

East Fork WWTP

Final Design Review (FDR)

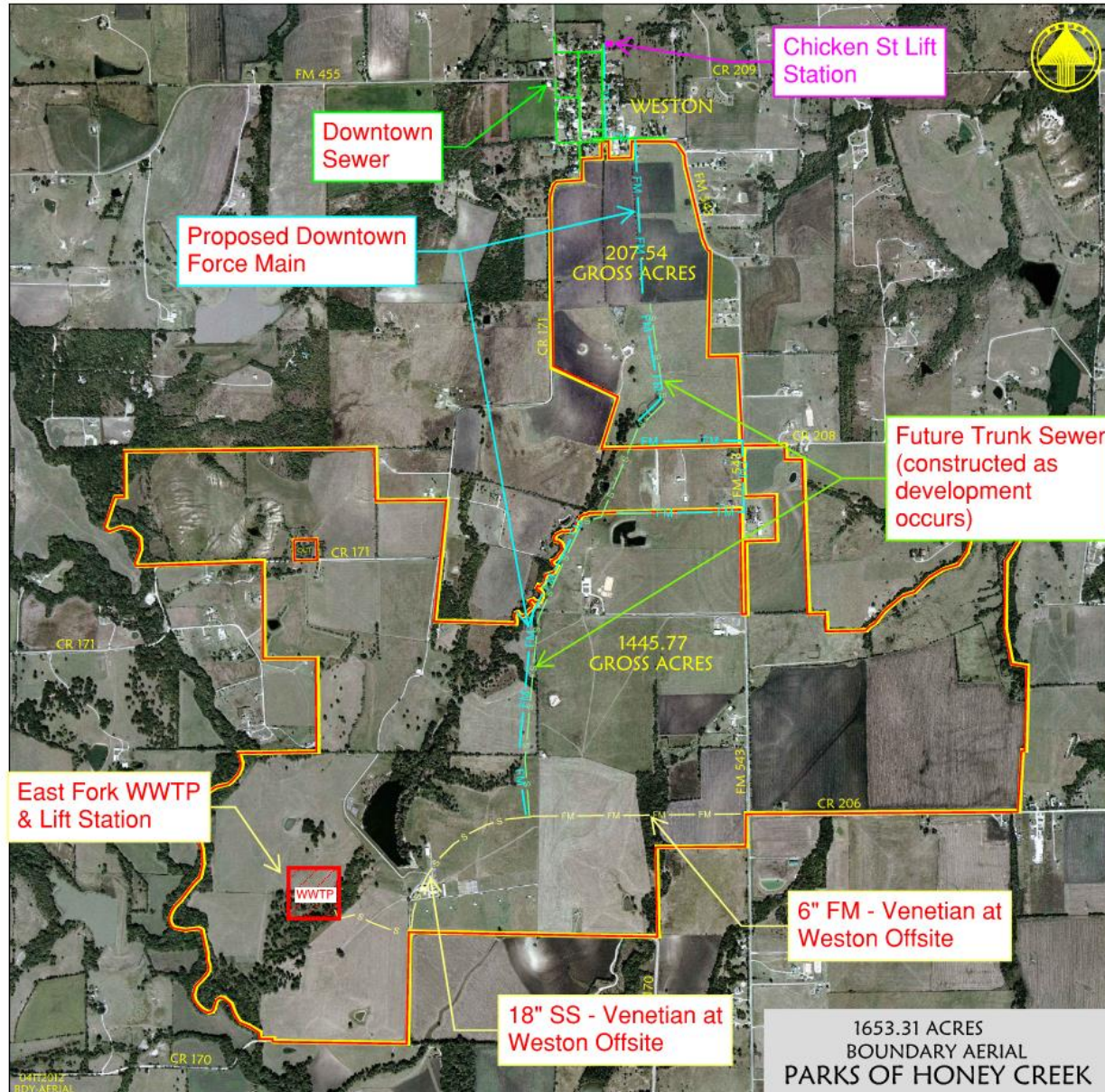


Agenda

- ▶ Project Overview/Summary
- ▶ Permit Requirements
- ▶ Final Plan Review
- ▶ Operations Cost
- ▶ Next Steps



Project Overview



East Fork WWTP & Lift Station

Trunk Sewer & Downtown Wastewater collection system (Chicken St Lift Station)

By Developer - On Site Lift Station & Collection System (Venetian at Weston Offsite)

Permit Requirements

- ▶ Permit WQ0015565001

- ▶ Expires June 26, 2024

- ▶ Proposed Phase 1 (Interim I)

- ▶ 0.25 MGD
 - ▶ 10 mg/l CBOD₅
 - ▶ 15 mg/l TSS
 - ▶ 3 mg/l NH₃-N
 - ▶ 1.0-4.0 mg/l Cl₂ Residual
 - ▶ 5.0 mg/l DO

- ▶ Future Phase 2(Interim II)

- ▶ 1.25 MGD
 - ▶ 10 mg/l CBOD₅
 - ▶ 15 mg/l TSS
 - ▶ 2 mg/l NH₃-N
 - ▶ Dechlorinate
 - ▶ 1.0 mg/l TP
 - ▶ 5.0 mg/l DO

- ▶ Future Phase 3 (Final)

- ▶ 2.5 MGD
 - ▶ 7 mg/l CBOD₅
 - ▶ 15 mg/l TSS
 - ▶ 2 mg/l NH₃-N
 - ▶ Dechlorinate
 - ▶ 0.5 mg/l TP
 - ▶ 6.0 mg/l DO



Permit Requirements

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Final Plan Review



LOCATION MAP
1"=1000'

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G.4.0	PROCESS FLOW DIAGRAM
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C.2.0	DIMENSION CONTROL PLAN
C.3.0	YARD PIPING
C3.1	PIPE PROFILES
C.4.0	CIVIL DETAILS
C.4.1	CIVIL DETAILS
C.4.2	CIVIL DETAILS
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M.1.2	DETAILS
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S.1.1	BAR SCREEN & LIFT STATION SECTION VIEW
S.2.0	TREATMENT UNIT PLAN & SECTION
S.2.1	TREATMENT UNIT DETAILS
S.6.0	SLUDGE ROOM, BLOWERS & ELECTRICAL ROOM PLAN
S.6.1	SLUDGE ROOM, BLOWERS & ELECTRICAL ROOM SECTIONS
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EY.8.0	PANEL DIAGRAMS
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EZ.2.0	DETAILS
--	TXDOT DETAILS

CITY OF WESTON EAST FORK WWTP FOR REVIEW



MAYOR
JIM MARISCHEN

ALDERMAN
MARIA WHITWORTH
KEVIN DEAL
CAROL DECKER
HEATHER RICHARDSON
MIKE HILL

PRELIMINARY
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a bidding or construction document. This
document has been prepared under the
supervision of Mark D. Hill, P.E. #79466.

