PROJECT NO. 16408					SHEET 4
WELL FILTER PLANT DEMOLITION PLAN					OF 24
CITY OF SAN CLEMENTE					



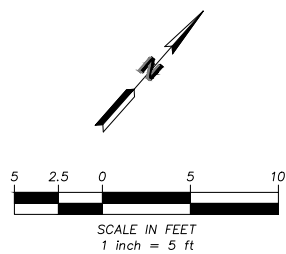
PROPOSED IMPROVEMENTS
SCALE: 1" = 5'-0"

SHEET NOTES:

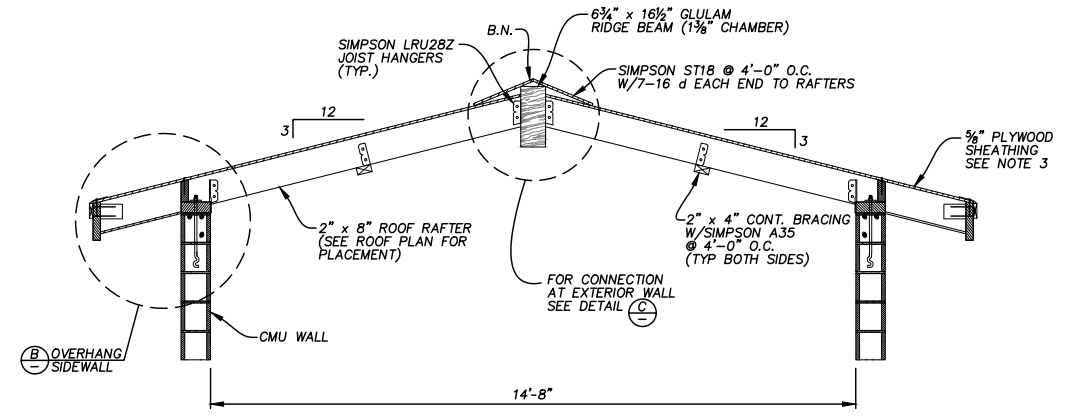
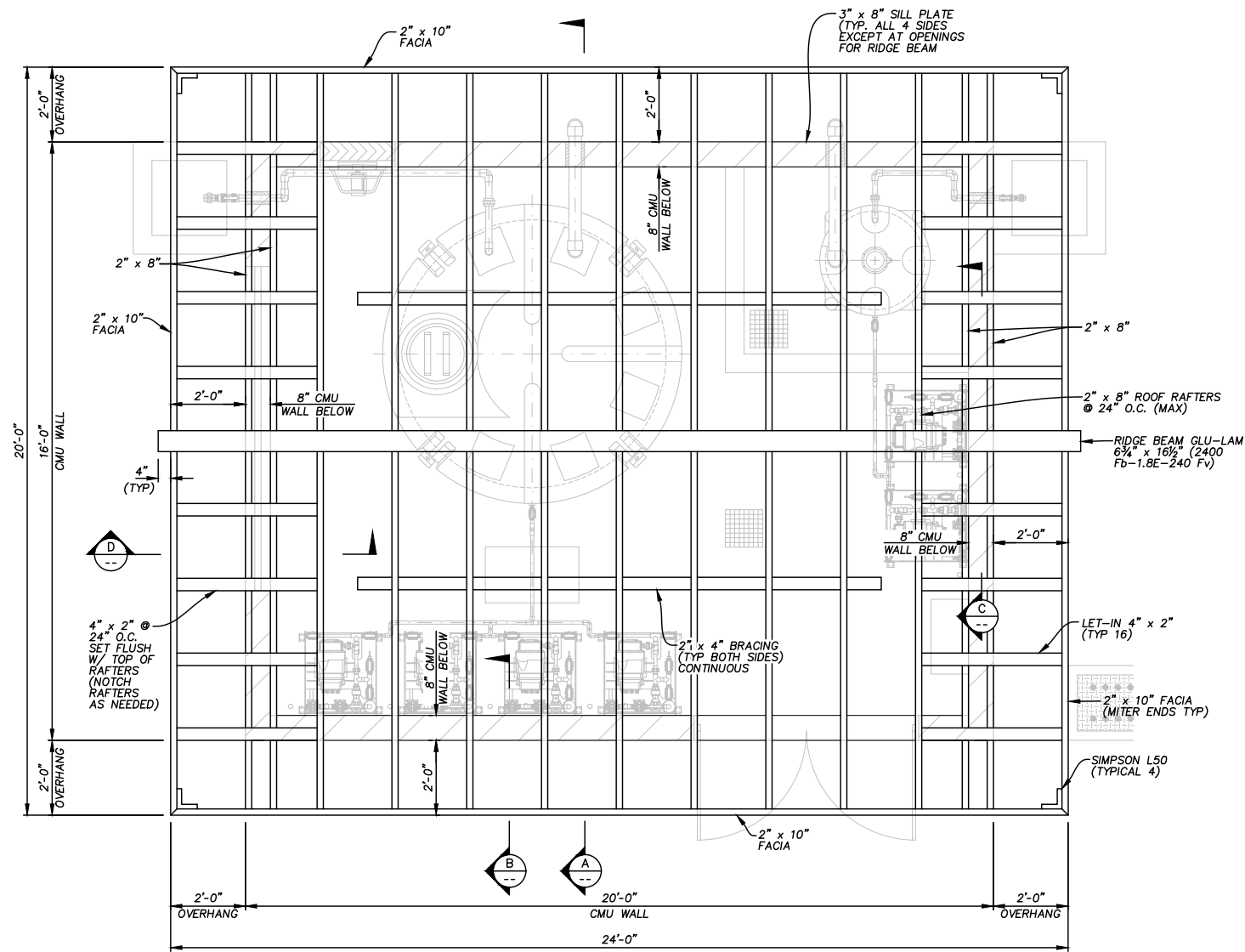
- CONTRACTOR TO MAINTAIN TEMPORARY ACCESS THROUGH WORK AREA FOR GOLF CART ACCESS.

