

GOLDEN GATE MASTER PUMP STATION AND SITE IMPROVEMENTS

CONSTRUCTION PLANS

Located in Collier County
Sections 27 and 28, Township 49 South, Range 26 East

Plans Prepared For:

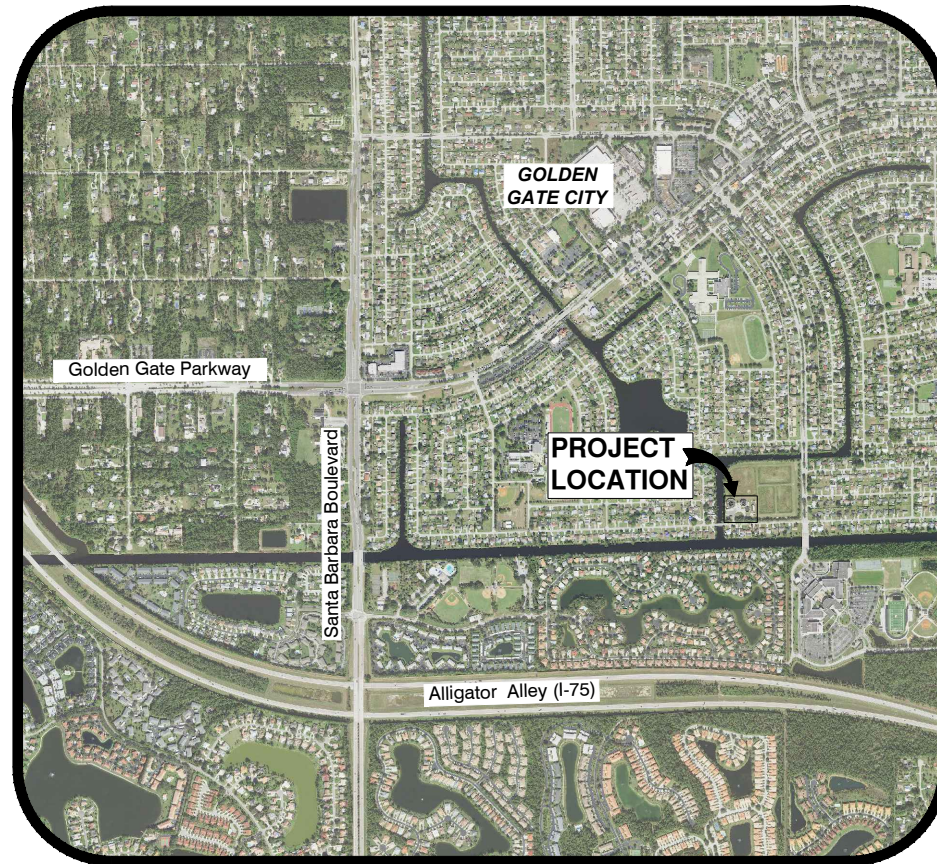


ENGINEERING AND PROJECT MANAGEMENT DIVISION
PUBLIC UTILITIES DEPARTMENT
PROJECT MANAGER: CORINNE TRTAN
3339 TAMIAMI TRAIL E
SUITE 303
NAPLES, FL 34112
TEL: (239) 252-4233
FAX: (239) 252-3989

PROPERTY DATA:
SITE ADDRESS: 4931 32nd AVE S.W.
PARCEL NO: 36450440006
STRAP NO: 324700 257 14B28

LEGAL DESCRIPTION:
GOLDEN GATE UNIT 7 ALL OF BLK 255, BLK 258+ALL VACATED LOTS, ROADS,
ALLEY WAYS, & EASEMENTS IN SAID BLOCKS O.R. 1270, PG's 2130-40.

ORIGINAL SHEET SIZE: 11x17



Location Map

N.T.S.

Prepared by:



Civil Engineers • Land Surveyors • Planners • Landscape Architects
Cert. of Auth. EB 0005151 Cert. of Auth. LB 0005151 Business LC 26000266
Bonita Springs: 239.947.1144 www.GradyMinor.com Fort Myers: 239.690.4380

O. Grady Minor and Associates, P.A.
3800 Via Del Rey
Bonita Springs, Florida 34134

Revisions

Revision	Date	Description	By



Know what's below.
Call before you dig.

DESIGN TICKET:

ALEXANDER PAUL DUWKO, P.E.
O. GRADY MINOR & ASSOC., P.A.
3800 VIA DEL REY
BONITA SPRINGS, FL 34134
FLORIDA P.E. LICENSE NO. 88695
EB/LB 0005151

DATE: FEBRUARY, 2024
FILE NAME: GGMP5_COVER.DWG
JOB CODE: GGMP5
DRAWING NUMBER 1

SUBMITTAL
PHASE 1 BID

Golden Gate Master Pump Station
PHASE 1 BID PLANS



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

ALEXANDER PAUL DUNKO, P.E.
LICENSE #88695
Grady Minor & Assoc.
3800 Via Del Rey
Bonita Springs, Florida 34134

ON THE DATE ADJACENT TO THE SEAL

PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED AND SEALED AND THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.

DATE _____

GRADY MINOR AND ASSOC.
 3800 VIA DEL REY
 BONITA SPRINGS, FL 34134
 ALEXANDER PAUL DUNKO, P.E. 88695

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

TYLER WAINRIGHT, P.E.
LICENSE #80476
Tetra Tech Inc.
10600 Chevrolet Way, Ste. 102
Estero, Florida 33928
Engineering Business No. 2429

ON THE DATE ADJACENT TO THE SEAL

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DATE _____

TETRA TECH
 10600 CHEVROLET WAY, STE 102
 ESTERO, FL 33928
 TYLER WAINRIGHT, P.E. 80476

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
1	KEY SHEET
2	SIGNATURE SHEET
3	SIGNATURE SHEET
4	GENERAL NOTES
5	GENERAL NOTES
6	AERIAL PHOTOGRAPH AND EXISTING CONDITIONS PLAN
7	SITE PLAN AND UTILITY PLAN
8	PUMP STATION SITE PLAN
9	GRADING, PAVING, AND DRAINAGE PLAN
10	PLAN VIEW-EQUIPMENT SECTIONS
11	SUMMARY OF DRAINAGE STRUCTURES
12	EQUIPMENT SECTIONS
13	EQUIPMENT SECTIONS
14	EQUIPMENT SECTIONS
15	STRUCTURAL DETAILS
16	MISCELLANEOUS DETAILS
17	MISCELLANEOUS DETAILS
18	MISCELLANEOUS DETAILS

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
E-001	ELECTRICAL NOTES & SYMBOLS
E-002	ELECTRICAL NOTES & SYMBOLS
E-003	ELECTRICAL NOTES & SYMBOLS
E-101	ELECTRICAL SITE PLAN
E-201	ENLARGED POWER PLAN
E-202	ENLARGED GROUNDING PLAN
E-301	SINGLE-LINE DIAGRAM
E-401	PANELBOARD SCHEDULES
E-501	ELECTRICAL DETAILS
E-502	ELECTRICAL DETAILS



Revision	Date	Description	By

DESIGNED BY:	A.P.D.
DRAWN BY:	E.M.N.
APPROVED:	A.P.D.
JOB CODE:	GCMP5
SCALE:	11x17 N.T.S.

Q. Grady Minor and Associates, P.A.
 3800 Via Del Rey
 Bonita Springs, Florida 34134

Civil Engineers • Land Surveyors • Planners • Landscape Architects
 Cert. of Auth. EB 0005151 Cert. of Auth. LB 0005151 Business LC 26000266

Bonita Springs: 239.947.1144 www.GradyMinor.com Fort Myers: 239.690.4380

GOLDEN GATE MASTER PUMP STATION AND SITE IMPROVEMENTS

SIGNATURE SHEET

ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+)

MUNICIPALITY:	COLLIER COUNTY
SBC/TWN/RGE:	27 AND 28/49S/26E
DATE:	FEBRUARY, 2024
SUBMITTAL TYPE:	PHASE 1 BID
SHEET	2

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THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY:

John D. Reed, P.E.
P.E. No. 73082, FL

201 East Pine Street, Suite 1000
Orlando, Florida 32801
Engineering Business No. 2429

DATE _____

ON THE DATE ADJACENT TO THE SEAL

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TETRA TECH
5621 2nd STREET WEST
ORLANDO, FL 32801
JOHN D. REED, P.E. 73082

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
I-001	INSTRUMENTATION LEGEND AND ABBREVIATIONS
I-002	INSTRUMENTATION LEGEND AND ABBREVIATIONS
I-101	PLANT NETWORK ARCHITECTURE
I-201	PUMP STATION P&ID
I-301	MPS CP LAYOUT
I-302	TRANSMITTER TO FIBER PANEL
I-501	INSTRUMENTATION DETAILS
I-502	INSTRUMENTATION DETAILS



Revision	Date	Description	By

DESIGNED BY:	A.P.D.
DRAWN BY:	E.M.N.
APPROVED:	A.P.D.
JOB CODE:	GCMP5
SCALE:	11x17 N.T.S.