06.04.2021

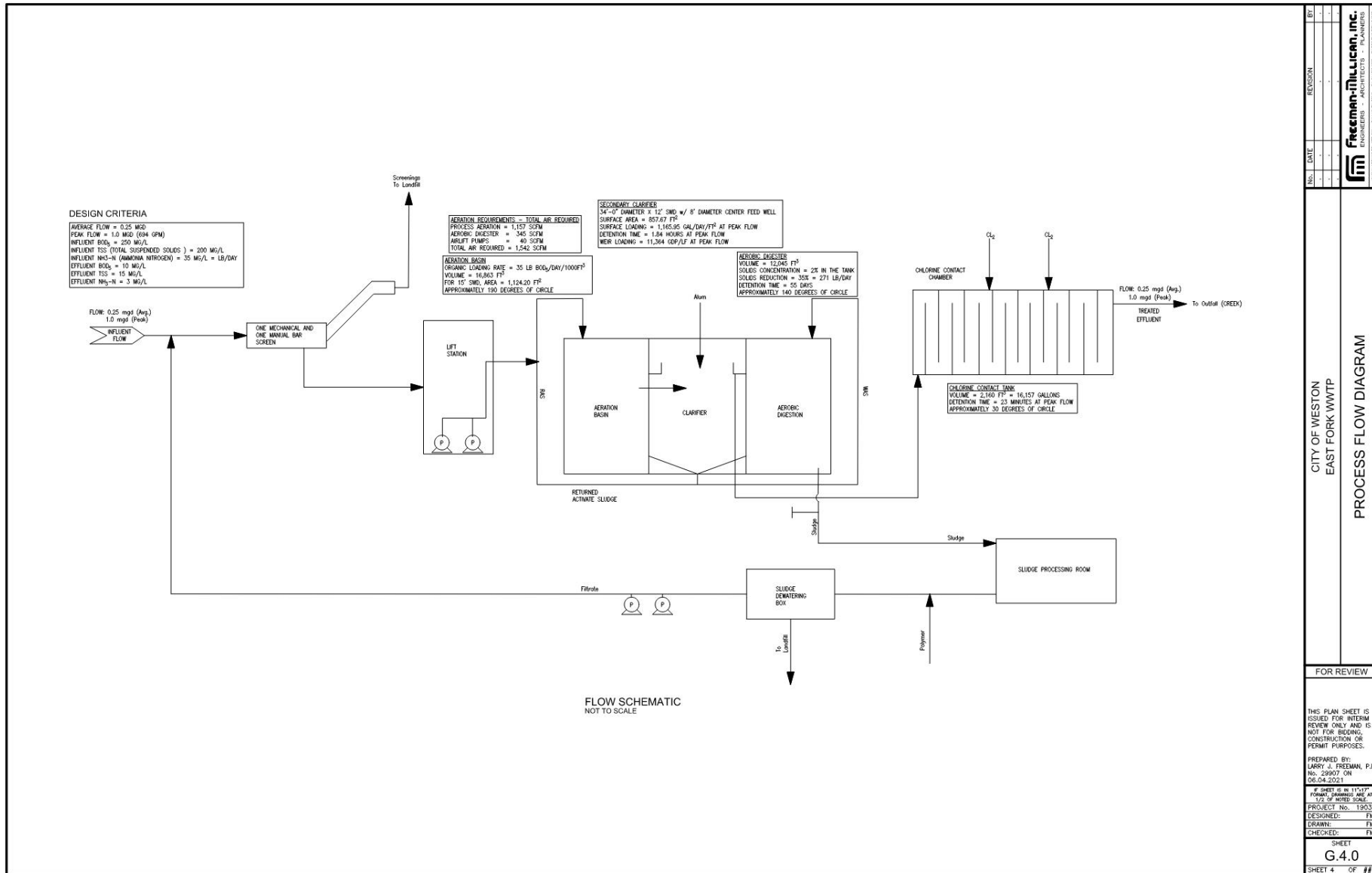


FMI PROJECT No. 19032
June 2021

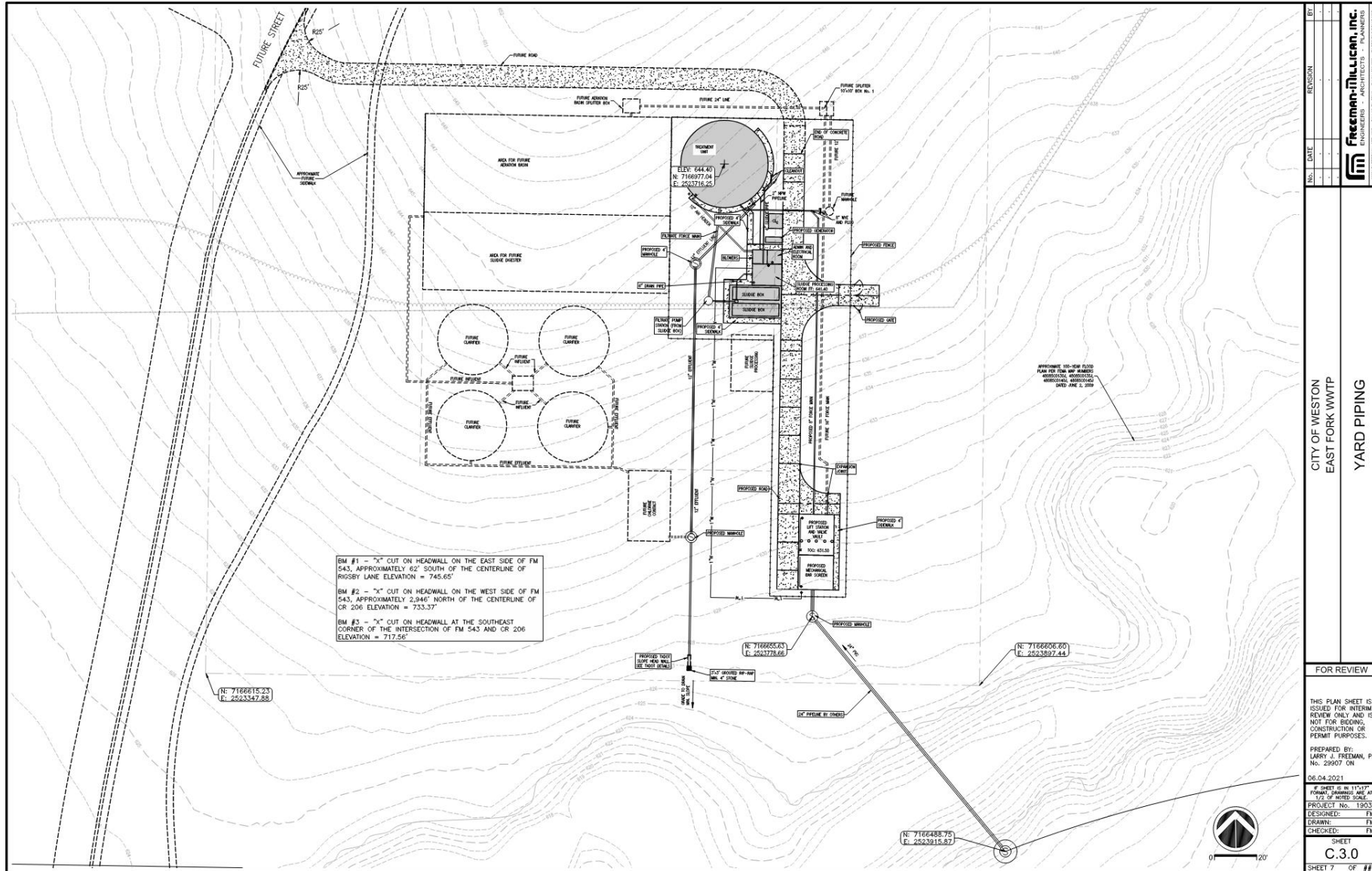
19032 - CITY OF WESTON - EAST FORK WWTP - FOR REVIEW - June 2021



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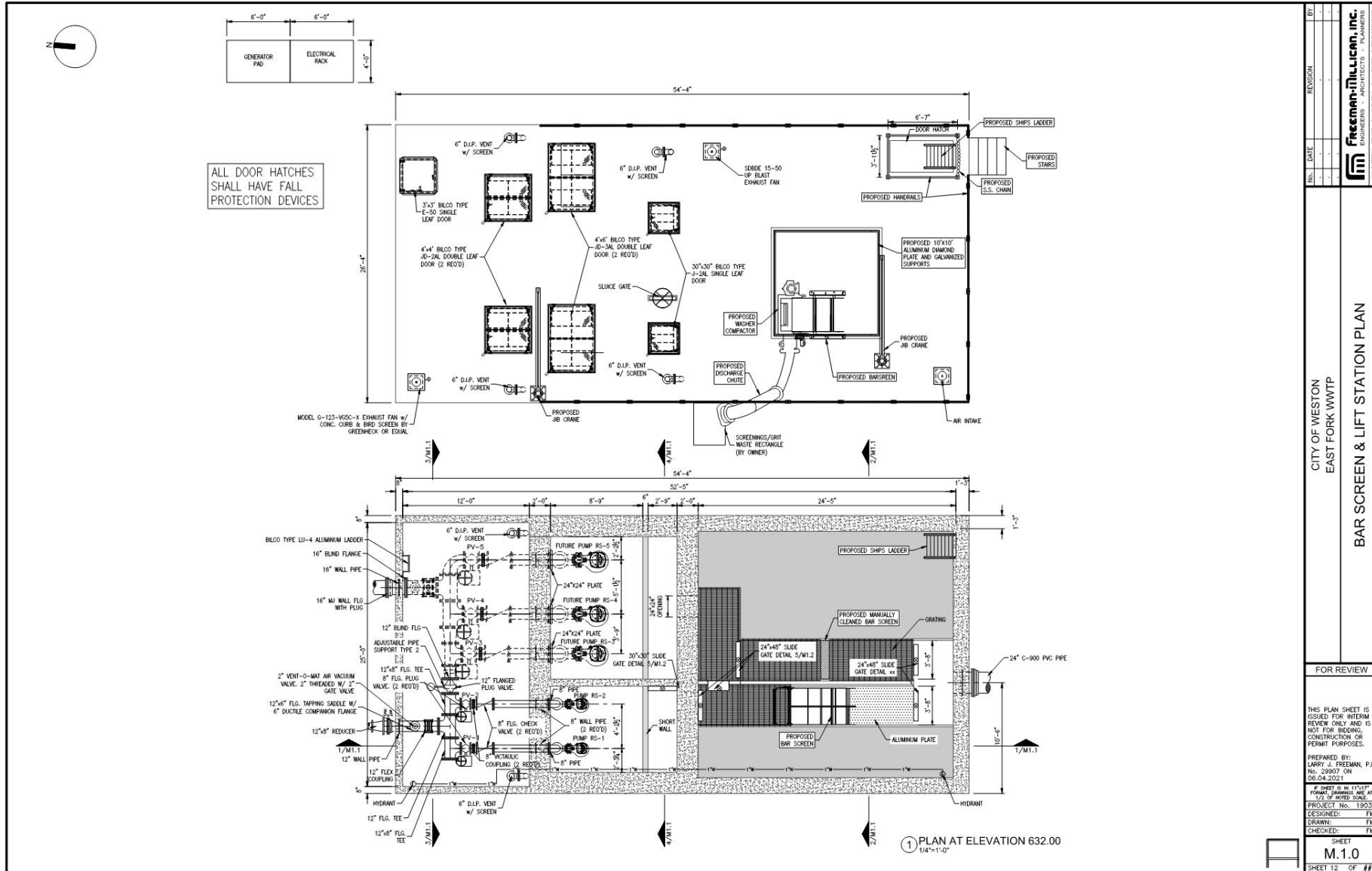


BM #1 - 3" CUT ON HEADWALL ON THE EAST SIDE OF FM 543, APPROXIMATELY 62' SOUTH OF THE CENTERLINE OF RIGSBY LANE ELEVATION = 745.65'
 BM #2 - 3" CUT ON HEADWALL ON THE WEST SIDE OF FM 543, APPROXIMATELY 2,946' NORTH OF THE CENTERLINE OF CR 206 ELEVATION = 733.37'
 BM #3 - 3" CUT ON HEADWALL AT THE SOUTHEAST CORNER OF THE INTERSECTION OF FM 543 AND CR 206 ELEVATION = 717.56'