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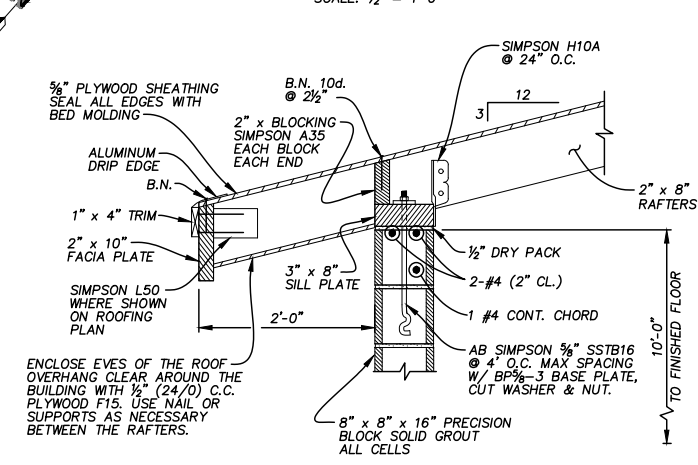
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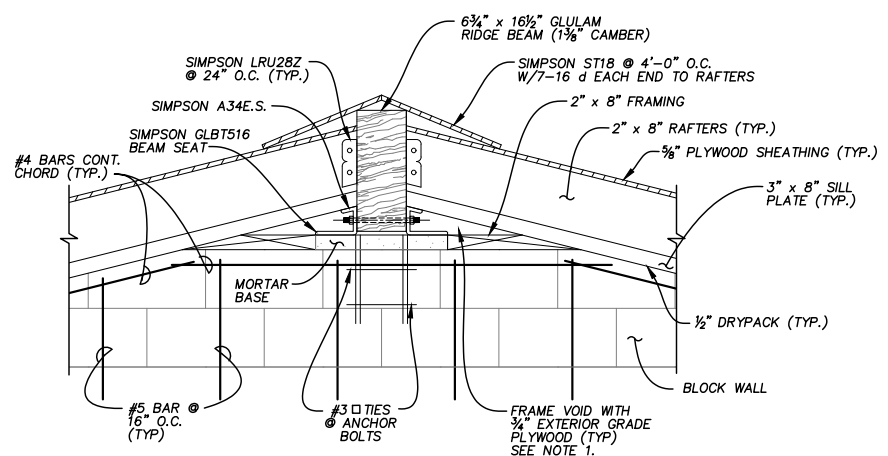
CHEMICAL BUILDING SECTION A
SCALE: 1/2" = 1'-0"

- NOTES:**
- ON THE EXTERIOR SIDE OF THE WALL, THE CONTRACTOR SHALL PLACE 3/4" EXTERIOR GRADE PLYWOOD TO COVER THE VOIDS BETWEEN THE FRAMING AND ANY REMAINING MASONRY OPENINGS.
 - CONNECT THE STRAP TO WOOD PLATE AND BLOCKING BY NAIL.
 - ROOF SHEETING SHALL BE STRUCTURAL 1 GRADE PLYWOOD, BLOCK ALL EDGES, 10d @ 4" OC BN., 10d 4" EN., AND 10d @ 12" FN.
 - FOR LIGHTWEIGHT CONCRETE SHINGLES, SEE BUILDING ELEVATIONS AND PROJECT SPECS.

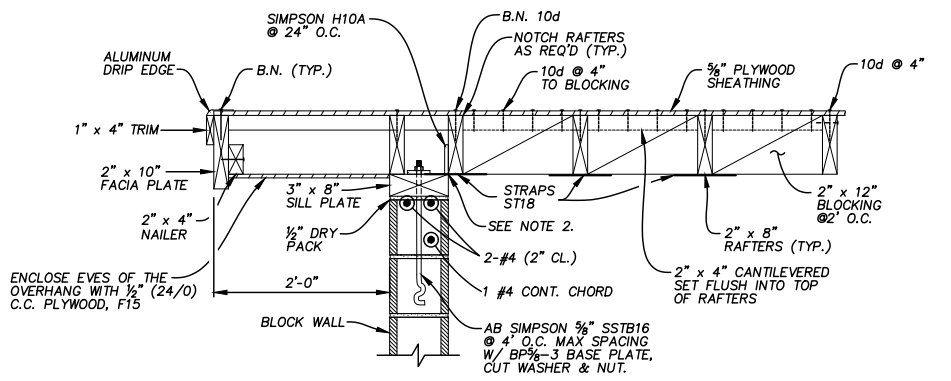
CHEMICAL BUILDING ROOF FRAMING PLAN
SCALE: 1/2" = 1'-0"