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GOLDEN GATE MASTER PUMP STATION AND SITE IMPROVEMENTS

SIGNATURE SHEET

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MUNICIPALITY:	COLLIER COUNTY
SBC/TWN/RGE:	27 AND 28/49S/26E
DATE:	FEBRUARY, 2024
SUBMITTAL TYPE:	PHASE 1 BID
SHEET	3

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GENERAL NOTES:

1. ALL ELEVATIONS REFER TO NATIONAL AMERICAN VERTICAL DATUM OF 1988 (NAVD-88). THE CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD-29) IS +1.270'.
 2. THE CONTRACTOR SHALL POT HOLE TO LOCATE (HORIZONTALLY AND VERTICALLY) ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION AND PROVIDE IN WRITING ANY DISCREPANCIES TO THE COUNTY. EXTREME CAUTION TO BE USED WHEN EXCAVATING, AS NUMBER AND LOCATION OF EXISTING UTILITIES ARE BASED ON RECORD INFORMATION THAT HAS NOT BEEN FIELD VERIFIED.
 3. IT IS THE CONTRACTOR'S RESPONSIBILITY DURING CONSTRUCTION TO PROTECT ANY EXISTING UTILITIES. DAMAGE TO EXISTING UTILITIES AND PROPERTY DURING CONSTRUCTION SHALL BE REPAIRED AND/OR REPLACED AT CONTRACTOR'S EXPENSE.
 4. THE CONTRACTOR IS REQUIRED TO CONTACT ALL UTILITY OWNERS PRIOR TO THE BEGINNING OF CONSTRUCTION AND COORDINATE WITH UTILITY OWNERS DURING CONSTRUCTION. THE PRESENCE OF THE UTILITIES ARE LIKELY IN THE PROJECT AREA. CONTRACTOR TO COORDINATE WITH, BUT NOT LIMITED TO, THESE UTILITIES PRIOR TO AND DURING CONSTRUCTION:
- | SERVICE PROVIDER | UTILITY COMPANY | TELEPHONE |
|--|---|-----------------------|
| ELECTRIC | FLORIDA POWER & LIGHT (24 HOUR EMERGENCY) | 239-353-6010 |
| TELEPHONE | CENTURY LINK | 1-800-339-1811 |
| CABLE T.V. | COMCAST | (239) 432-1850 |
| UNDERGROUND FACILITY LOCATION SERVICES | SUNSHINE ONE CALL | 811 or 1-800-432-4770 |
| WASTEWATER | COLLIER COUNTY | (239) 252-6886 |
| WATER | COLLIER COUNTY | (239) 252-6245 |
| GAS | TECO ENERGY | 1-877-832-6747 |
| COMMUNICATIONS | CROWN CASTLE FIBER | 1-866-787-2637 |
| COMMUNICATIONS | SUMMIT BROADBAND | (239) 444-0400 |
| STORMWATER | COLLIER COUNTY | (239) 252-8192 |
5. EXISTING FACILITIES INCLUDING DRIVEWAYS, SIDEWALK, UTILITIES AND OTHER EXISTING FACILITIES SHALL BE RESTORED TO A CONDITION EQUAL OR BETTER THAN WHAT EXISTED PRIOR TO COMMENCING CONSTRUCTION, AT NO ADDITIONAL COST TO THE OWNER, TO THE SATISFACTION OF THE COUNTY.
 6. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPLACE/REPAIR ANY EXISTING LANDSCAPING/PRIVATE IMPROVEMENTS WITHIN THE ROW, E.G. SOD, SPRINKLER PIPING, SPRINKLER HEADS, IRRIGATION SYSTEMS, AND FENCING THAT MAY HAVE BEEN DAMAGED DURING CONSTRUCTION AT NO ADDITIONAL COSTS TO THE OWNER. CONTRACTOR TO REPLACE OR REPAIR DAMAGED PROPERTY OR IMPROVEMENTS TO A CONDITION EQUAL TO OR BETTER THAN EXISTED PRIOR TO CONSTRUCTION. CONTRACTOR SHALL TEMPORARILY CONNECT IRRIGATION COMPONENTS DURING CONSTRUCTION TO ENSURE IRRIGATION SYSTEMS CONTINUED USE DURING CONSTRUCTION.
 7. ANY SURVEY MONUMENTS INCLUDING PROPERTY CORNER WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF A MONUMENT IS IN DANGER OF BEING DISTURBED, THE CONTRACTOR SHALL PROPERLY REFERENCE ITS LOCATION AND RESET THE MONUMENT AS REQUIRED BY THE CONTRACTOR'S FLORIDA LICENSED SURVEYOR, AT NO ADDITIONAL COST TO THE OWNER.
 8. CONTRACTOR TO PROVIDE SILT FENCE, STACKED SYNTHETIC BALES AND OTHER APPROPRIATE MEASURES TO EFFECT THE FILTRATION OF SURFACE WATER FLOWS AND TO PROVIDE EROSION PROTECTION DURING CONSTRUCTION ACTIVITIES. PROTECTION IS TO BE MAINTAINED DURING THE CONSTRUCTION PERIOD UNTIL DISTURBED SOILS HAVE BEEN STABILIZED WITH GRASS OR SUITABLE EROSION PROTECTION TREATMENT.
 9. EXISTING OFF-SITE DRAINAGE PATTERNS SHALL BE MAINTAINED DURING CONSTRUCTION.
 10. SHOP DRAWINGS FOR ANY EQUIPMENT AND MATERIAL MUST BE APPROVED PRIOR TO FABRICATION AND INSTALLATION.
 11. CONTRACTOR SHALL RETAIN, ON THE WORK SITE, COPIES OF ALL PERMITS NECESSARY FOR CONSTRUCTION.
 12. CONTRACTOR IS REQUIRED TO OBTAIN FROM THE ENGINEER OF RECORD AND COUNTY PROJECT MANAGER WRITTEN APPROVAL FOR ANY DEVIATIONS FROM THE PLANS AND/OR SPECIFICATIONS.
 13. CONTRACTOR SHALL PROMPTLY REPORT ALL FIELD CHANGES TO THE ENGINEER OF RECORD, CEI REPRESENTATIVE, AND COUNTY PROJECT MANAGER.
 14. CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ALL AREAS DISTURBED BY THEIR WORK. ALL DISTURBED AREAS SHALL BE SODDED TO MATCH EXISTING CONDITIONS WITH SOD SET NO MORE THAN 1/2" BELOW ADJACENT DRIVEWAYS. NEWLY INSTALLED SOD SHALL BE WATERED UNTIL ESTABLISHED/ROOTED. IF SOD IS REQUIRED TO BE REINSTALLED DURING THE COURSE OF CONSTRUCTION FOR WHATEVER REASON, CONTRACTOR SHALL BE REQUIRED TO WATER REINSTALLED SECTIONS UNTIL THEY ARE ESTABLISHED/ROOTED.
 15. AFTER SUBSTANTIAL COMPLETION AND PRIOR TO FINAL COMPLETION, THE CONTRACTOR SHALL ACCURATELY RECORD AND PLOT THE LOCATIONS AND DEPTHS OF ALL IMPROVEMENTS INSTALLED ON A FINAL SET OF RECORD DRAWINGS WHICH SHALL BE DELIVERED TO THE ENGINEER OF RECORD, AND COLLIER COUNTY.
 16. SURVEY LAYOUT AND RECORD DRAWINGS ARE TO BE PERFORMED BY A FLORIDA LICENSED LAND SURVEYOR PROVIDED BY THE CONTRACTOR AND SHALL INCLUDE PROPERTY CORNERS AND RIGHT-OF-WAY LINES. ALL ELEVATIONS MUST REFER TO NAVD-88.
 17. CONTRACTORS WILL BE RESPONSIBLE FOR STORING ALL MATERIALS FOR THE PROJECT, INCLUDING

ALL MATERIALS PURCHASED BY COLLIER COUNTY IN A SECURED, FENCED IN STORAGE AREA.

18. DAMAGE TO EXISTING UTILITIES AND PROPERTY DURING CONSTRUCTION SHALL BE REPAIRED AND/OR REPLACED AT CONTRACTOR EXPENSE.
19. CONTRACTOR IS RESPONSIBLE FOR MAINTAINING UTILITY SERVICE AT ALL TIMES DURING CONSTRUCTION WITHIN THE PROJECT LIMITS. THIS INCLUDES HAVING A SUPPLY OF REPAIR MATERIALS ONSITE THAT MATCHES EXISTING IN THE EVENT OF A BREAK.
20. CONTRACTOR WILL BE EXPECTED TO PROVIDE A TWO (2) WEEK LOOK AHEAD FOR ALL CONSTRUCTION ACTIVITIES EVERY TWO (2) WEEKS AND ATTEND ALL MEETINGS AT THE COUNTY'S DISCRETION.
21. CONTRACTOR SHALL NOT LEAVE TRENCHES OR HOLES OPEN OVER NIGHT OR OVER WEEKENDS/HOLIDAYS.
22. ALL CONSTRUCTION DEBRIS AND OTHER WASTE MATERIAL SHALL BE DISPOSED OF OFFSITE IN ACCORDANCE WITH APPLICABLE REGULATIONS.
23. WORK AREAS ARE TO BE CLEANED ON A DAILY BASIS INCLUDING, BUT NOT LIMITED TO SWEEPING STREETS AND DAILY WATERING.
24. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING RIGHT-OF-WAY, TREE REMOVAL, AND DEWATERING PERMITS AS APPLICABLE.
25. ALL CONTRACTORS AND REPRESENTATIVES ON-SITE MUST HAVE COLLIER COUNTY CONTRACTOR IDENTIFICATION BADGES ON THEIR PERSON, CLEARLY DISPLAYED, AT ALL TIMES.
26. THE APPROVAL OF THESE CONSTRUCTION PLANS DOES NOT AUTHORIZE CONSTRUCTION OF REQUIRED IMPROVEMENTS WHICH ARE INCONSISTENT WITH EASEMENT OF RECORD.
27. COLLIER COUNTY PUBLIC UTILITIES DEPARTMENT IS RESPONSIBLE FOR THE MAINTENANCE OF THE INFRASTRUCTURE ON THIS SITE.
28. ALL PROHIBITED EXOTIC VEGETATION SHALL BE REMOVED FROM THE SITE AND IT SHALL BE MAINTAINED FREE OF EXOTICS IN PERPETUITY. (LDC 3.05.08)
29. A SEPARATE PERMIT IS REQUIRED FOR THE INSTALLATION OF ANY GATES (I.E. SLIDING, MANUAL ROLLING, MOTORIZED OR OTHER) THAT PREVENT ACCESS BY FIRE APPARATUS. ACCESS BOXES FOR MANUAL GATES AND EVAC SYSTEMS FOR ELECTRONIC GATES WILL BE REQUIRED. (FLORIDA FIRE PREVENTION CODE 6TH ED. 1: 18.2.2.2.)
30. COUNTY PERMIT TO PERFORM WORK AND/OR MAINTENANCE IN PUBLIC RIGHT-OF-WAY IS REQUIRED FOR WORK WITHIN THE PUBLIC ROAD ROW.
31. COLLIER COUNTY PUBLIC UTILITIES IS RESPONSIBLE FOR THE MAINTENANCE OF THE WATER MANAGEMENT FACILITIES ON THIS SITE.