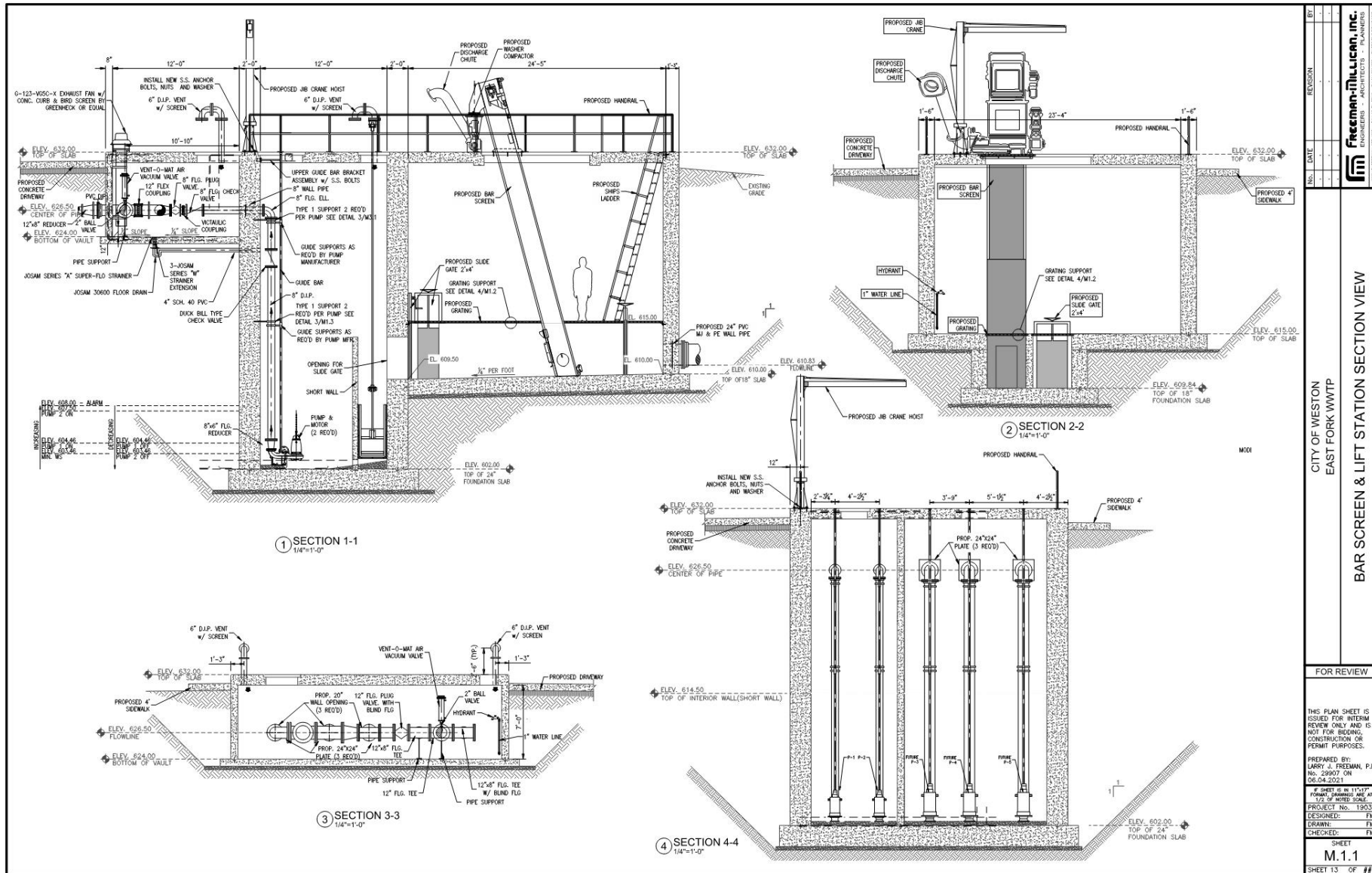
BY:	REVISION:
NO:	DATE:
 Faceplan-Mulican, Inc. ENGINEERING & ARCHITECTURE 1100 W. 15TH ST., SUITE 100, DALLAS, TX 75202	
CITY OF WESTON EAST FORK WWTP YARD PIPING	
FOR REVIEW	
THIS PLAN SHEET IS ISSUED FOR INTERIM REVIEW ONLY AND IS NOT FOR BIDDING, CONSTRUCTION OR PERMIT PURPOSES.	
PREPARED BY: LARRY J. FREDMAN, P.E. No. 29407 04	
06.04.2021	
PROJECT No. 19032	
DESIGNED: FMI	
DRAWN: FMI	
CHECKED: FMI	
SHEET C.3.0	
SHEET 7 OF 111	



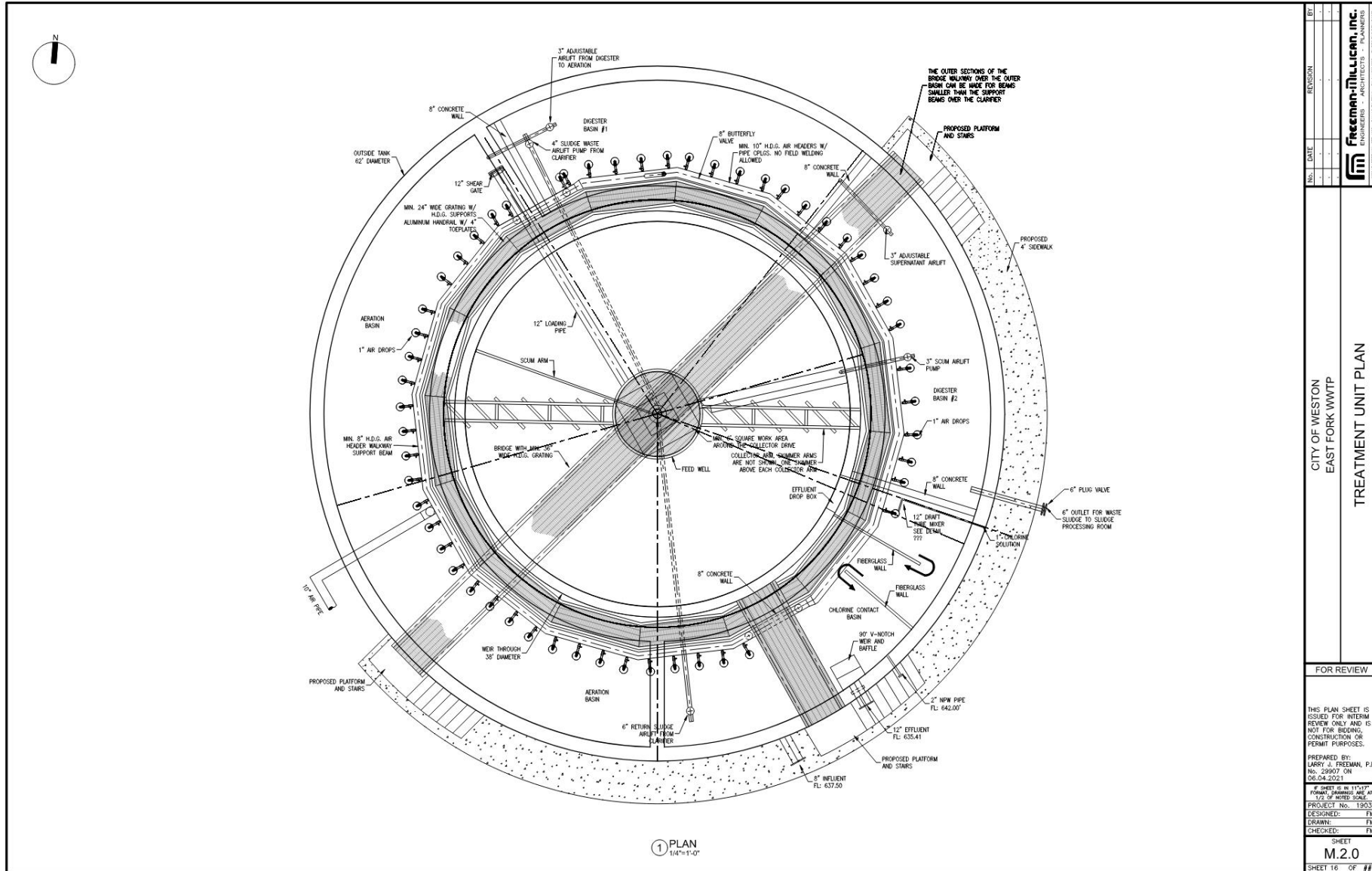
Final Plan Review



Final Plan Review



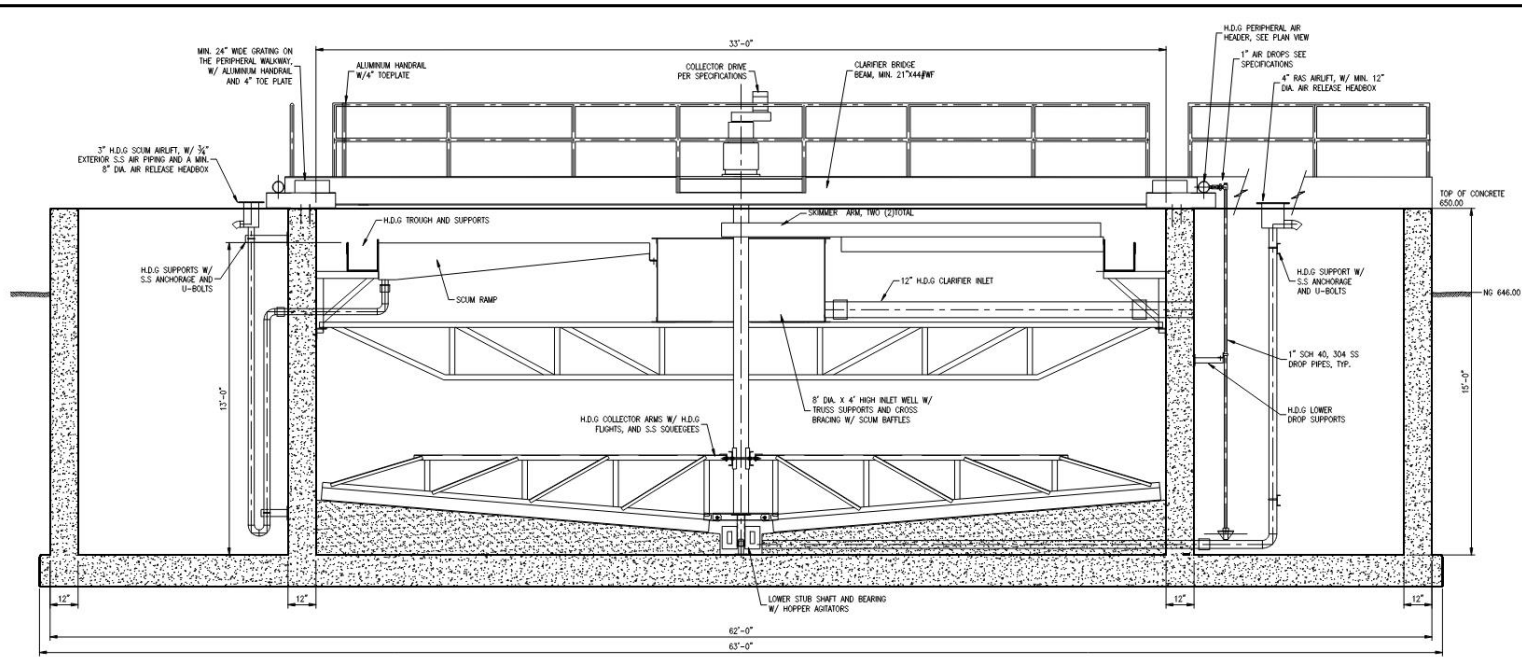
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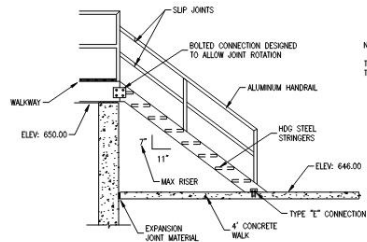
BY:	REVISION:
NO.	DATE
 Freeman Mulican, Inc. ENGINEERS ARCHITECTS PLANNERS 1000 WEST 10TH STREET, SUITE 1000, DALLAS, TEXAS 75208-1000 TEL: 214.760.1000 FAX: 214.760.1001	
CITY OF WESTON EAST FORK WWTP TREATMENT UNIT PLAN	