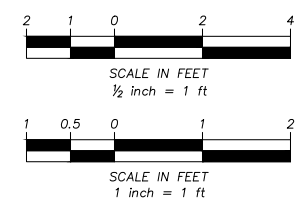
OVERHANG SIDEWALL SECTION B
SCALE: 1" = 1'-0"



RIDGE BEAM EXTERIOR/INTERIOR WALL SECTION C
SCALE: 1" = 1'-0"



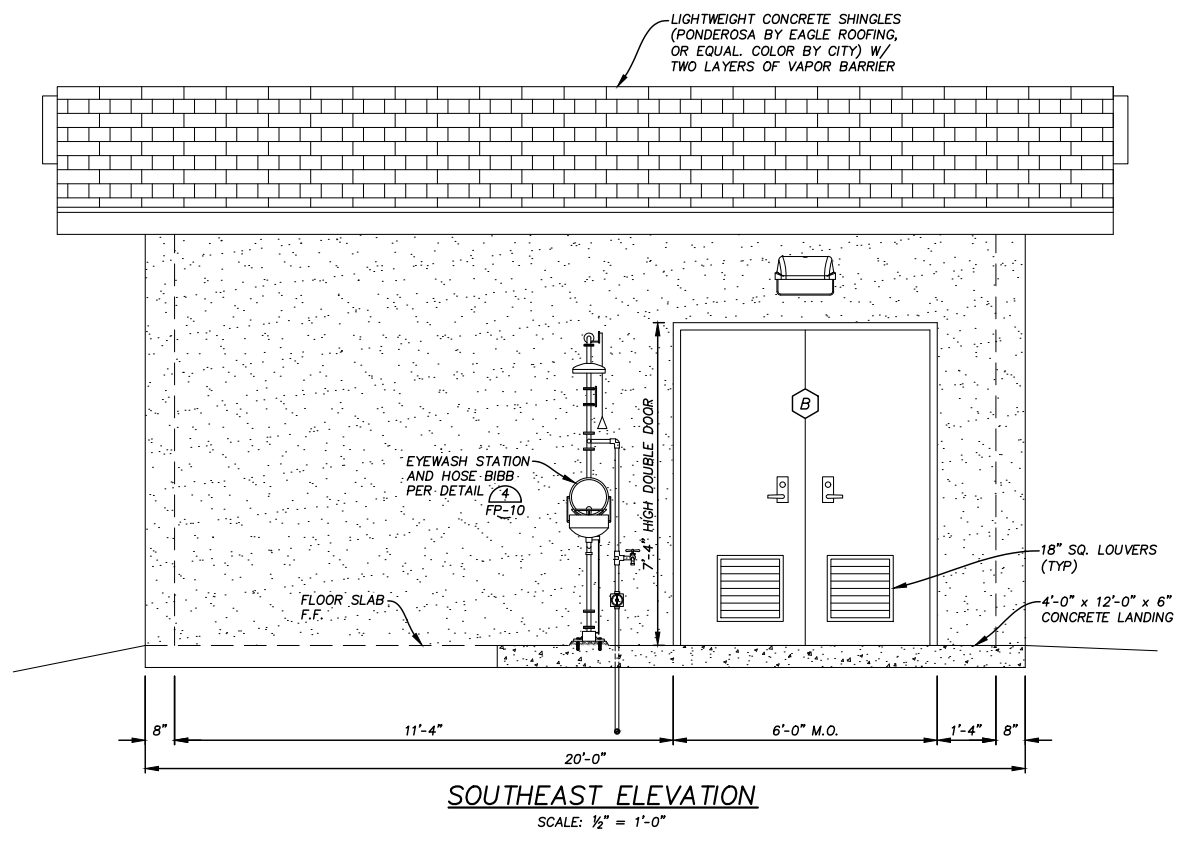
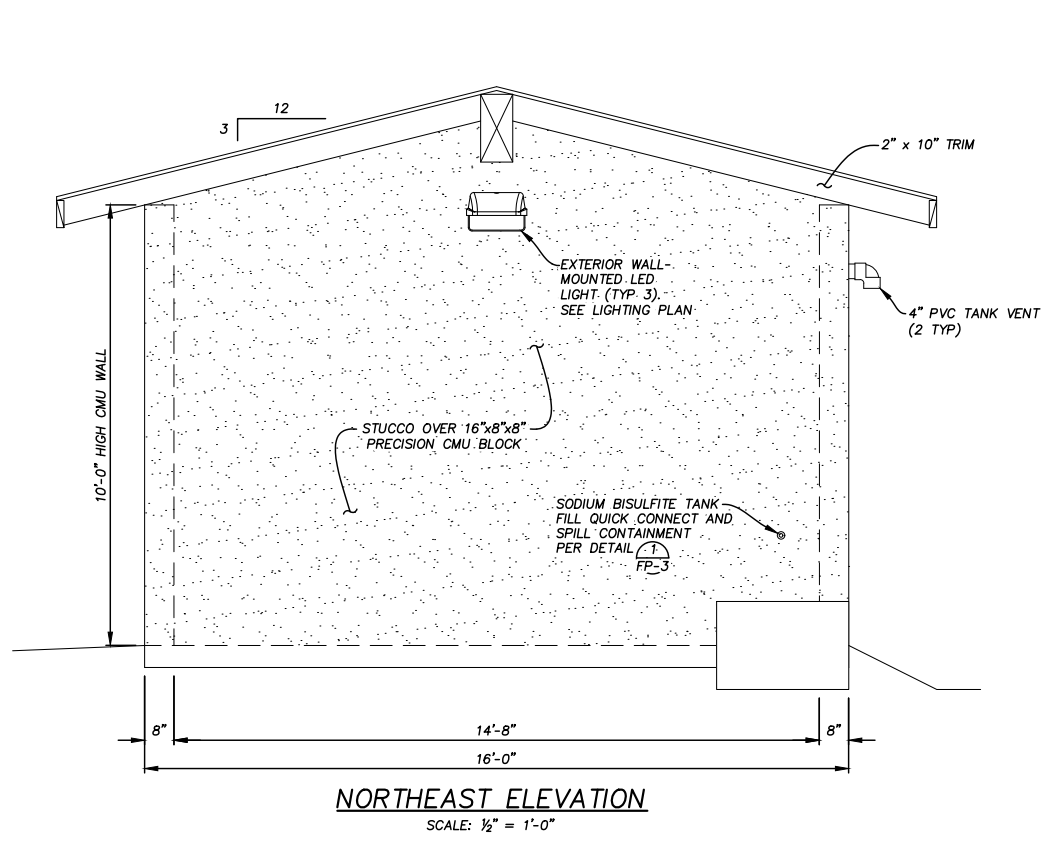
OVERHANG ENDWALL SECTION D
SCALE: 1" = 1'-0"