Revision	Date	Description	By

DESIGNED BY:	A.P.D.
DRAWN BY:	E.M.N.
APPROVED:	A.P.D.
JOB CODE:	GCMP5
SCALE:	11x17 N.T.S.

Q. Grady Minor and Associates, P.A.
3800 Via Del Rey
Bonita Springs, Florida 34134

Civil Engineers • Land Surveyors • Planners • Landscape Architects
Cert. of Auth. EB 0005151 Cert. of Auth. LB 0005151
Business LC 26000266

Bonita Springs: 239.947.1144 www.GradyMinor.com Fort Myers: 239.690.4380

COLDEN GATE MASTER PUMP STATION AND SITE IMPROVEMENTS

GENERAL NOTES

ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+)

MUNICIPALITY:
COLLIER COUNTY

SBC/TWN/RGE:
27 AND 28/49S/26E

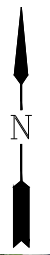
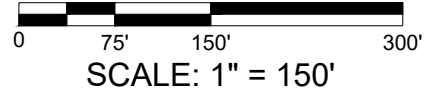
DATE:
FEBRUARY, 2024

SUBMITTAL TYPE:
PHASE 1 BID

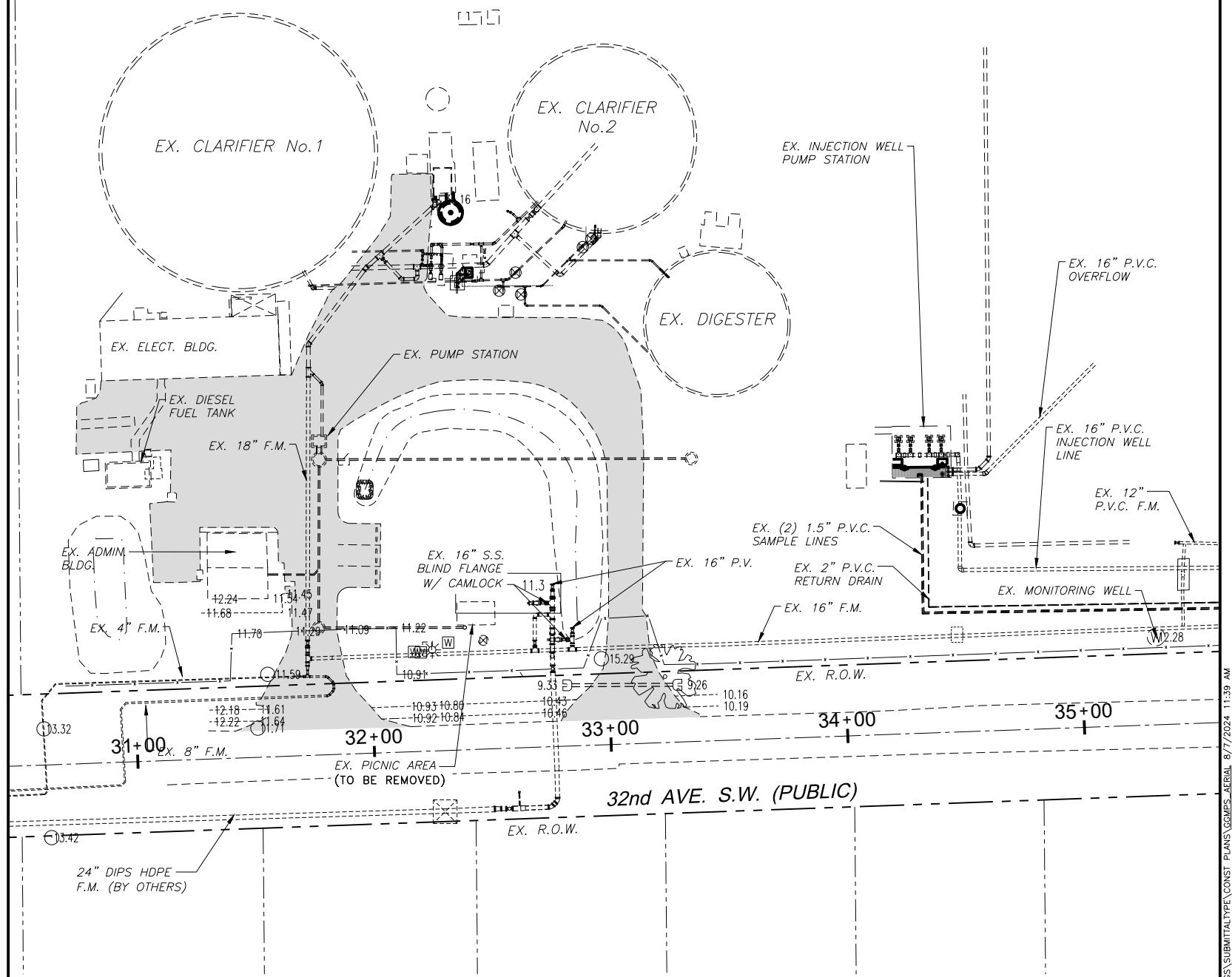
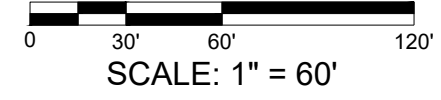
SHEET 4

ALEXANDER PAUL DUNKO, P.E.
FLORIDA P.E. LICENSE NO. 88695

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AERIAL PHOTOGRAPH
SCALE: 1"=150'

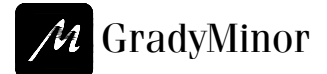


EXISTING CONDITIONS PLAN
SCALE: 1"=60'



Revision	Date	Description	By

DESIGNED BY: A.P.D.
 DRAWN BY: E.M.N.
 APPROVED: A.P.D.
 JOB CODE: GGMP5
 SCALE: 11x17 AS NOTED



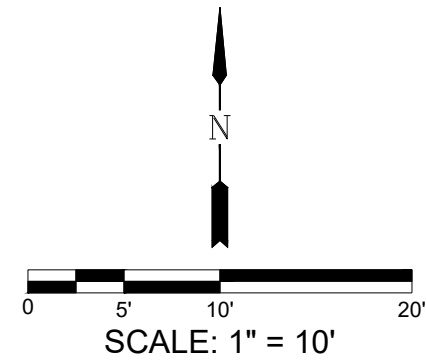
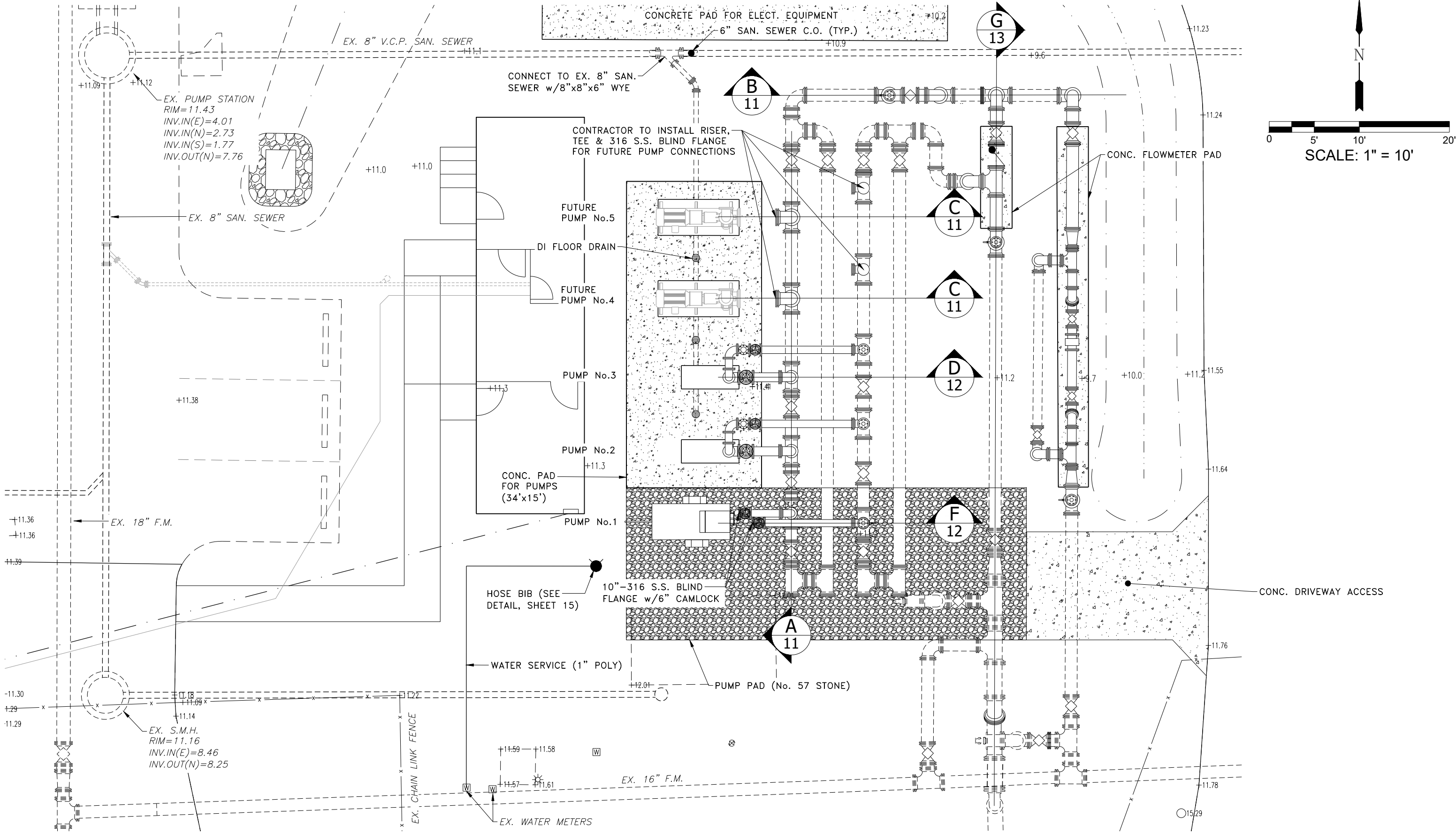
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GOLDEN GATE MASTER PUMP STATION AND SITE IMPROVEMENTS
AERIAL PHOTOGRAPH AND EXISTING CONDITIONS PLAN
 ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88) CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+)1.270'