Final Plan Review



1 TREATMENT UNIT SECTION
3/8"=1'-0"



NOTE:
STAIRS ARE SHOWN HERE AS STRAIGHT TO SHOW DETAIL AND TREAD RISE AND RISE. ACTUAL STAIRS ARE CURVED TO MATCH THE CURVATURE OF THE TANK AS SHOWN ON THE PLAN VIEW

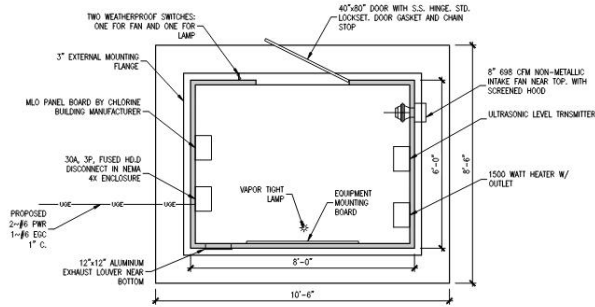
- NOTES:
1. STAIRWAY TO BE FURNISHED BY CLARIFIER MECHANISM MANUFACTURER.
 2. STAIR TREADS SHALL BE 11"X30"
 3. ALL CARBON STEEL PARTS TO BE HOT DIPPED GALVANIZED AFTER FABRICATION

2 STAIRWAY DETAIL
1/12"=1'-0"

BY	REVISION
DATE	
NO.	
 Freesman-Mulican, Inc. ENGINEERS ARCHITECTS 1100 WESTLAKENAVILLE, TX 75086 (972) 492-1100 FAX (972) 492-1101	
CITY OF WESTON EAST FORK WWTP TREATMENT UNIT SECTION	
FOR REVIEW	
THIS PLAN SHEET IS ISSUED FOR INTERIM REVIEW ONLY AND IS NOT FOR BIDDING, CONSTRUCTION OR PERMIT PURPOSES.	
PREPARED BY: LARRY H. FREEMAN, P.E. No. 29907 ON 06.04.2021	
PROJECT No. 19032 DESIGNED: FMI DRAWN: FMI CHECKED: FMI	
SHEET M.2.1	
SHEET 17 OF 111	

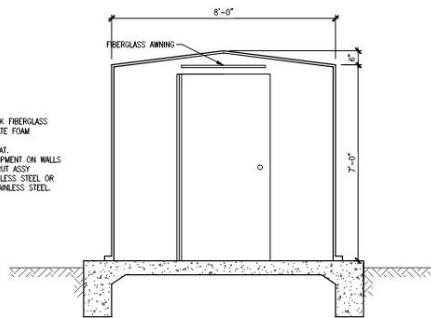


Final Plan Review

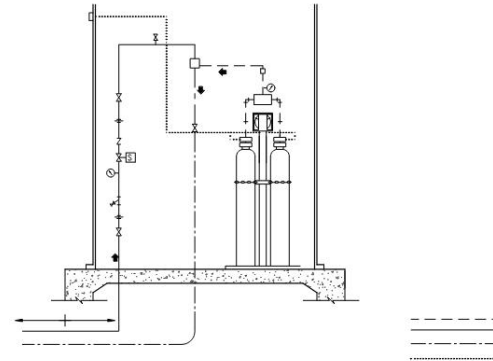


① CHLORINE BUILDING PLAN
1/2"=1'-0"

- NOTES:
1. MATERIALS OF CONSTRUCTION: 1/2" THK FIBERGLASS SKINS WITH 1" THK POLYISOCYANURATE FOAM INSULATION CORE.
 2. EXTERIOR & INTERIOR WHITE GEL COAT.
 3. CONTRACTOR SHALL MOUNT ALL EQUIPMENT ON WALLS AND MOUNTING BOARD USING UNISTRUT ASSY. MEMBERS, UNISTRUT SHALL BE STAINLESS STEEL OR ALUMINUM. FASTENERS SHALL BE STAINLESS STEEL.

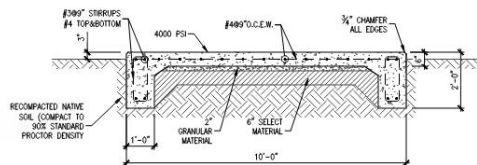


② CHLORINE BUILDING ELEVATION
1/2"=1'-0"



MARK	DESCRIPTION	NOTES
1	150 LB. CHLORINE CYLINDER	FURNISHED BY CHLORINATOR MANUFACTURER
2	3/4" GALV. STL. CYLINDER CHAIN	FURNISHED BY CHLORINATOR MANUFACTURER
3	EMERGENCY SHUTOFF VALVE	FURNISHED BY CHLORINATOR MANUFACTURER
4	VACUUM REGULATOR	FURNISHED BY CHLORINATOR MANUFACTURER
5	CHLORINE SCALE	FURNISHED BY CHLORINATOR MANUFACTURER
6	AUTO SWITCH-OVER VALVE	FURNISHED BY CHLORINATOR MANUFACTURER
7	AUTOMATIC FEED CTRL. PANEL	FURNISHED BY CHLORINATOR MANUFACTURER
8	VACUUM GAUGE	WITH S.S. CHEMICAL PROTECTOR 4.5"
9	1" SCH 40 PVC O2 SOLUTION	USE SPECIFIED PIPE CLAMPS @ 5 FT. CENTERS
10	3/4" SCH 40 PVC VENT LINE	CHLORINE INJECTOR
11	CHLORINE INJECTOR	FURNISHED BY CHLORINATOR MANUFACTURER
12	3/4" COPPER WATER LINE	RIGID COPPER ABOVE GRADE, SOFT COPPER ELSEWHERE INSULATE WATER LINE WITH 1" RIGID INSULATION W/ ALUM BACKET
13	PRESSURE GAUGE	OIL FILLED, 4.5" DIA. W/ GAGE COOK
14	INSECT SCREEN	

④ CHLORINE EQUIPMENT INSTALLATION DETAIL
NO SCALE



③ CHLORINE BUILDING SLAB SECTION
1/2"=1'-0"

NO.	DATE	REVISION	BY

Freeman-Mulliken, Inc.
ENGINEERS ARCHITECTS PLANNERS

CITY OF WESTON
EAST FORK WWTP

CHLORINATOR ROOM & EQUIPMENT

FOR REVIEW

THIS PLAN SHEET IS ISSUED FOR INTERIM REVIEW ONLY AND IS NOT FOR BIDDING, CONSTRUCTION OR PERMIT PURPOSES.