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811
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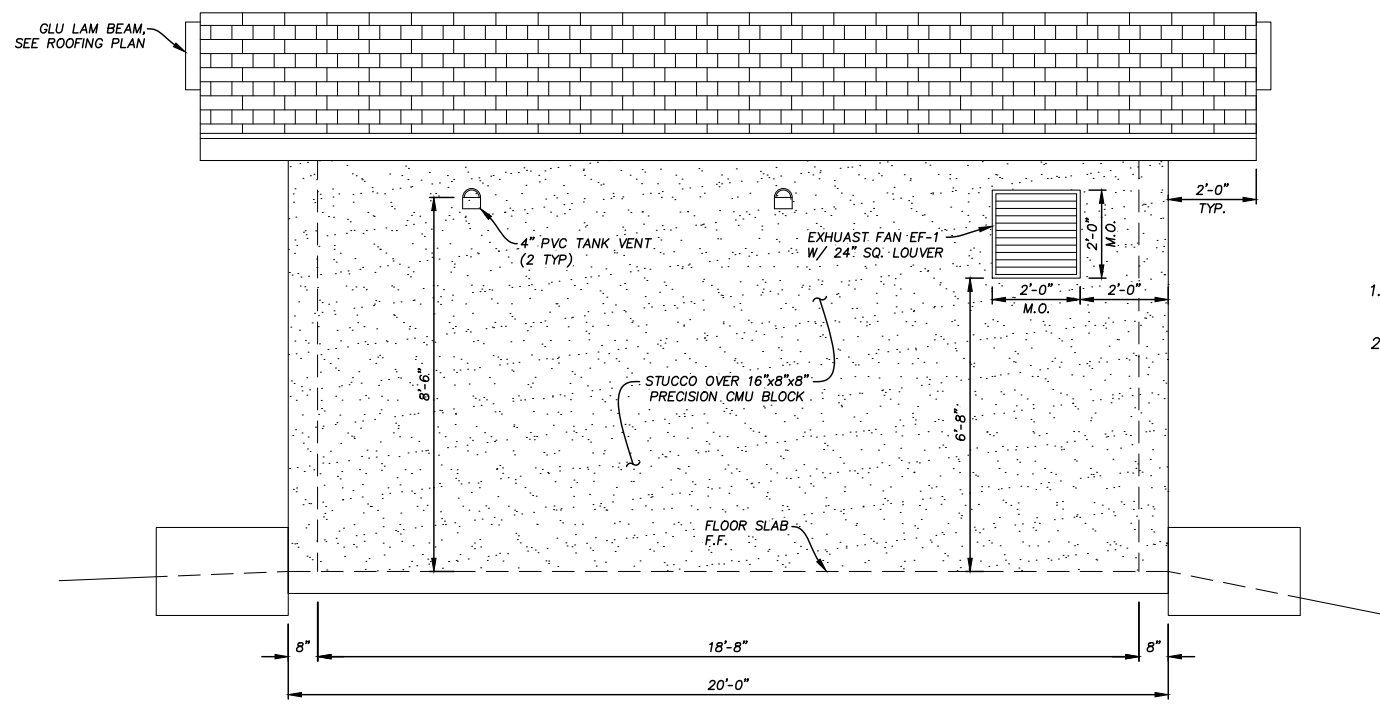
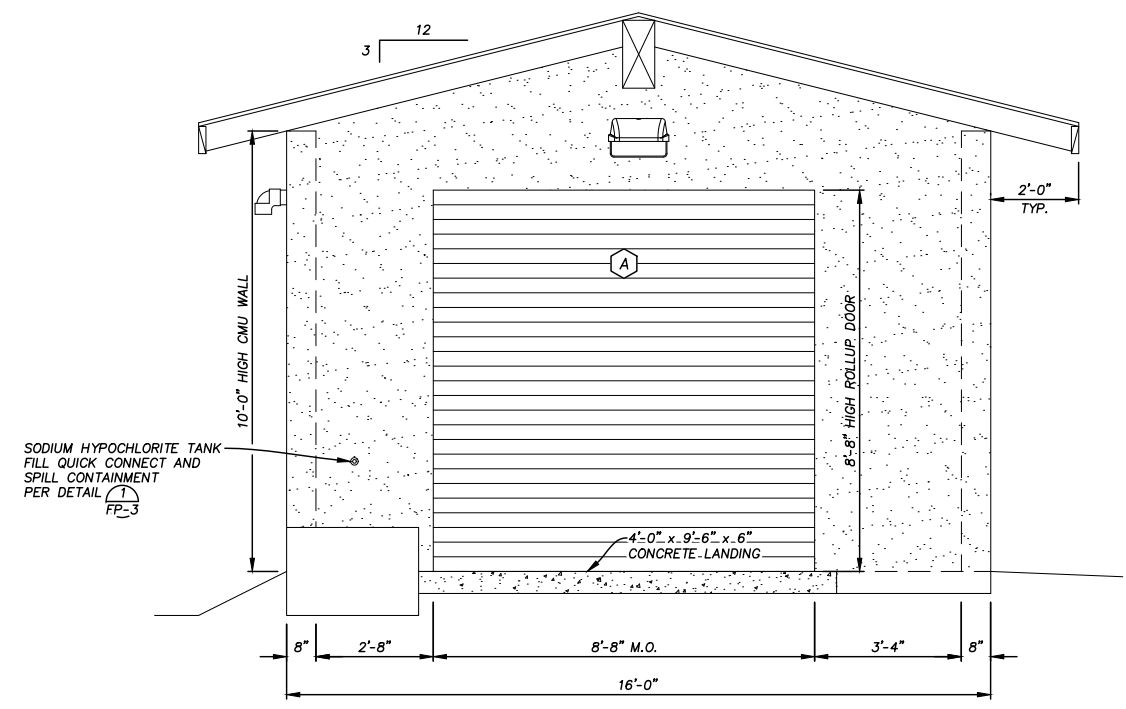
REVISIONS REV. DATE: DESCRIPTION BY: APP'VD:		REFERENCES		APPROVALS		ENGINEERING SCALE: DATE: DRAWN BY: D.B. DESIGNED BY: D.B. 8/29/19 CHECKED BY: GARY J. HOBSON APPROVED: SEE DRAWING T-1 D.T. REBENSORF RCE C60091 DEPUTY PUBLIC WORKS DIRECTOR DATE:		WELL FILTER PLANT REHABILITATION CHEMICAL STORAGE BUILDING PROJECT NO. 16408 WELL FILTER PLANT CHEMICAL BUILDING ROOF FRAMING PLAN CITY OF SAN CLEMENTE		DRAWING NO: FP-5 SHEET 8 OF 24	
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DOOR SCHEDULE		
DOOR	A	B
SIZE	8'-8"W x8'-8"H	6'-0"W x7'-4"H
TYPE	ROLLUP	DOUBLE
THICKNESS	-	1 3/4"
HAND	-	LHR/ RHR
CORE	-	HM
MATERIAL	-	HM
FINISH	FF	PT
CLOSER	-	X
HINGE	-	SS
EXIT DEVICE	-	X
KICK PLATE	-	X
OVERHEAD STOP	-	X
DRIP CAP	-	X
DOOR SWEEP	-	X
DOOR SEALS	-	X
THRESHOLD	-	X