ALEXANDER PAUL DUNKO, P.E.
 FLORIDA P.E. LICENSE NO. 88695

MUNICIPALITY: COLLIER COUNTY
 SEC./TWN/RGE: 27 AND 28/49S/26E
 DATE: FEBRUARY, 2024
 SUBMITTAL TYPE: PHASE 1 BID
 SHEET 6

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Revision	Date	Description	By

DESIGNED BY: A.P.D.
 DRAWN BY: E.M.N.
 APPROVED: A.P.D.
 JOB CODE: GGMPs
 SCALE: 11x17 1"=10'

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 Bonita Springs, Florida 34134

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GOLDEN GATE MASTER PUMP STATION AND SITE IMPROVEMENTS

PUMP STATION SITE PLAN

ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+)1.270'

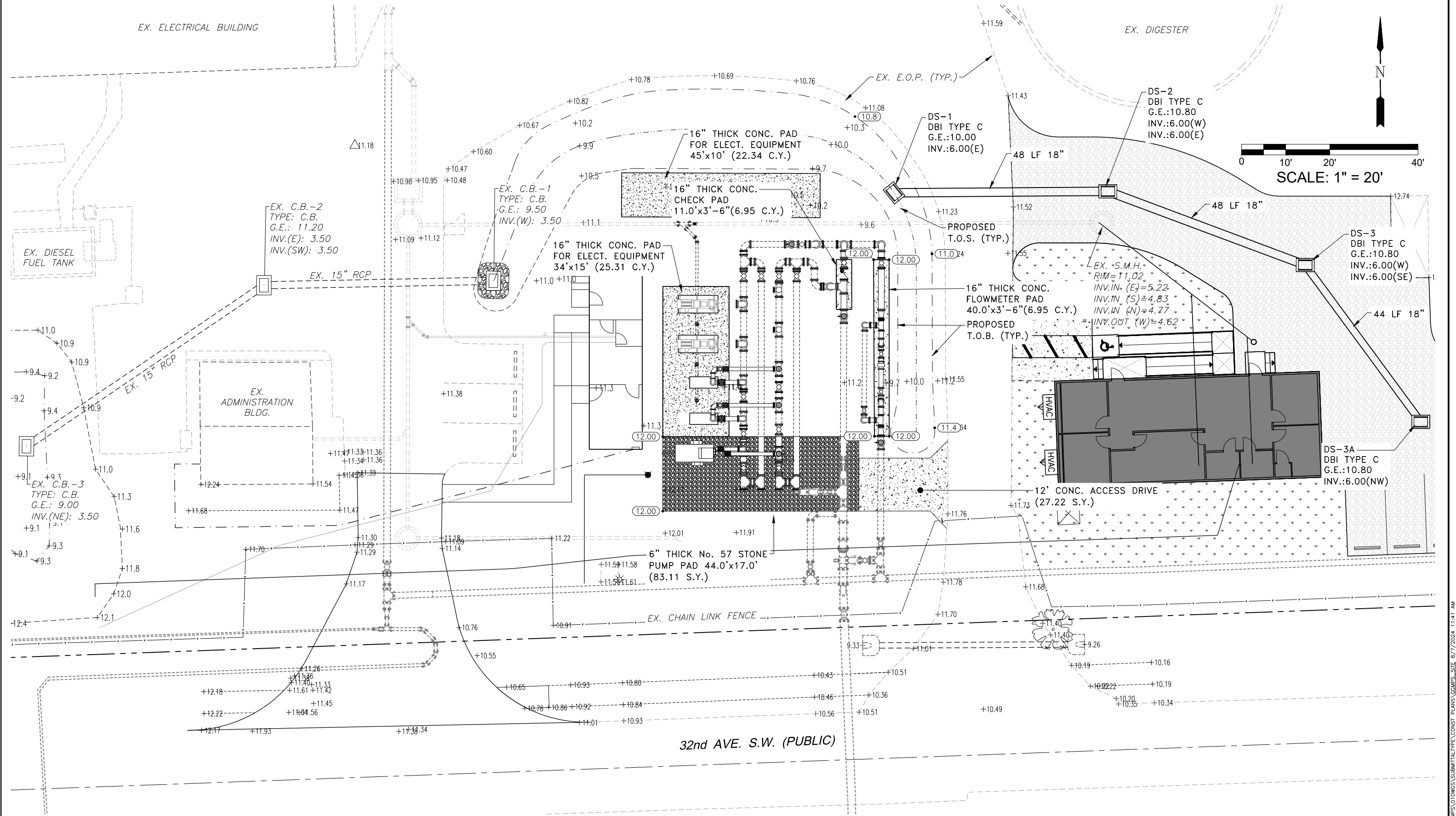
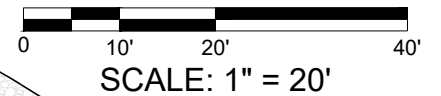
ALEXANDER PAUL DUNKO, P.E.
 FLORIDA P.E. LICENSE NO. 88695

MUNICIPALITY: COLLIER COUNTY
 SEC./TWN/RGE: 27 AND 28/49S/26E
 DATE: FEBRUARY, 2024
 SUBMITTAL TYPE: 90% PLANS
 SHEET 8

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EX. ELECTRICAL BUILDING

EX. DIGESTER



Revision	Date	Description	By

DESIGNED BY: A.P.D.
 DRAWN BY: E.M.N.
 APPROVED: A.P.D.
 JOB CODE: GGMP5
 SCALE: 1"=20'

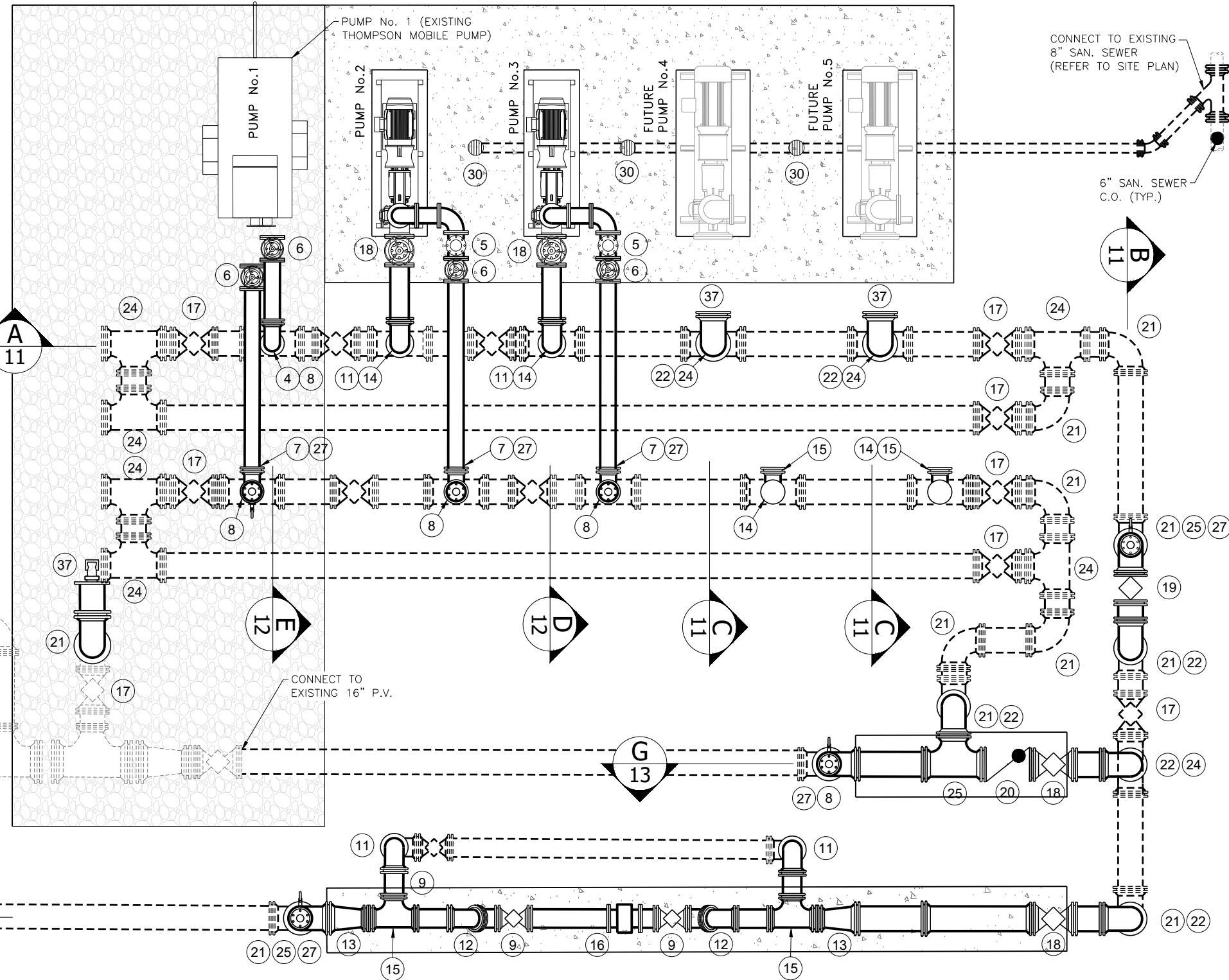
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GOLDEN GATE MASTER PUMP STATION AND SITE IMPROVEMENTS
 GRADING, PAVING, and DRAINAGE PLAN
 ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+)1.270'