PREPARED BY:
LARRY H. FREEMAN, P.E.
NO. 29007 ON
06.04.2021

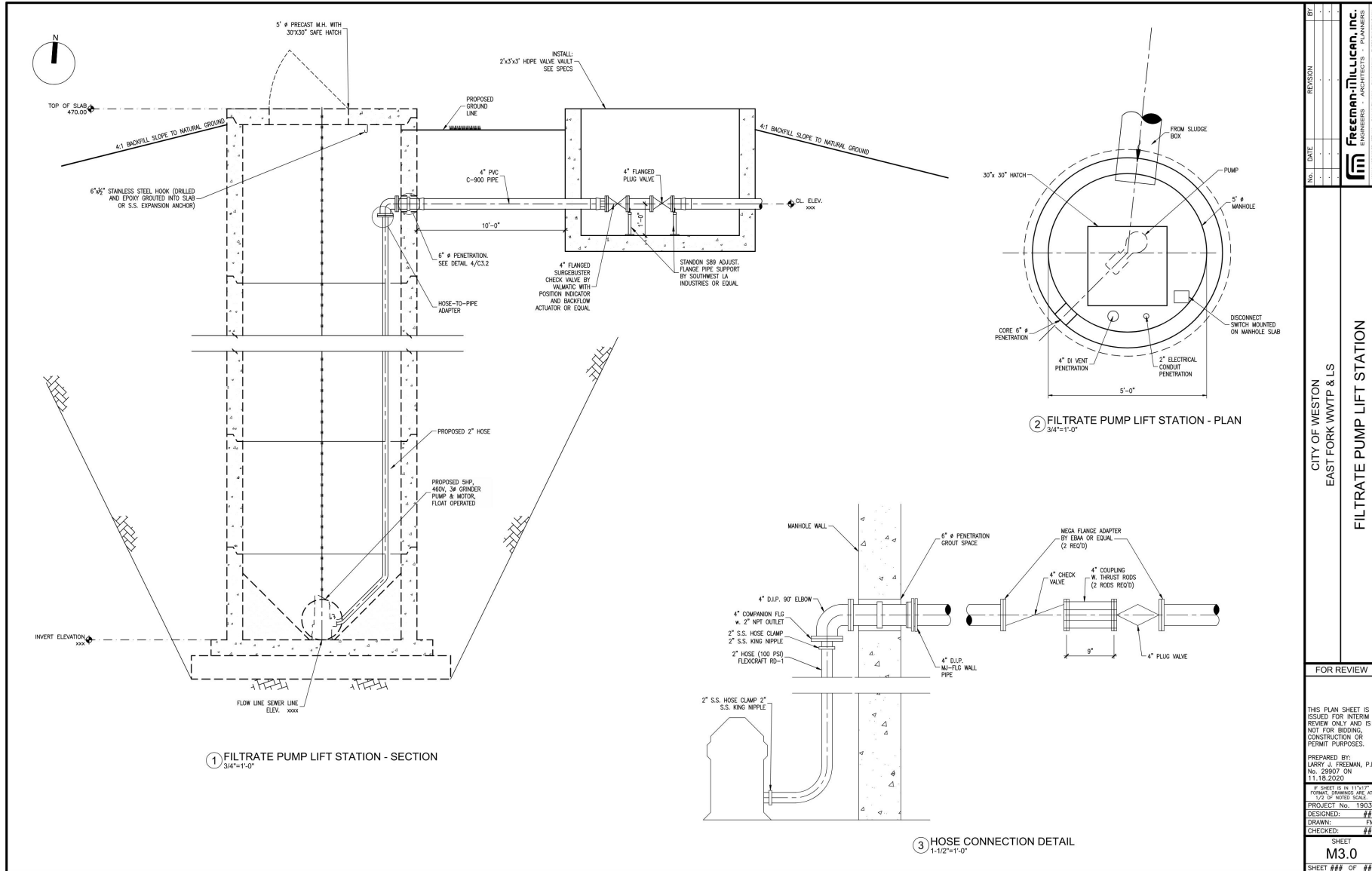
PROJECT NO. 19032

DESIGNED: FM
DRAWN: FM
CHECKED: FM

SHEET
M.3.0
SHEET 18 OF 111



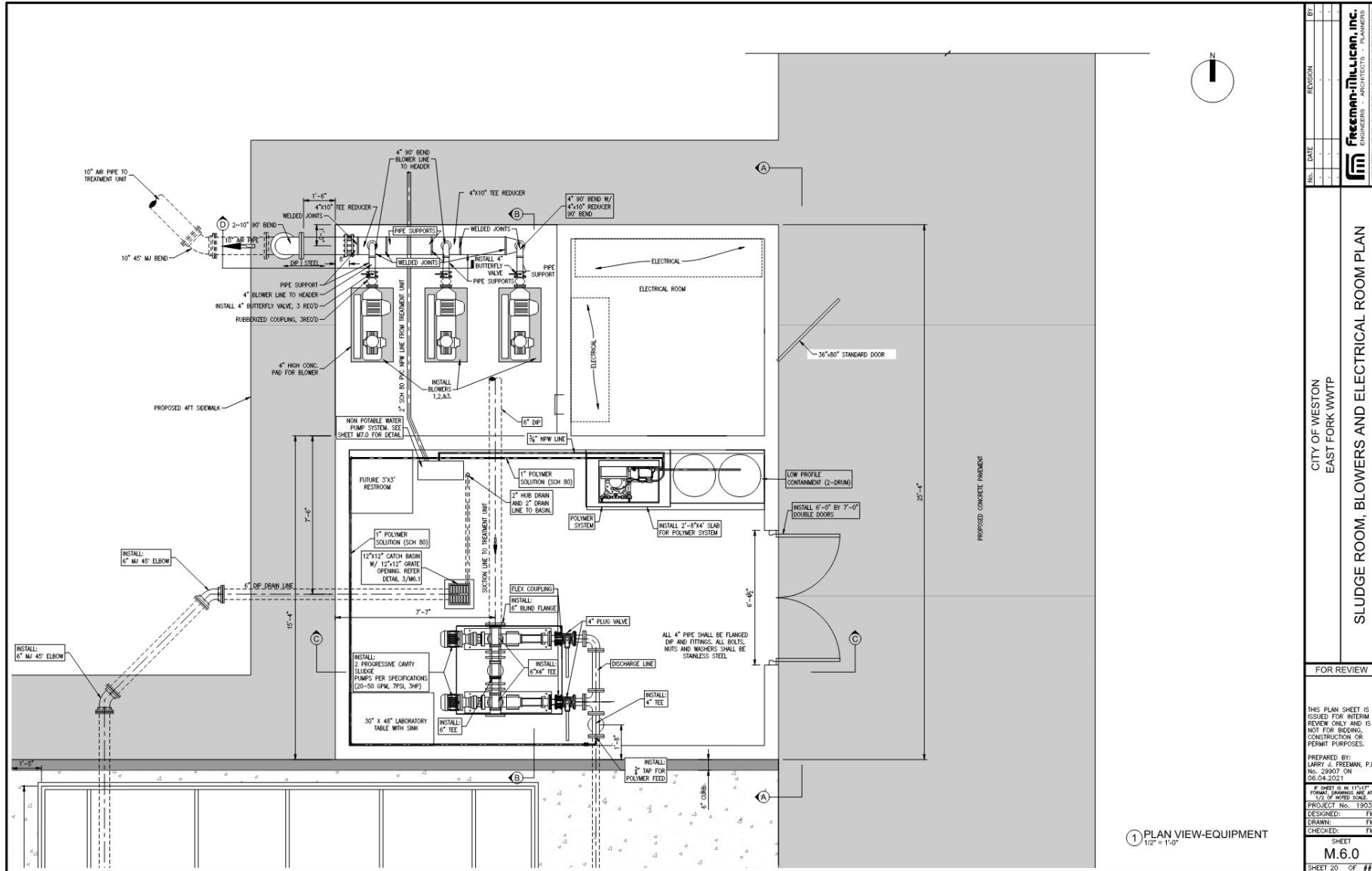
Final Plan Review



BY:	REVISION:
NO.:	DATE:
 Freeman Mulican, Inc. ENGINEERS ARCHITECTS PLANNERS 1700 N. WINDBELL, STE. 300 DALLAS, TX 75201 PH: 214.260.0000 FAX: 214.260.0007	
CITY OF WESTON EAST FORK WWTP & LS FILTRATE PUMP LIFT STATION	
FOR REVIEW	
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PREPARED BY: LARRY J. FREEMAN, P.E. No. 29907 ON 11.18.2020	
PROJECT No. 19032	
DESIGNED: ###	
DRAWN: FMH	
CHECKED: ###	
SHEET M3.0	
SHEET ### OF ###	