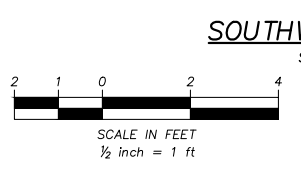
- DOOR ABBREVIATIONS:**
- AL ALUMINUM
 - AN ANODIZED ALUMINUM
 - FF FACTORY FINISH
 - IM INSULATED METAL
 - HM HOLLOW METAL
 - MT METAL
 - PL PLASTIC LAMINATE
 - PT PAINT
 - PR PAIR
 - SC SOLID CORE
 - SS STAINLESS STEEL
 - TG TEMPERED GLAZING
 - WD WOOD
 - X REQUIRED

- GENERAL NOTES:**
- ALL DOORS SHALL COMPLY WITH CBC.
 - ALL DOOR HARDWARE SHALL BE LEVEL TYPE, PUSH-PULL ACTIVATING BARS OR PANIC HARDWARE PER CBC.



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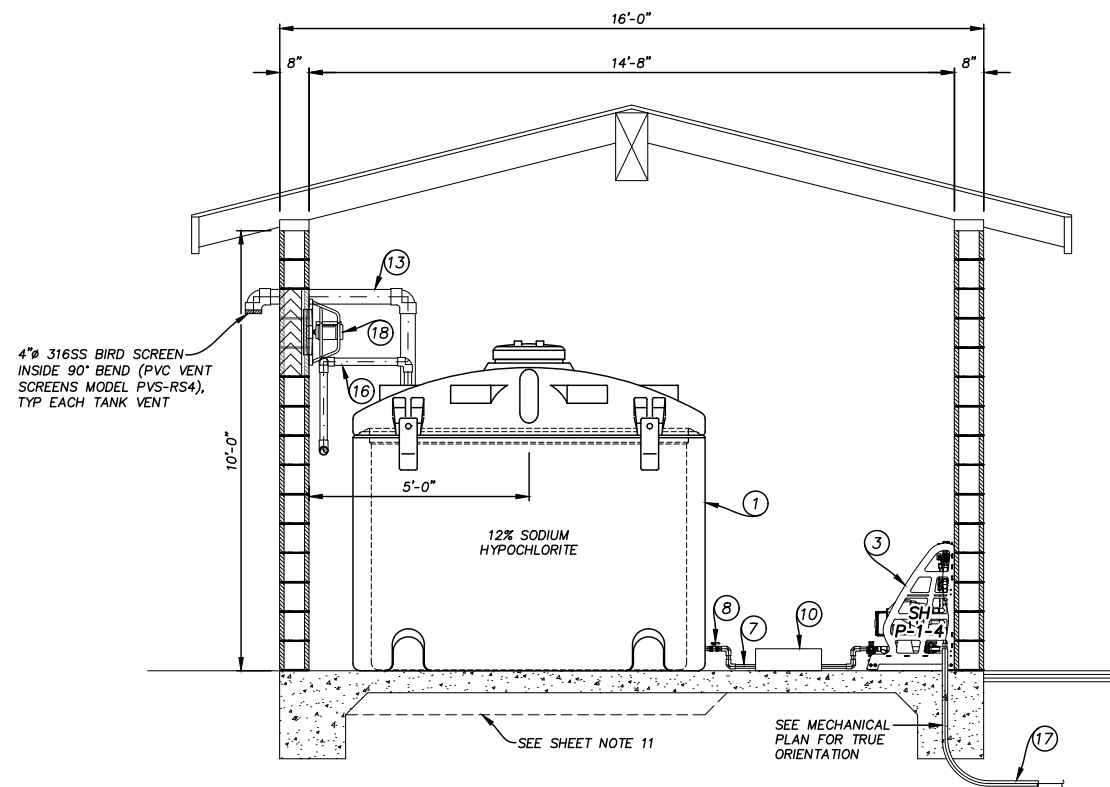


SOUTHWEST ELEVATION
SCALE: 1/2" = 1'-0"

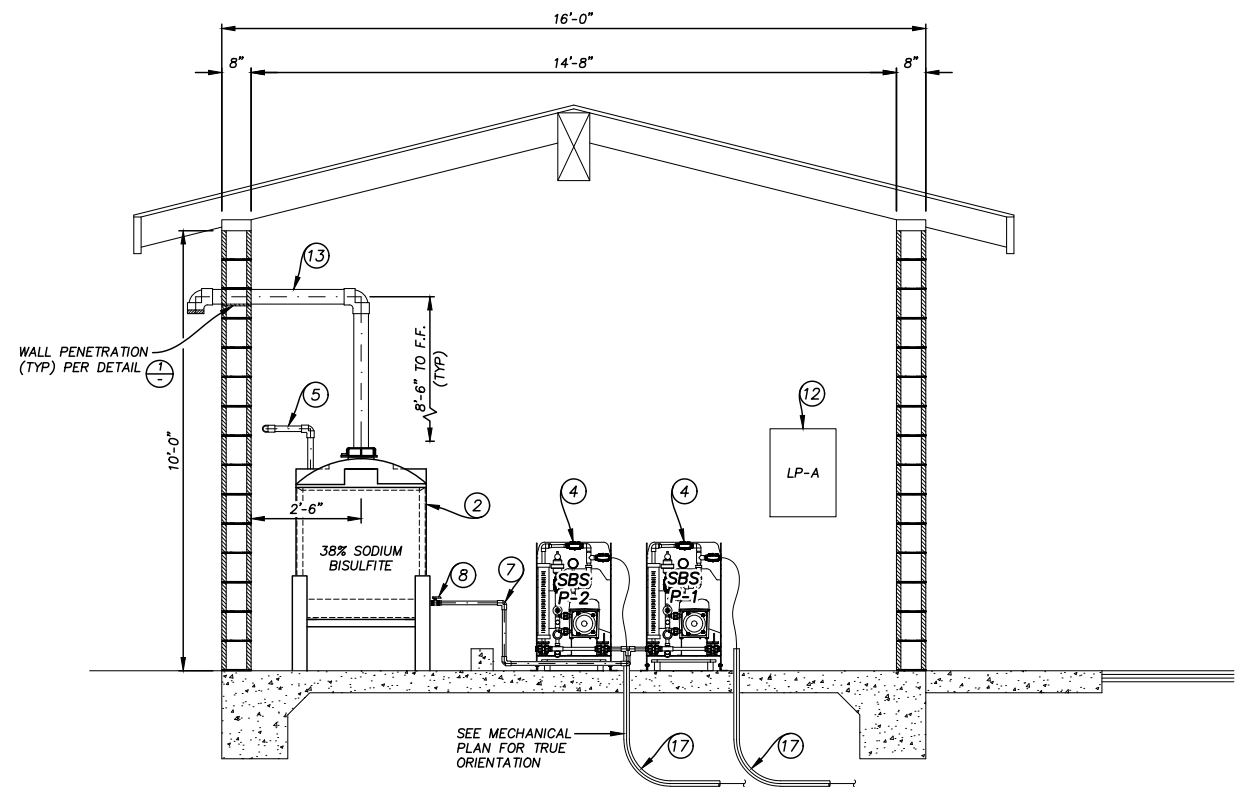
NORTHWEST ELEVATION
SCALE: 1/2" = 1'-0"