ALEXANDER PAUL DUNKO, P.E.
 FLORIDA P.E. LICENSE NO. 88695

MUNICIPALITY: COLLIER COUNTY
 SEC./TWN/RGE: 27 AND 28/49S/26E
 DATE: FEBRUARY, 2024
 SUBMITTAL TYPE: PHASE 1 BID
 SHEET 9

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FITTINGS and VALVES TAG LIST

TAG No.	DESCRIPTION	COMMENTS
1	10"x6" REDUCER	D.I., FLANGED
2	6" PLUG VALVE	D.I., FLANGED
3	6" CHECK VALVE	D.I., FLANGED
4	10°-90° BEND	D.I., FLANGED
5	10° CHECK VALVE	D.I., FLANGED
6	10" PLUG VALVE	D.I., FLANGED
7	10"x10"x10" TEE	D.I., FLANGED w/ S.S. BLIND FLANGE
8	16"x16"x10" TEE	D.I., M.J., RESTRAINED
9	12" PLUG VALVE	D.I., FLANGED
10	12" CHECK VALVE	D.I., FLANGED
11	12°-90° BEND	D.I., FLANGED
12	12°-45° BEND	D.I., FLANGED
13	16"x12" REDUCER	D.I., FLANGED
14	16"x16"x12" TEE	D.I., M.J., RESTRAINED
15	12"x12"x12" TEE	D.I., FLANGED
16	12" FLOW METER	D.I., FLANGED
17	16" PLUG VALVE	D.I., M.J., RESTRAINED
18	16" PLUG VALVE	D.I., FLANGED
19	16" ACTUATED PLUG VALVE	D.I., M.J.
20	16" CHECK VALVE	D.I., M.J. RESTRAINED
21	16°-90° BEND	D.I., M.J. RESTRAINED
22	16°-90° BEND	D.I., FLANGED
23	16°-45° BEND	D.I., M.J., RESTRAINED
24	16"x16"x16" TEE	D.I., M.J., RESTRAINED
25	16"x16"x16" TEE	D.I., FLANGED
26	18"x16" REDUCER	D.I., FLANGED
27	AIR RELEASE VALVE	STAINLESS STEEL
28	6"x6"x6" TEE	PVC
29	6°-90° BEND	PVC
30	D.I. FLOOR DRAIN	D.I. GRATE, 12" SQ. HEAVY-DUTY TOP
31	PIPE SUPPORT	PER COLLIER Co. DETAIL WW-7C
32	12" BLIND FLANGE	WITH 6" CAMLOCK
33	10" BLIND FLANGE	WITH 6" CAMLOCK
34	20° - 45° BEND	D.I., M.J., RESTRAINED
35	20" x 16" TEE	D.I., M.J., RESTRAINED
36	20" x 16" REDUCER	D.I., M.J., RESTRAINED
37	16" BLIND FLANGE	WITH 4" CAMLOCK



Revision	Date	Description	By

DESIGNED BY: A.P.D.
 DRAWN BY: E.M.N.
 APPROVED: A.P.D.
 JOB CODE: GCMP5
 SCALE: 3/16"=1'-0"

GradyMinor
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 3800 Via Del Rey
 Bonita Springs, Florida 34134

Civil Engineers • Land Surveyors • Planners • Landscape Architects
 Cert. of Auth. EB 0005151 Cert. of Auth. LB 0005151 Business LC 26000266
 Bonita Springs: 239.947.1144 www.GradyMinor.com Fort Myers: 239.690.4380

GOLDEN GATE MASTER PUMP STATION AND SITE IMPROVEMENTS

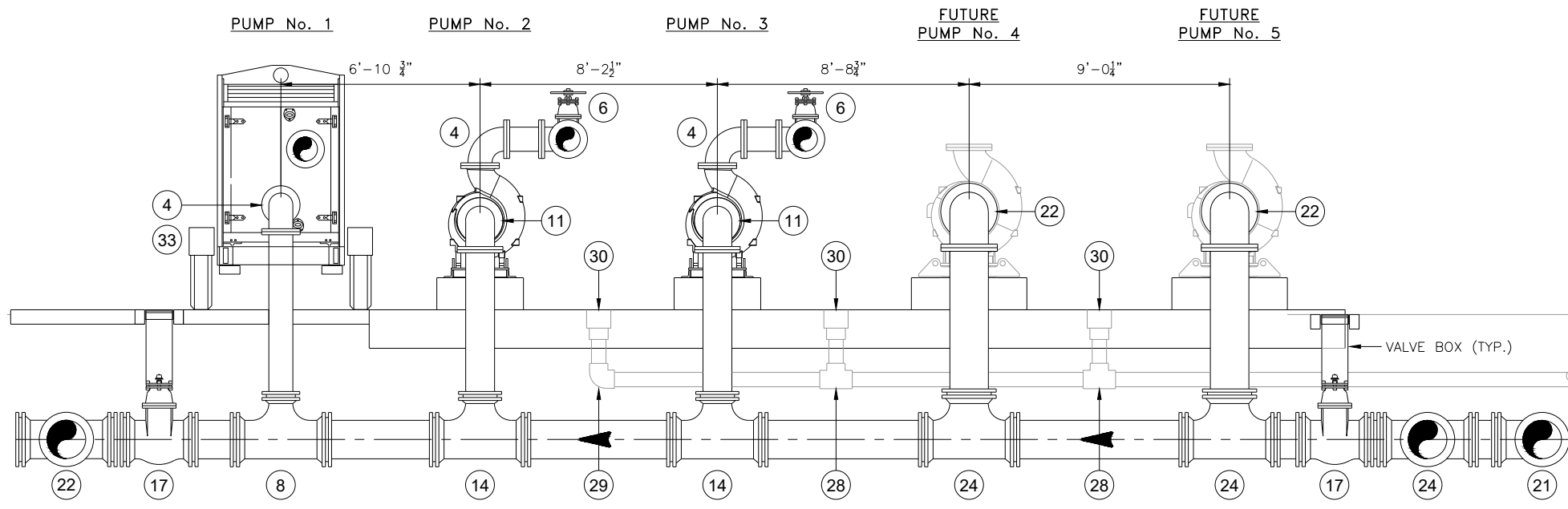
PLAN VIEW-EQUIPMENT SECTIONS

ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+)1.270'

MUNICIPALITY: COLLIER COUNTY
 SBC/TWN/RGB: 27 AND 28/49S/26E
 DATE: FEBRUARY, 2024
 SUBMITTAL TYPE: PHASE 1 BID
 SHEET 10

ALEXANDER PAUL DUNKO, P.E.
 FLORIDA P.E. LICENSE NO. 88695

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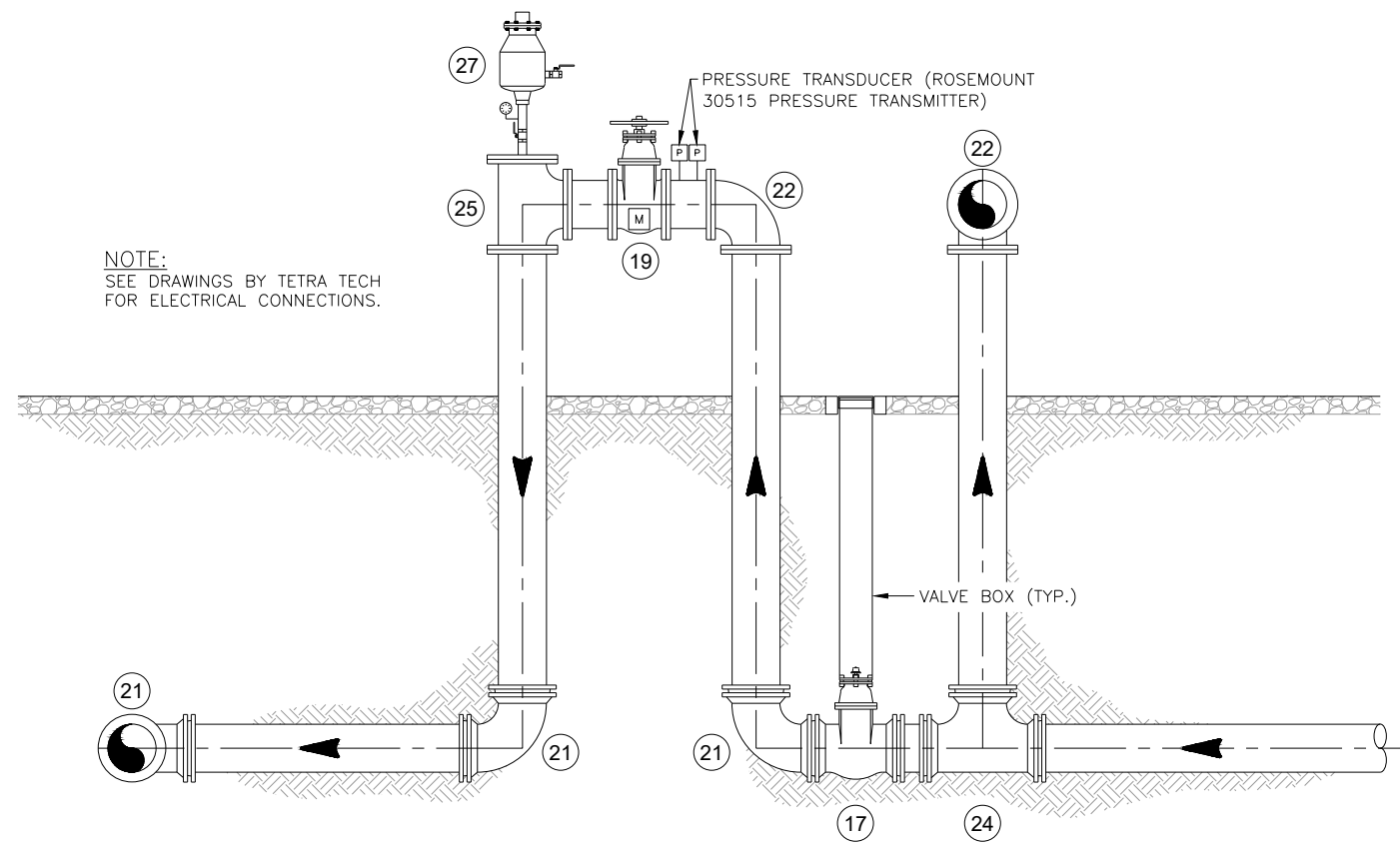
SECTION A
SCALE: 3/16"=1'-0"