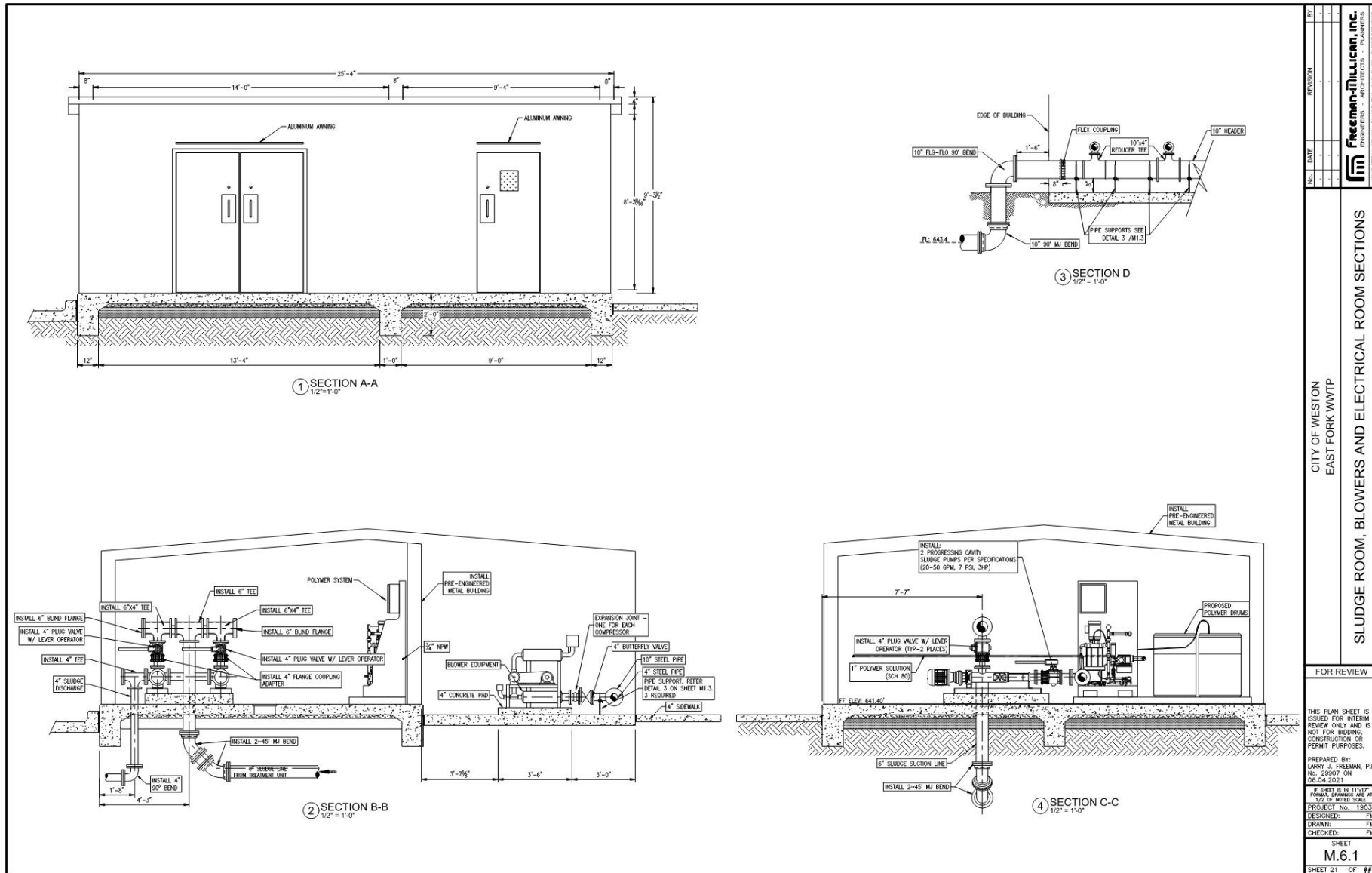
Final Plan Review



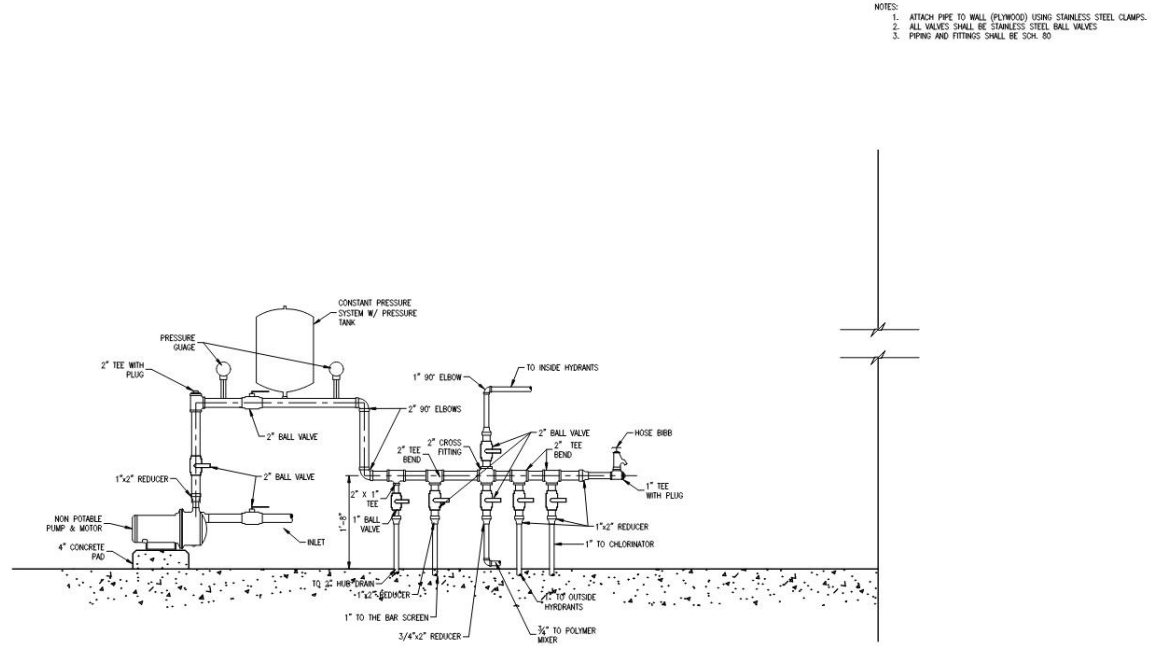
BY:	REVISION:
DATE:	
 Freeman Mulvan, Inc. ENGINEERING ARCHITECTURE INTERIORS 1000 W. STATE ST. SUITE 1000 DALLAS, TX 75201 PH: 214.761.1111 FAX: 214.761.1112 WWW.FREEMANMULVAN.COM	
CITY OF WESTON EAST FORK WWTP SLUDGE ROOM, BLOWERS AND ELECTRICAL ROOM PLAN	
FOR REVIEW	



Final Plan Review



Final Plan Review



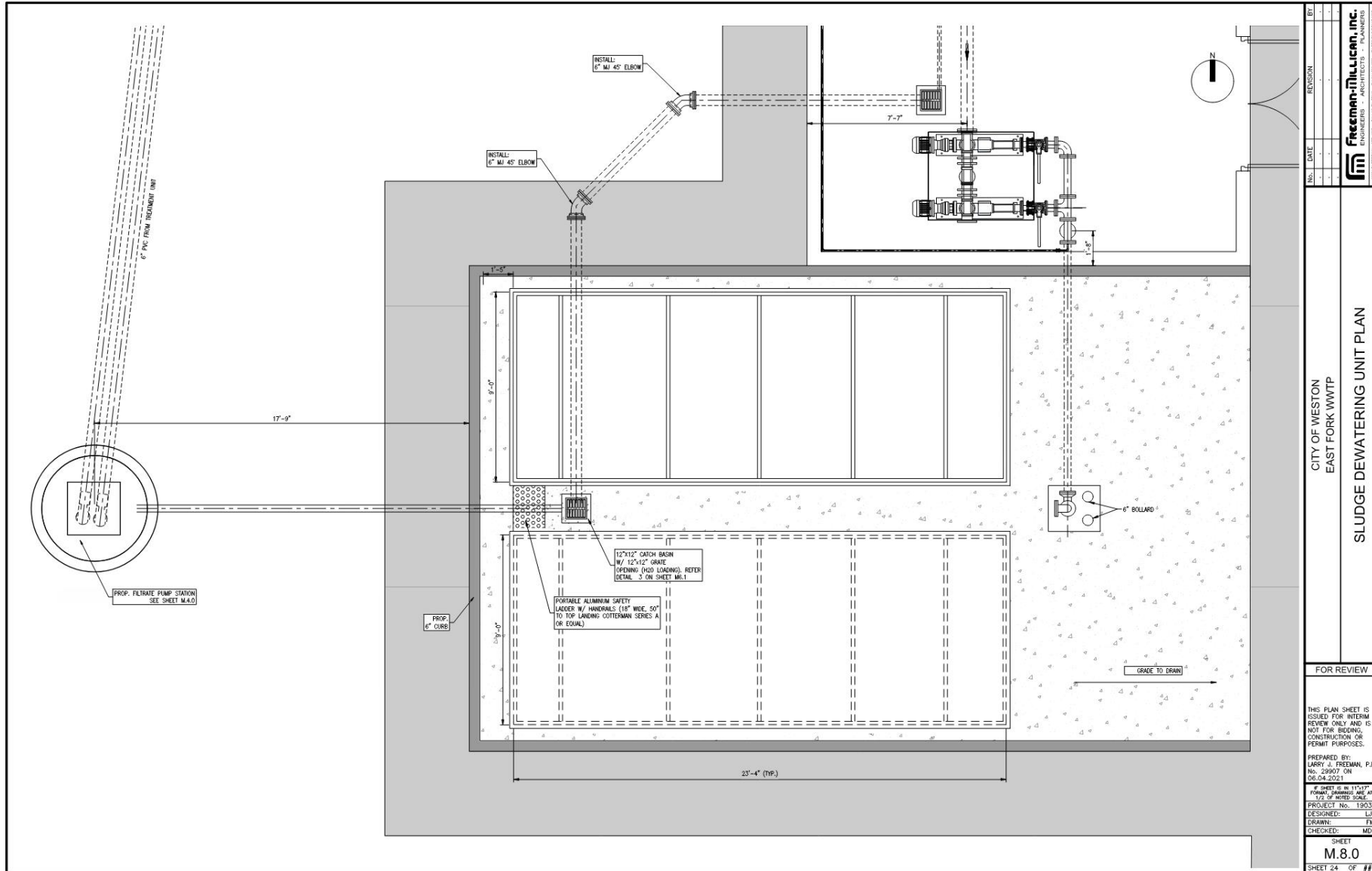
① NON POTABLE WATER PUMP & CONSTANT PRESSURE SYSTEM
N.T.S.

- NOTES:
1. ATTACH PIPE TO WALL (PLYWOOD) USING STAINLESS STEEL CLAMPS.
 2. ALL VALVES SHALL BE STAINLESS STEEL BALL VALVES.
 3. PIPING AND FITTINGS SHALL BE SCH. 80.

BY:	RENSON
DATE:	
NO.:	
DATE:	
 Freeman Mulvan, Inc. ENGINEERING AND ARCHITECTURE 1100 W. WALL STREET, SUITE 1000, DALLAS, TEXAS 75201-3842	
CITY OF WESTON EAST FORK WWTP NON-POTABLE WATER SYSTEM	
FOR REVIEW	
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PREPARED BY: LARRY H. FREEMAN, P.E. No. 29907 ON 06.04.2021	
PROJECT No. 19032 DESIGNED: FMI DRAWN: SYG CHECKED: FMI	
SHEET M.7.0 SHEET 21 OF 111	