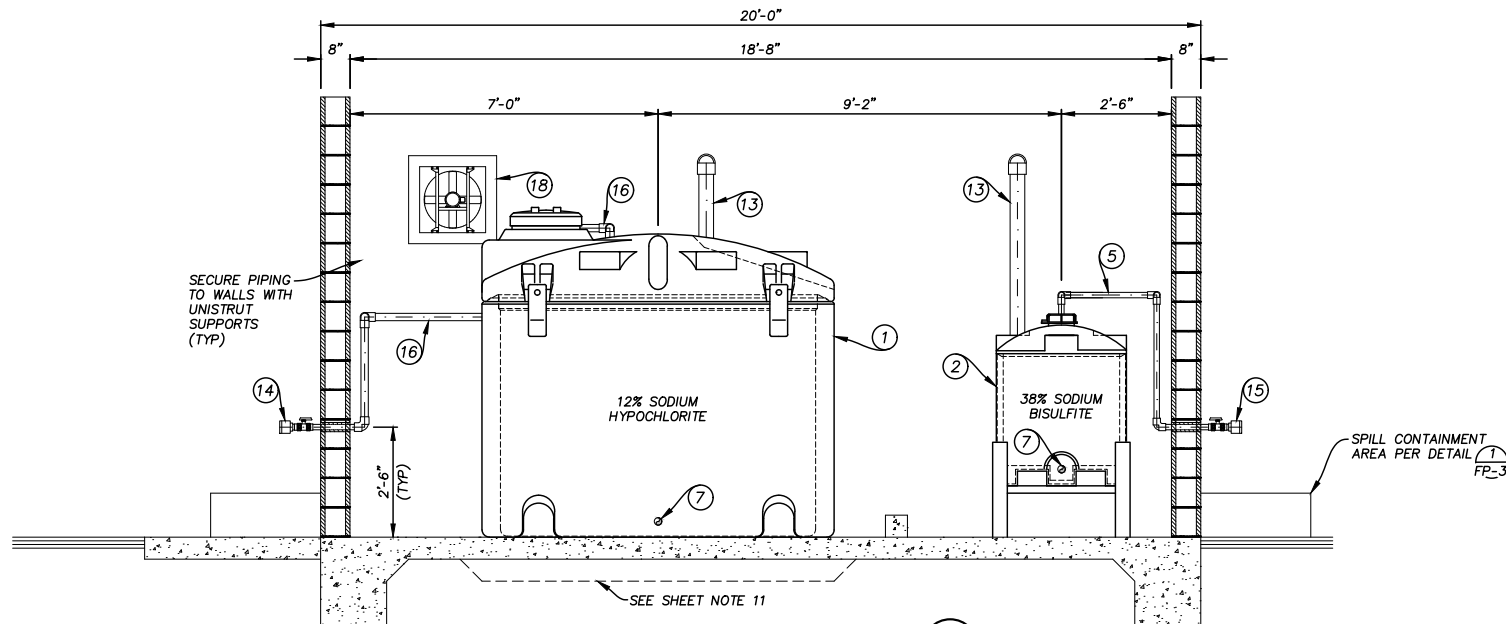
ENGINEERING SCALE :		DATE:		WELL FILTER PLANT REHABILITATION CHEMICAL STORAGE BUILDING PROJECT NO. 16408 WELL FILTER PLANT CHEMICAL BUILDING ELEVATIONS CITY OF SAN CLEMENTE	DRAWING NO: FP-6
DRAWN BY : D.B. DESIGNED BY : D.B.		8/29/19			
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DEPUTY PUBLIC WORKS DIRECTOR					
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REVISIONS					
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APPROVALS					
					SHEET 9
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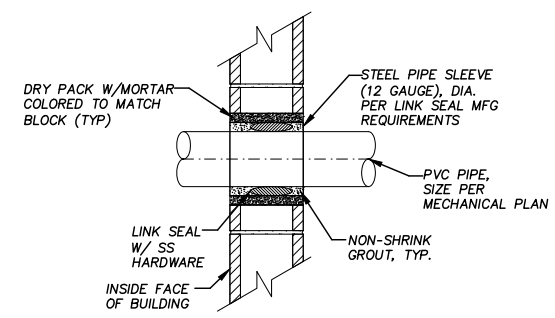
MECHANICAL SECTION A
SCALE: 1/2" = 1'-0"
FP-7