FITTINGS and VALVES TAG LIST

TAG No.	DESCRIPTION	COMMENTS
1	10"x6" REDUCER	D.I., FLANGED
2	6" PLUG VALVE	D.I., FLANGED
3	6" CHECK VALVE	D.I., FLANGED
4	10"-90° BEND	D.I., FLANGED
5	10" CHECK VALVE	D.I., FLANGED
6	10" PLUG VALVE	D.I., FLANGED
7	10"x10"x10" TEE	D.I., FLANGED w/ S.S. BLIND FLANGE
8	16"x16"x10 TEE	D.I., M.J., RESTRAINED
9	12" PLUG VALVE	D.I., FLANGED
10	12" CHECK VALVE	D.I., FLANGED
11	12"-90° BEND	D.I., FLANGED
12	12"-45° BEND	D.I., FLANGED
13	16"x12" REDUCER	D.I., FLANGED
14	16"x16"x12" TEE	D.I., M.J., RESTRAINED
15	12"x12"x12" TEE	D.I., FLANGED

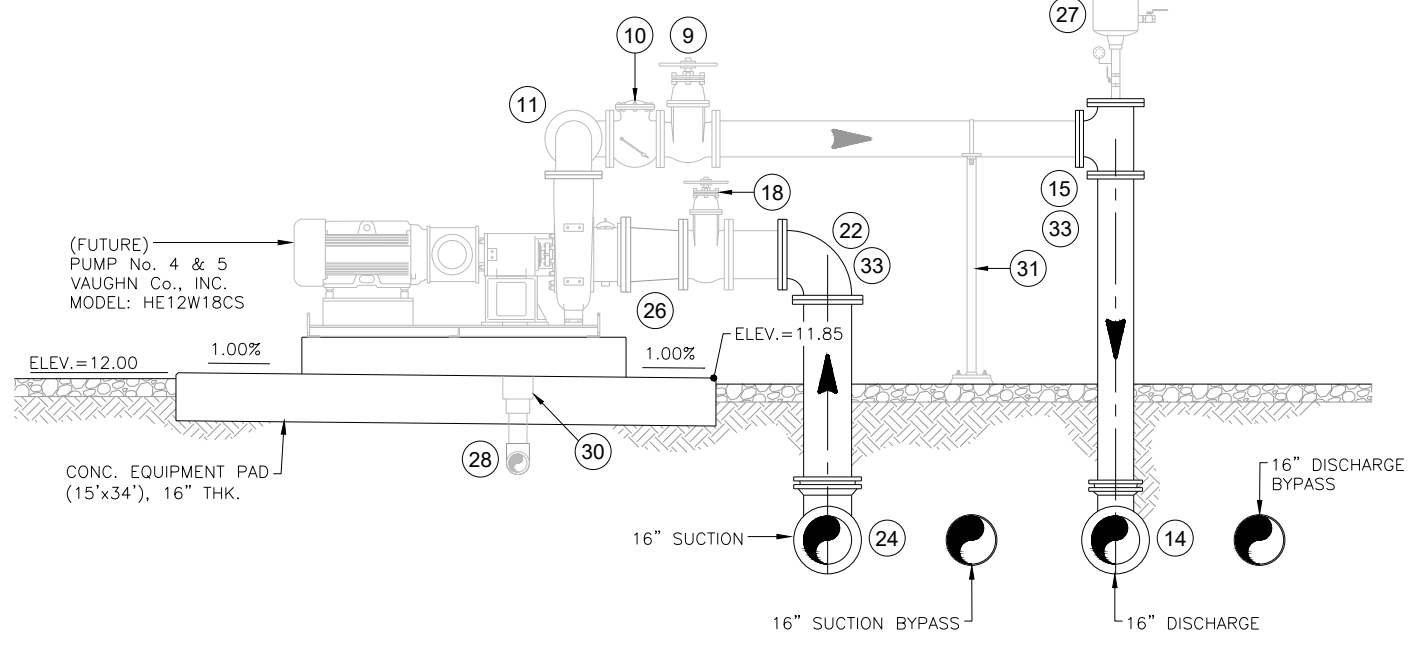
FITTINGS and VALVES TAG LIST

TAG No.	DESCRIPTION	COMMENTS
16	12" FLOW METER	D.I., FLANGED
17	16" PLUG VALVE	D.I., M.J., RESTRAINED
18	16" PLUG VALVE	D.I., FLANGED
19	16" ACTUATED PLUG VALVE	D.I., M.J.
20	16" CHECK VALVE	D.I., M.J. RESTRAINED
21	16"-90° BEND	D.I., M.J. RESTRAINED
22	16"-90° BEND	D.I., FLANGED
23	16"-45° BEND	D.I., M.J., RESTRAINED
24	16"x16"x16" TEE	D.I., M.J., RESTRAINED
25	16"x16"x16" TEE	D.I., FLANGED
26	18"x16" REDUCER	D.I., FLANGED
27	AIR RELEASE VALVE	STAINLESS STEEL
28	6"x6"x6" TEE	PVC
29	6"-90° BEND	PVC
30	D.I. FLOOR DRAIN	D.I. GRATE, 12" SQ. HEAVY-DUTY TOP
31	PIPE SUPPORT	PER COLLIER Co. DETAIL WW-7C
32	12" BLIND FLANGE	WITH 6" CAMLOCK
33	10" BLIND FLANGE	WITH 6" CAMLOCK



NOTE:
SEE DRAWINGS BY TETRA TECH
FOR ELECTRICAL CONNECTIONS.

SECTION B
SCALE: 3/16"=1'-0"



SECTION C
SCALE: 3/16"=1'-0"



Revision	Date	Description	By

DESIGNED BY: A.P.D.
 DRAWN BY: E.M.N.
 APPROVED: A.P.D.
 JOB CODE: GCMP5
 SCALE: AS NOTED

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 Bonita Springs: 239.947.1144 www.GradyMinor.com Fort Myers: 239.690.4380

GOLDEN GATE MASTER PUMP STATION AND SITE IMPROVEMENTS

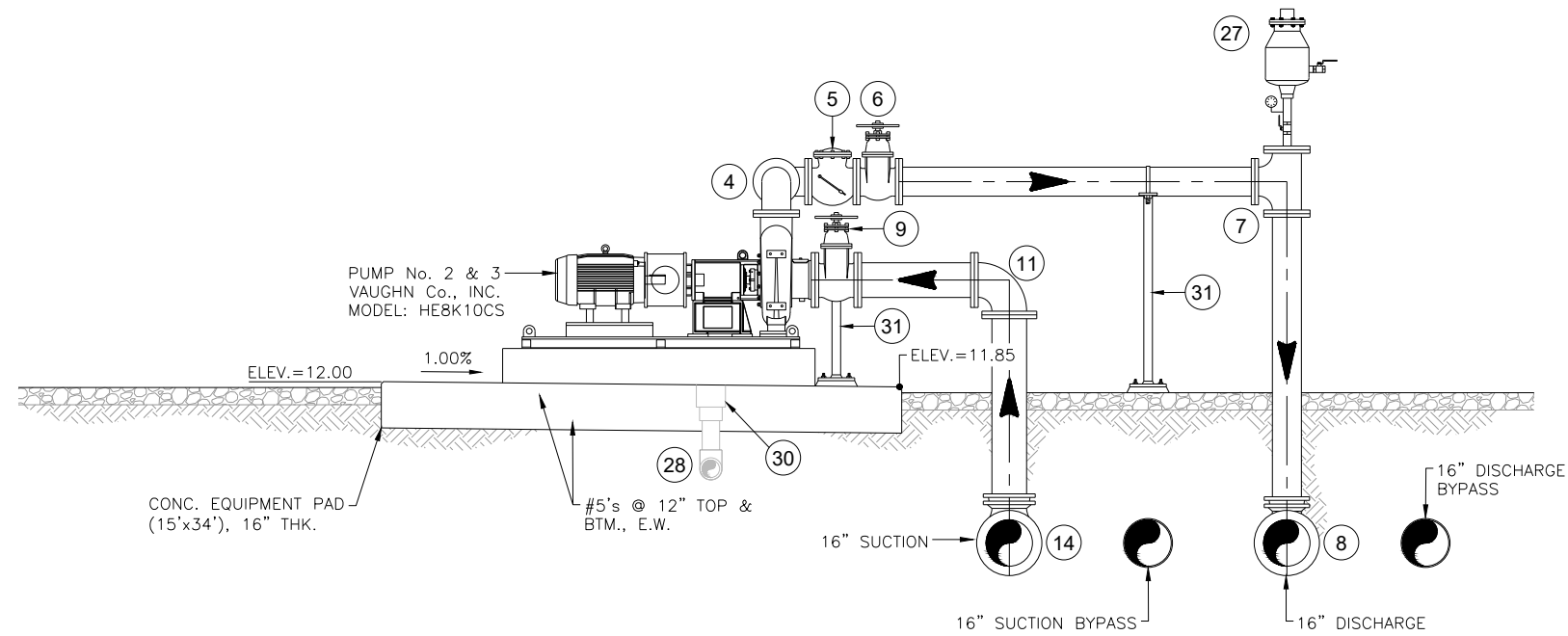
EQUIPMENT SECTIONS

ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+)1.270'