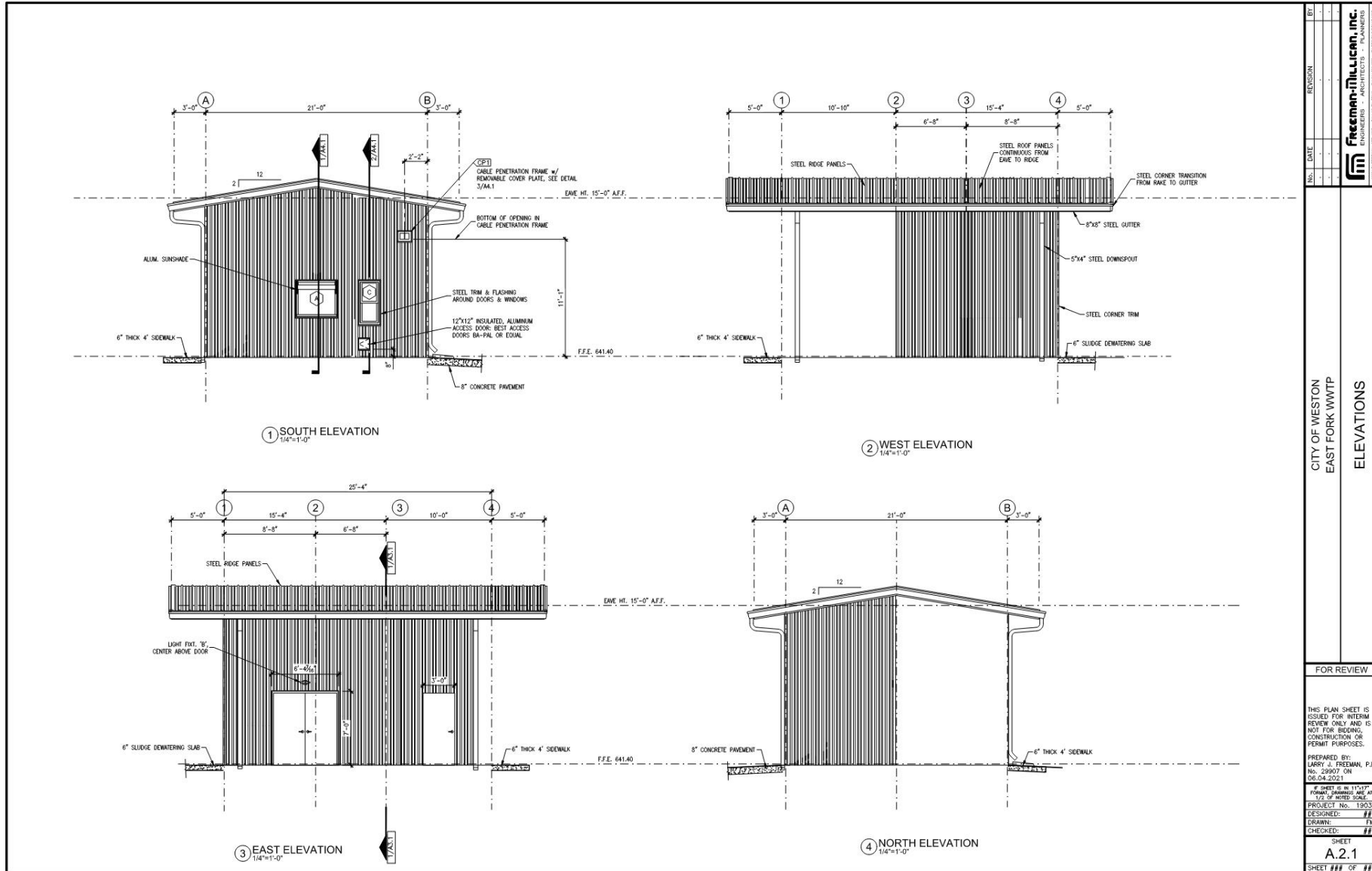
Final Plan Review



BY:	REVISION:
NO.:	DATE:
 Faceman Mulican, Inc. ENGINEERING & ARCHITECTURE 1000 W. UNIVERSITY BLVD., SUITE 1000, AUSTIN, TEXAS 78705 TEL: 512.476.1111 FAX: 512.476.1112 WWW.FACEMANMULICAN.COM	
CITY OF WESTON EAST FORK WWTP SLUDGE DEWATERING UNIT PLAN	
FOR REVIEW	
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PREPARED BY: LARRY H. FREEMAN, P.E. No. 29907 ON 06.04.2021	
PROJECT No. 19032 DESIGNED: LWF DRAWN: FMI CHECKED: MDH	
SHEET M.8.0 SHEET 24 OF 111	



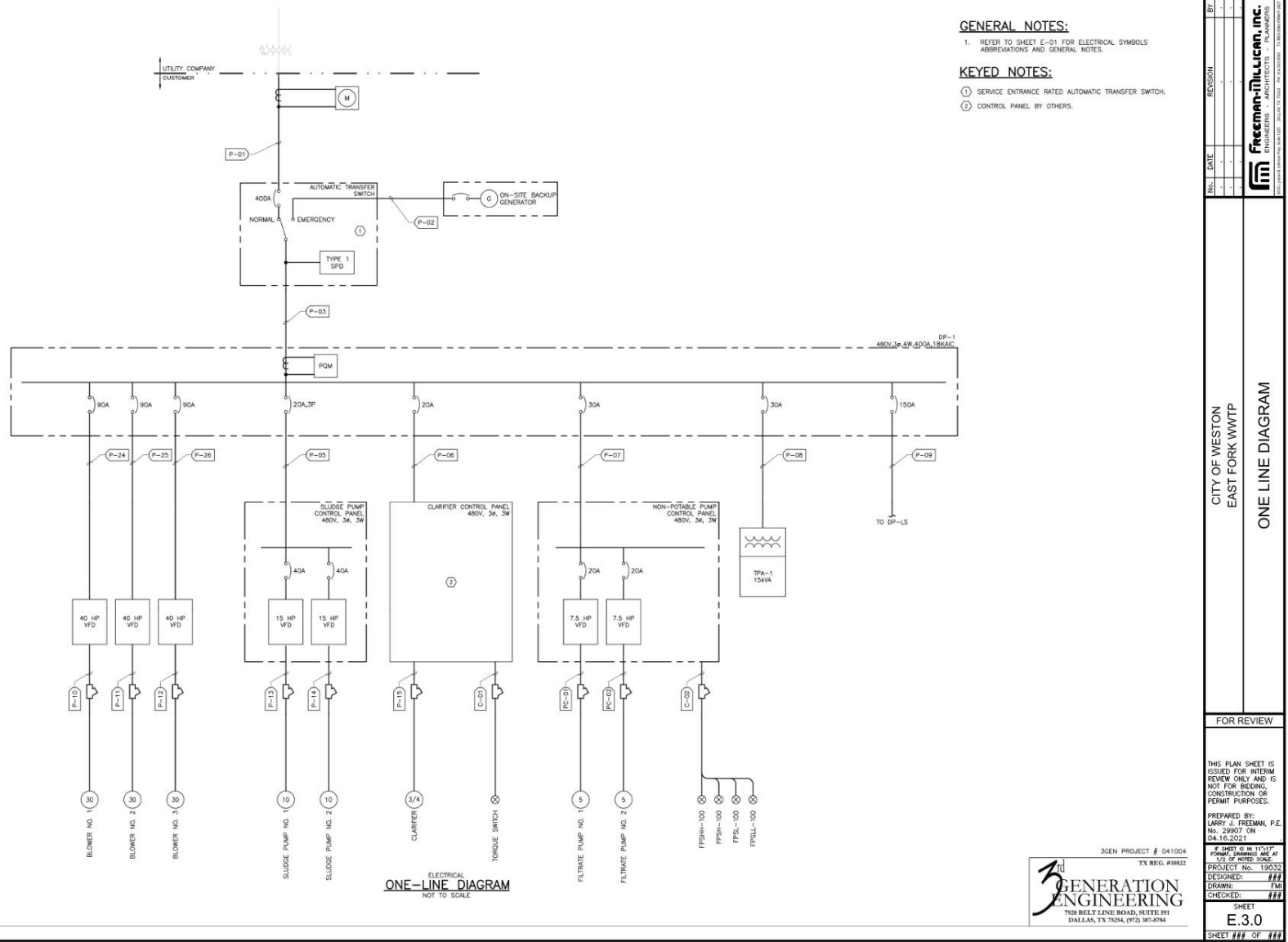
Final Plan Review



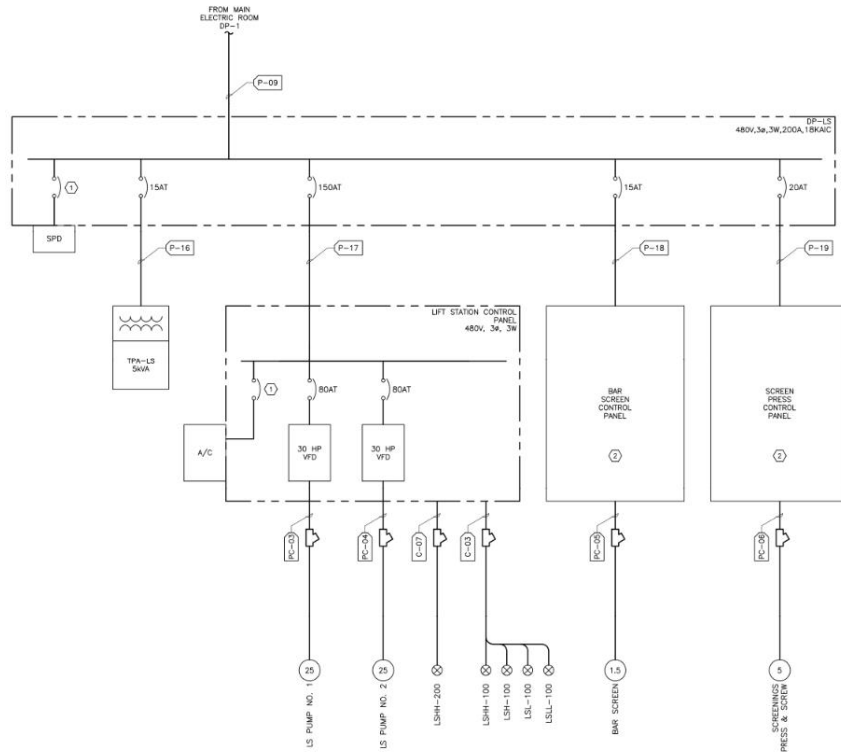
BY	REVISION
NO.	DATE
 Fisceman Mulcahy, Inc. ENGINEERS ARCHITECTS PLANNERS 1000 W. WILSON ST. SUITE 1000 DALLAS, TX 75201	
CITY OF WESTON EAST FORK WWTP ELEVATIONS	
FOR REVIEW	
THIS PLAN SHEET IS ISSUED FOR INTERIM REVIEW ONLY AND IS NOT FOR BIDDING, CONSTRUCTION OR PERMIT PURPOSES.	
PREPARED BY: LARRY H. FREEMAN, P.E. No. 29907 ON 06.04.2021	
PROJECT No. 19032 DESIGNED: ### DRAWN: ### CHECKED: ###	
SHEET A.2.1 SHEET ### OF ###	



Final Plan Review



Final Plan Review



ELECTRICAL
ONE-LINE DIAGRAM
NOT TO SCALE

GENERAL NOTES:

1. REFER TO SHEET E-01 FOR ELECTRICAL SYMBOLS ABBREVIATIONS AND GENERAL NOTES.

KEYED NOTES:

- ① BREAKER TO BE SIZED PER MANUFACTURER'S RECOMMENDATIONS.
- ② CONTROL PANEL BY OTHERS.