MECHANICAL SECTION B
SCALE: 1/2" = 1'-0"
FP-7



MECHANICAL SECTION C
SCALE: 1/2" = 1'-0"
FP-7



MASONRY WALL PENETRATION 1
NOT TO SCALE

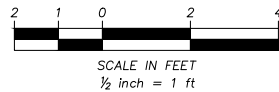
SHEET NOTES:

1. THE TANKS PIPING SHALL BE MODIFIED AND SUBMITTED FOR APPROVED TANKS INLET, OUTLET, AND VENT LOCATIONS THAT ARE DIFFERENT THAN THE LOCATION SHOWN IN THIS DRAWING.
2. ALL INDOOR PIPING SHALL BE SUPPORTED PER DETAIL 2, DWG. FP-10.
3. TANKS SUPPORTS CALCULATIONS FOR SEISMIC SHALL BE SUBMITTED BY THE TANK MANUFACTURER.
4. PROVIDE AND INSTALL A UNION AT EVERY CHANGE IN PIPE DIRECTION (HORIZONTAL AND VERTICAL).
5. FLOOR SLAB AND ALL FACES OF CONCRETE CURB SHALL BE COATED WITH BELZONA 4311.
6. ALL MATERIALS USED FOR SODIUM BISULFITE SYSTEM SHALL BE NSF APPROVED LISTED. USE PVC PIPE AND FITTINGS FOR SODIUM BISULFITE SYSTEM UNLESS NOTED OTHERWISE.
7. ALL MATERIALS USED FOR SODIUM HYPOCHLORITE SYSTEM SHALL BE NSF APPROVED LISTED. USE CPVC PIPE AND FITTINGS FOR SODIUM HYPOCHLORITE SYSTEM UNLESS NOTED OTHERWISE.
8. ALL CONDUITS & PIPING INSIDE CHEMICAL STORAGE BUILDING ARE SHOWN DIAGRAMMATICALLY. ALL CONDUITS & PIPING SHALL BE EXPOSED AND ATTACHED TO WALLS USING UNISTRUT SUPPORTS (UNLESS INDICATED OTHERWISE). ALL CONDUCTORS & GROUND WIRES SHALL BE COPPER/THHN.
9. BUILDING MATERIALS SHALL BE RATED NON-COMBUSTABLE.
10. BURIED CHEMICAL FEED CONDUITS SHALL BE ENCASED IN SE30 SAND (4" MIN. ALL AROUND @ 90% MIN. COMPACTION).
11. CONTRACTOR SHALL THICKEN CONCRETE SLAB UNDER TANKS PER TANK STRUCTURAL CALCULATIONS, IF NEEDED, AT NO ADDITIONAL COST TO CITY.

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ENGINEERING SCALE :		DATE:	WELL FILTER PLANT REHABILITATION CHEMICAL STORAGE BUILDING PROJECT NO. 16408 WELL WATER FILTRATION PLANT CHEMICAL BUILDING MECHANICAL SECTIONS CITY OF SAN CLEMENTE	DRAWING NO: FP-8
DRAWN BY : D.B. DESIGNED BY : D.B.		8/29/19		SHEET 11
CHECKED BY : GARY J. HOBSON				OF 24
APPROVED :		SEE DRAWING T-1		
D.T. REBENSODRF RCE C60091		DEPUTY PUBLIC WORKS DIRECTOR		
DATE				
REV.	DATE:	DESCRIPTION	BY:	APP'VD:
REVISIONS		REFERENCES		APPROVALS





PROJECT AREA PHOTOGRAPHS



View of project area from Avenida Santa Margarita/the golf course



PROJECT AREA PHOTOGRAPHS



View of project area and golf cart path.



PROJECT AREA PHOTOGRAPHS



View of nearest tee box and vegetation barrier.



DECRA[®] VILLA TILE



Villa Tile Amalfi Sand



Villa Tile Capri Clay



Villa Tile Pompeii Ash



Villa Tile Rustico Clay



Villa Tile Tuscan Sun



Villa Tile Venetian Gold

METAL ROOFING ISN'T WHAT IT USED TO BE

VILLA TILE FEATURES:

Lifetime Limited Warranty*

(including 120 mph winds and hail penetration)

Class 4 Impact Resistance to UL 2218
by Underwriters Laboratories

(Highest Rating)

Lightweight – Only 160 lbs. / 100 sq. ft. Installed

Non-Combustible Class A Rated Material

Won't Crack, Break, Burn, Curl, Split or Rot

Walkable, Low Maintenance, Long Life

Non-Porous, Freeze / Thaw Resistant

Interlocking Panels Provide Protection
Against the Elements

Tear-Off May Not Be Required

(See local code)

Reduces Energy Consumption & Landfill Impact

Direct to Deck Application

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