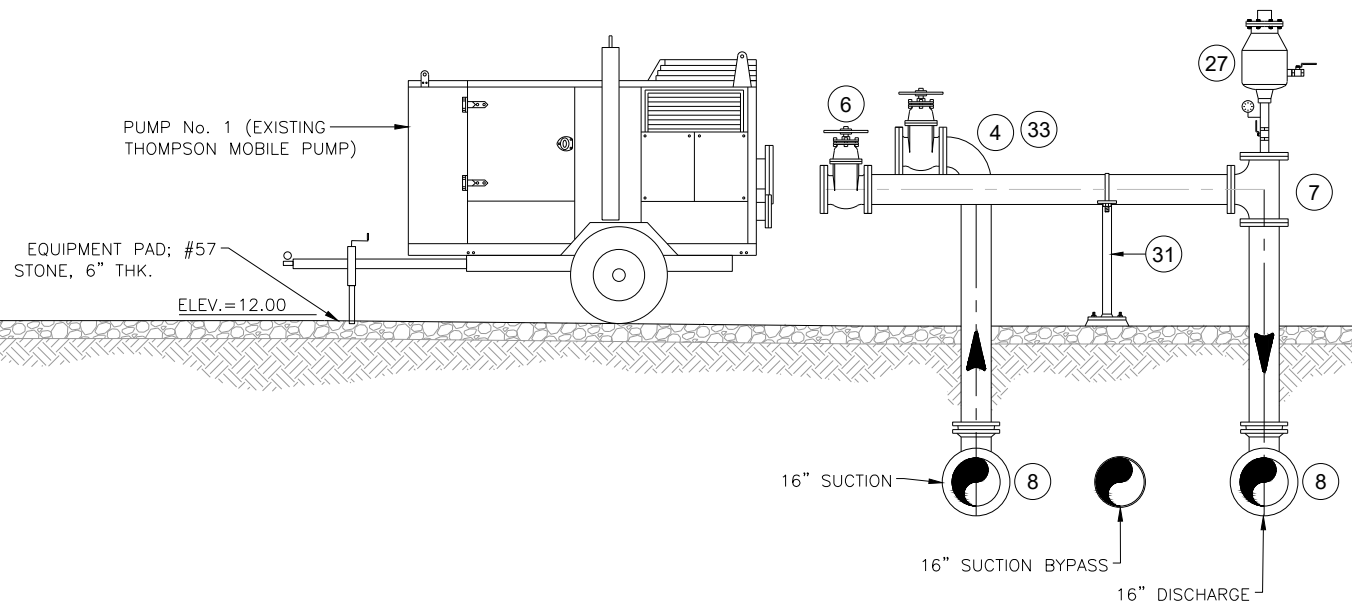
MUNICIPALITY: COLLIER COUNTY
 SBC/TWN/RGE: 27 AND 28/49S/26E
 DATE: FEBRUARY, 2024
 SUBMITTAL TYPE: PHASE 1 BID
 SHEET 11

ALEXANDER PAUL DUNKO, P.E.
 FLORIDA P.E. LICENSE NO. 88695

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SECTION D
SCALE: 3/16"=1'-0"



SECTION E
SCALE: 3/16"=1'-0"

FITTINGS and VALVES TAG LIST

TAG No.	DESCRIPTION	COMMENTS
1	10"x6" REDUCER	D.I., FLANGED
2	6" PLUG VALVE	D.I., FLANGED
3	6" CHECK VALVE	D.I., FLANGED
4	10"-90° BEND	D.I., FLANGED
5	10" CHECK VALVE	D.I., FLANGED
6	10" PLUG VALVE	D.I., FLANGED
7	10"x10"x10" TEE	D.I., FLANGED w/ S.S. BLIND FLANGE
8	16"x16"x10" TEE	D.I., M.J., RESTRAINED
9	12" PLUG VALVE	D.I., FLANGED
10	12" CHECK VALVE	D.I., FLANGED
11	12"-90° BEND	D.I., FLANGED
12	12"-45° BEND	D.I., FLANGED
13	16"x12" REDUCER	D.I., FLANGED
14	16"x16"x12" TEE	D.I., M.J., RESTRAINED
15	12"x12"x12" TEE	D.I., FLANGED
16	12" FLOW METER	D.I., FLANGED
17	16" PLUG VALVE	D.I., M.J., RESTRAINED
18	16" PLUG VALVE	D.I., FLANGED
19	16" ACTUATED PLUG VALVE	D.I., M.J.
20	16" CHECK VALVE	D.I., M.J. RESTRAINED
21	16"-90° BEND	D.I., M.J. RESTRAINED
22	16"-90° BEND	D.I., FLANGED
23	16"-45° BEND	D.I., M.J., RESTRAINED
24	16"x16"x16" TEE	D.I., M.J., RESTRAINED
25	16"x16"x16" TEE	D.I., FLANGED
26	18"x16" REDUCER	D.I., FLANGED
27	AIR RELEASE VALVE	STAINLESS STEEL
28	6"x6"x6" TEE	PVC
29	6"-90° BEND	PVC
30	D.I. FLOOR DRAIN	D.I. GRATE, 12" SQ. HEAVY-DUTY TOP
31	PIPE SUPPORT	PER COLLIER Co. DETAIL WW-7C
32	12" BLIND FLANGE	WITH 6" CAMLOCK
33	10" BLIND FLANGE	WITH 6" CAMLOCK



Revision	Date	Description	By

DESIGNED BY: A.P.D.
 DRAWN BY: E.M.N.
 APPROVED: A.P.D.
 JOB CODE: GCMP5
 SCALE: AS NOTED

GradyMinor
 Q. Grady Minor and Associates, P.A.
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 Bonita Springs: 239.947.1144 www.GradyMinor.com Fort Myers: 239.690.4380

GOLDEN GATE MASTER PUMP STATION AND SITE IMPROVEMENTS

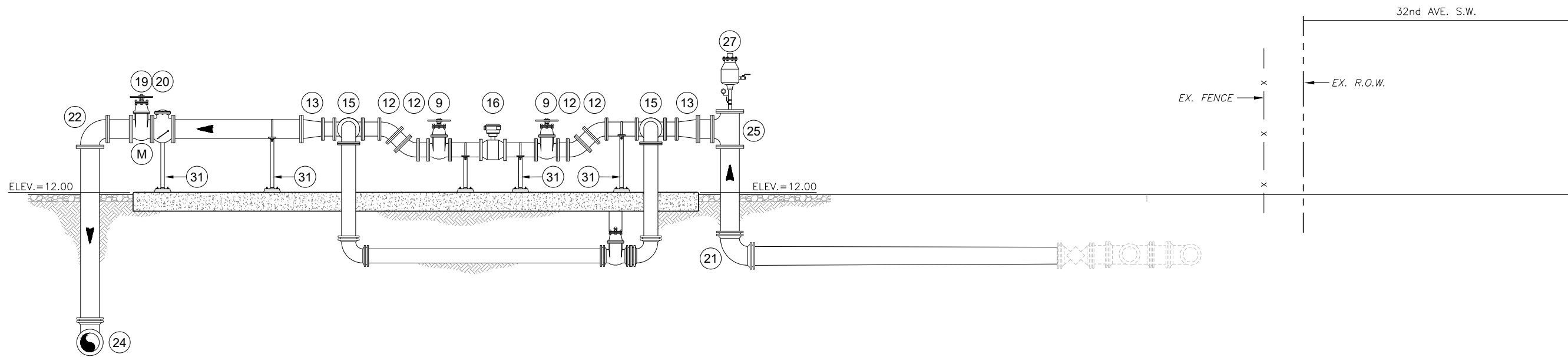
EQUIPMENT SECTIONS

ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+)1.270'

MUNICIPALITY: COLLIER COUNTY
 SBC/TWN/RGB: 27 AND 28/49S/26E
 DATE: FEBRUARY, 2024
 SUBMITTAL TYPE: PHASE 1 BID
 SHEET 12

ALEXANDER PAUL DUNKO, P.E.
 FLORIDA P.E. LICENSE NO. 88695

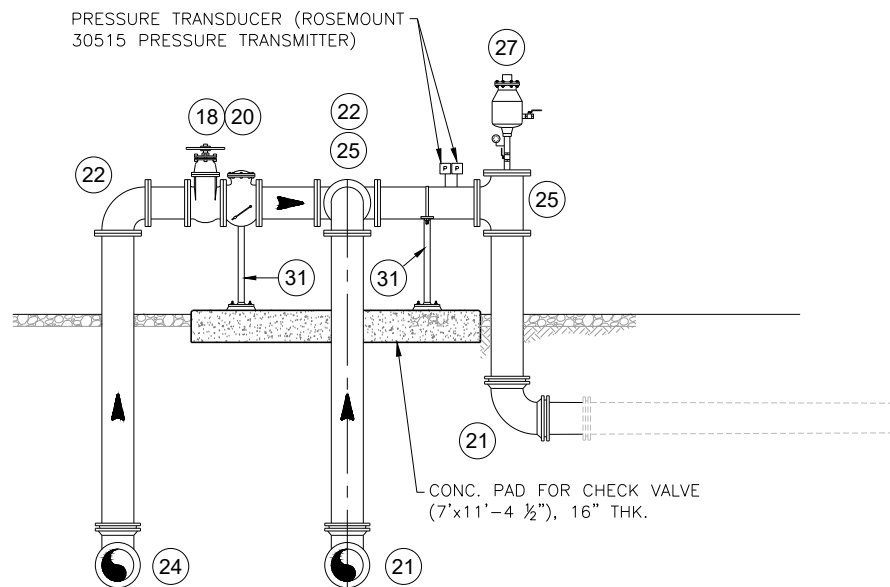
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NOTE:
SEE DRAWINGS BY TETRA TECH
FOR ELECTRICAL CONNECTIONS.