NO.	DATE	REVISION

Fisceman-Mullan, Inc.
ELECTRICAL ENGINEERING
11000 Preston Road, Suite 1000, Dallas, TX 75242 (972) 387-8734

CITY OF WESTON
EAST FORK WWTP
ONE LINE DIAGRAM

FOR REVIEW

THIS PLAN SHEET IS ISSUED FOR INTERIM REVIEW ONLY AND IS NOT FOR BIDDING, CONSTRUCTION OR PERMIT PURPOSES.

PREPARED BY:
LARRY J. FREEMAN, P.E.
No. 29907 ON
04.16.2021

PROJECT No. 19032

DESIGNED: **FM**

DRAWN: **FM**

CHECKED: **FM**

SHEET

E.4.0

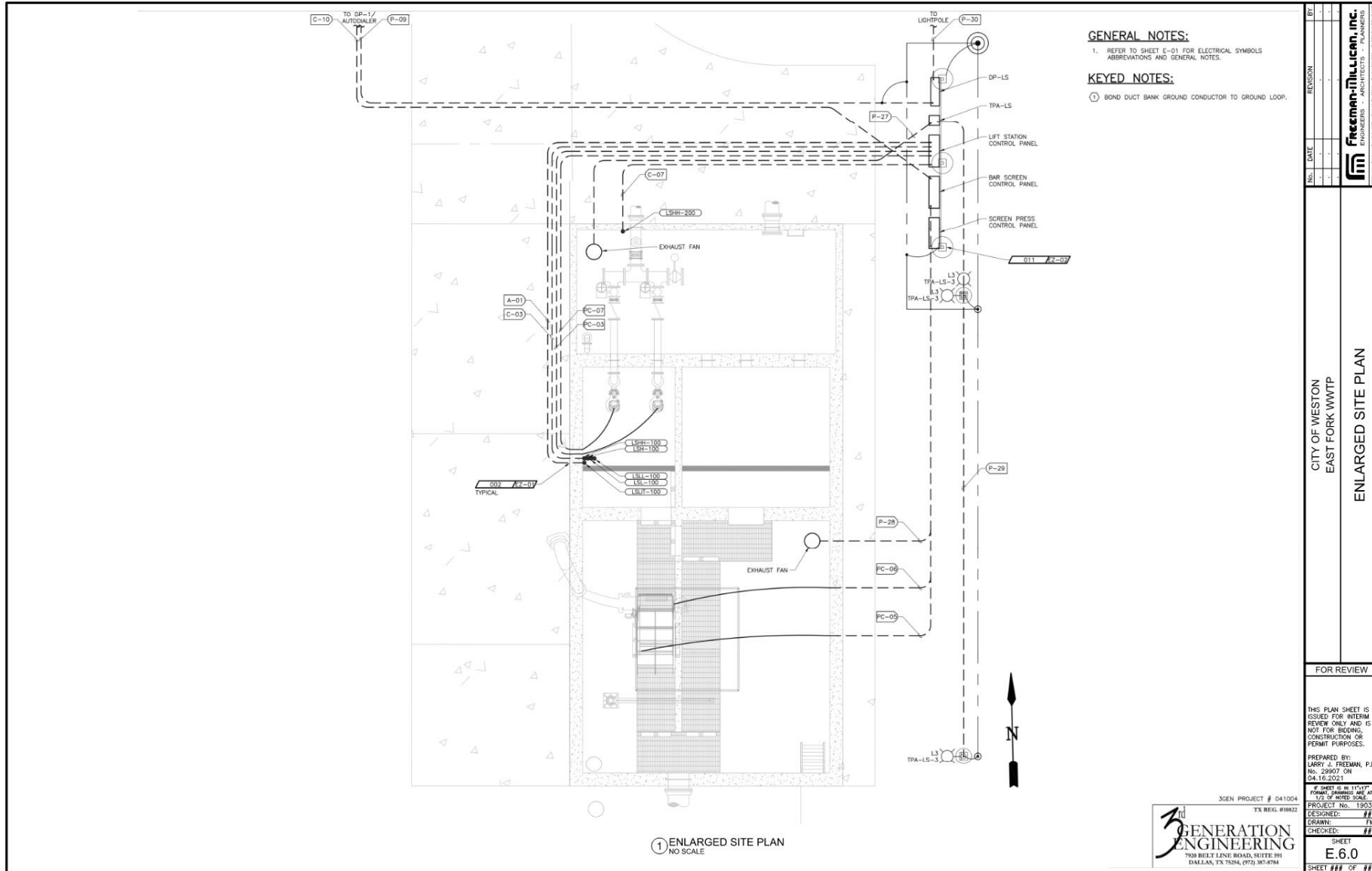
SHEET **###** OF **###**

3GEN PROJECT # 041004
TX REG. #98822

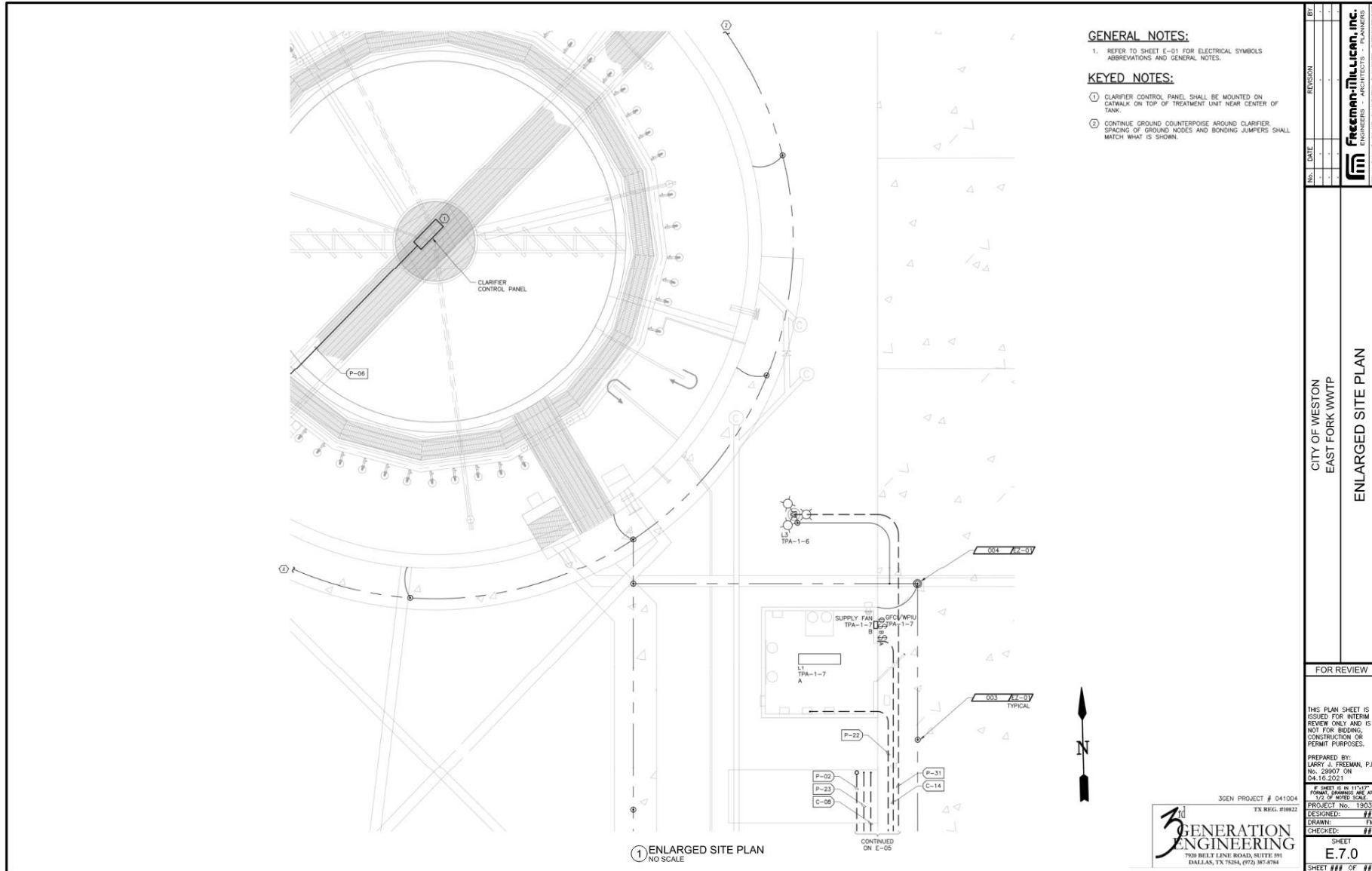
3rd GENERATION ENGINEERING
7930 BELT LINE ROAD, SUITE 891
DALLAS, TX 75254, (972) 387-8734



Final Plan Review



Final Plan Review



Operation & Maintenance Cost

East Fork WWTP – O&M Cost	
Category	Annual Budget
Personnel	\$ 70,000
Supplies (Chemicals, Other)	\$ 35,000
Other Services (Sludge Disposal, Maintenance, Support,...)	\$ 90,000
Electrical	\$ 65,000
Annual Budget	\$ 260,000



Next Steps

East Fork WWTP - Schedule			
MILESTONE	Duration (Weeks)	Date (Week of)	
Final Design Review	3	6/10/2021	
Submit TCEQ Design Report	6	6/14/2021	
Advertise for Bids	4	6/28/2021	
Receive Bids	3	7/26/2021	
Receive TCEQ Approval	1	8/02/2021	
Award Bids	1	8/10/2021	
Begin Construction	2	8/30/2021	
End Construction	36 - 52	5/09/2022	8/29/2022