SECTION F

SCALE: 1/8"=1'-0"



SECTION G

SCALE: 1/8"=1'-0"

FITTINGS and VALVES TAG LIST

TAG No.	DESCRIPTION	COMMENTS
1	10"x6" REDUCER	D.I., FLANGED
2	6" PLUG VALVE	D.I., FLANGED
3	6" CHECK VALVE	D.I., FLANGED
4	10"-90° BEND	D.I., FLANGED
5	10" CHECK VALVE	D.I., FLANGED
6	10" PLUG VALVE	D.I., FLANGED
7	10"x10"x10" TEE	D.I., FLANGED w/ S.S. BLIND FLANGE
8	16"x16"x10" TEE	D.I., M.J., RESTRAINED
9	12" PLUG VALVE	D.I., FLANGED
10	12" CHECK VALVE	D.I., FLANGED
11	12"-90° BEND	D.I., FLANGED
12	12"-45° BEND	D.I., FLANGED
13	16"x12" REDUCER	D.I., FLANGED
14	16"x16"x12" TEE	D.I., M.J., RESTRAINED
15	12"x12"x12" TEE	D.I., FLANGED
16	12" FLOW METER	D.I., FLANGED
18	16" PLUG VALVE	D.I., FLANGED

FITTINGS and VALVES TAG LIST

TAG No.	DESCRIPTION	COMMENTS
19	16" ACTUATED PLUG VALVE	D.I., M.J.
20	16" CHECK VALVE	D.I., M.J. RESTRAINED
21	16"-90° BEND	D.I., M.J. RESTRAINED
22	16"-90° BEND	D.I., FLANGED
23	16"-45° BEND	D.I., M.J., RESTRAINED
24	16"x16"x16" TEE	D.I., M.J., RESTRAINED
25	16"x16"x16" TEE	D.I., FLANGED
26	18"x16" REDUCER	D.I., FLANGED
27	AIR RELEASE VALVE	STAINLESS STEEL
28	6"x6"x6" TEE	PVC
29	6"-90° BEND	PVC
30	D.I. FLOOR DRAIN	D.I. GRATE, 12" SQ. HEAVY-DUTY TOP
31	PIPE SUPPORT	PER COLLIER Co. DETAIL WW-7C
32	12" BLIND FLANGE	WITH 6" CAMLOCK
33	10" BLIND FLANGE	WITH 6" CAMLOCK
34	20" - 45° BEND	D.I., M.J., RESTRAINED



Revision	Date	Description	By

DESIGNED BY:	A.P.D.
DRAWN BY:	E.M.N.
APPROVED:	A.P.D.
JOB CODE:	CGMPS
SCALE:	AS NOTED



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 Cert. of Auth. EB 0005151 Cert. of Auth. LB 0005151
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 3800 Via Del Rey
 Bonita Springs, Florida 34134

GOLDEN GATE MASTER PUMP STATION AND SITE IMPROVEMENTS

EQUIPMENT SECTIONS

ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88)
 CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+)1.270'

ALEXANDER PAUL DUNKO, P.E.
 FLORIDA P.E. LICENSE NO. 88695

MUNICIPALITY:
 COLLIER COUNTY
 SBC/TWN/RGE:
 27 AND 28/49S/26E
 DATE:
 FEBRUARY, 2024
 SUBMITTAL TYPE:
 PHASE 1 BID
 SHEET 13

GENERAL NOTES

FOUNDATIONS

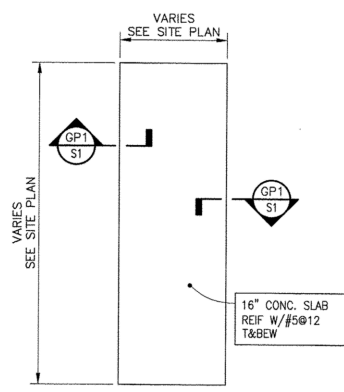
1. NO CONCRETE SHALL BE PLACED IN WATER OR ON FROZEN GROUND.
2. IN GENERAL, EXTERIOR CONSTRUCTION SHALL BE CARRIED DOWN A MINIMUM OF 2'-0" BELOW FINISHED EXTERIOR GRADE.
3. ALL FOUNDATIONS SHALL BEAR ON 12" OF COMPACTED GRAVEL ON UNDISTURBED SOIL WITH A BEARING CAPACITY OF NOT LESS THAN 2500 PSF.
4. ALL FINISHED EXCAVATIONS SHALL BE INSPECTED AND APPROVED BY THE ENGINEER OR HIS DESIGNEE BEFORE ANY CONCRETE IS PLACED.
5. ALL BACKFILL UNDER OR ADJACENT TO ANY PORTION OF THE STRUCTURES SHALL BE COMPACTED IN 12" LIFTS. SEE SPECIFICATIONS.
6. PROVIDE 6" GRAVEL, COMPACTED TO 90% MODIFIED PROCTOR DENSITY, UNDER ALL SLABS ON GRADE AND WHERE INDICATED ON THE DRAWINGS OVER WELL COMPACTED STRUCTURAL FILL.

CONCRETE

1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF THE SPECIFICATIONS, THE LATEST EDITION OF THE ACI BUILDING CODE (ACI 318) AND ACI 301, SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS, AND TO THE FLORIDA BUILDING CODE. IN CASE OF CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.
2. ALL CONCRETE SHALL BE READY-MIXED IN ACCORDANCE WITH ASTM C94.
3. VERTICAL CONSTRUCTION JOINTS AND STOPS IN THE CONCRETE WORK SHALL BE MADE AT MIDSPAN. PROVIDE DOWELS AT CONSTRUCTION JOINTS OF AREA EQUAL TO 0.5% OF THE VERTICAL CONCRETE AREA. SEE SPECIFICATIONS. PROVIDE BEVELED KEYWAYS AT ALL CONSTRUCTION JOINTS.
4. AT LEAST 48 HOURS SHALL ELAPSE BEFORE DEPOSITING NEW CONCRETE AGAINST PREVIOUSLY PLACED CONCRETE.
5. ALL CONCRETE SHALL ATTAIN THE FOLLOWING MINIMUM COMPRESSIVE STRENGTHS AT 28 DAYS AGE: FOOTINGS AND INTERIOR CONCRETE SLABS - 4,000 PSI.; CONCRETE EXPOSED TO THE ELEMENTS (EXTERIOR SLABS) CONCRETE EXPOSED TO SEWAGE - 4,000 PSI. REFER TO SPECIFICATIONS AND ACI 301 FOR DESIGN STRENGTHS REQUIRED FOR SELECTING MIX PROPORTIONS.
6. ALL SLABS ON GRADE SHALL BE PLACED IN ALTERNATE PANELS NOT EXCEEDING 900 S.F.

REINFORCING

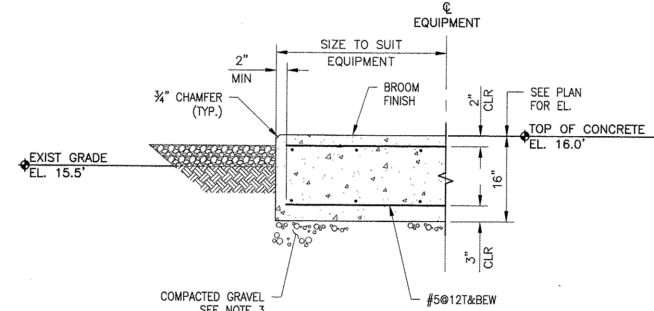
1. ALL REINFORCING BAR DETAILS SHALL CONFORM TO THE LATEST ACI CODE AND DETAILING MANUAL, EXCEPT AS OTHERWISE SPECIFIED.
2. ALL REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60 EXCEPT TIES AND STIRRUPS GRADE 40. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 AND SHALL BE PROVIDED IN FLAT SHEETS. LAPS SHALL BE STAGGERED AND SHALL BE 1-1/2 FULL MESH MIN.
3. SCHEDULE WITH THE SHOP DRAWINGS ALL NECESSARY ACCESSORIES TO HOLD REINFORCING SECURELY IN POSITION. MINIMUM REQUIREMENTS SHALL BE: HIGH CHAIRS - 4 FEET ON CENTERS; SLAB BOLSTERS - 3'-6" ON CENTERS; SUPPORT BARS FOR HIGH CHAIRS - #5.
4. ALL BARS, EXCEPT AS OTHERWISE NOTED, SHALL BE CONTINUOUS AND SHALL BE RUN CONTINUOUSLY AROUND CORNERS, LAPPED AT NECESSARY SPLICES, AND HOOKED AT DISCONTINUOUS ENDS. LAPS SHALL BE 30-BAR DIAMETER MINIMUM, UNLESS OTHERWISE NOTED.
5. THE CONCRETE PROTECTIVE COVERING FOR MAIN REINFORCEMENT SHALL BE, UNLESS SHOWN OTHERWISE:
 - A. FOOTING BOTTOMS...3 INCHES.
 - B. COLUMNS, BEAMS AND FORMED SURFACES IN DIRECT CONTACT WITH SOIL OR EXPOSED TO THE WEATHER (EXCEPT SLABS)...2 INCHES.
 - C. SLABS EXPOSED TO THE WEATHER...1 INCH.
 - D. INTERIOR SLABS...3/4 INCH.
6. ALL CONCRETE, UNLESS SPECIFICALLY NOTED TO BE PLAIN CONCRETE, SHALL BE REINFORCED.
7. ALL REINFORCING SHALL BE INSPECTED AND APPROVED BY THE ENGINEER OR HIS DESIGNEE BEFORE CONCRETE IS PLACED.



CONCRETE PAD SCHEDULE			
	X	Y	Z
EQUIPMENT PAD	43'-0"	22'-0"	16"
TRANSFORMER PAD	6'-0"	6'-0"	16"
FLOW METER PAD	7'-6"	38'-0"	16"

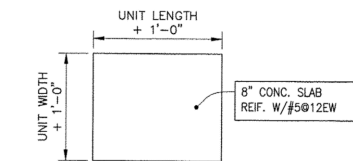
EQUIPMENT PAD, FLOW METER PAD, AND TRANSFORMER PAD

SCALE: 1/8" = 1'-0"



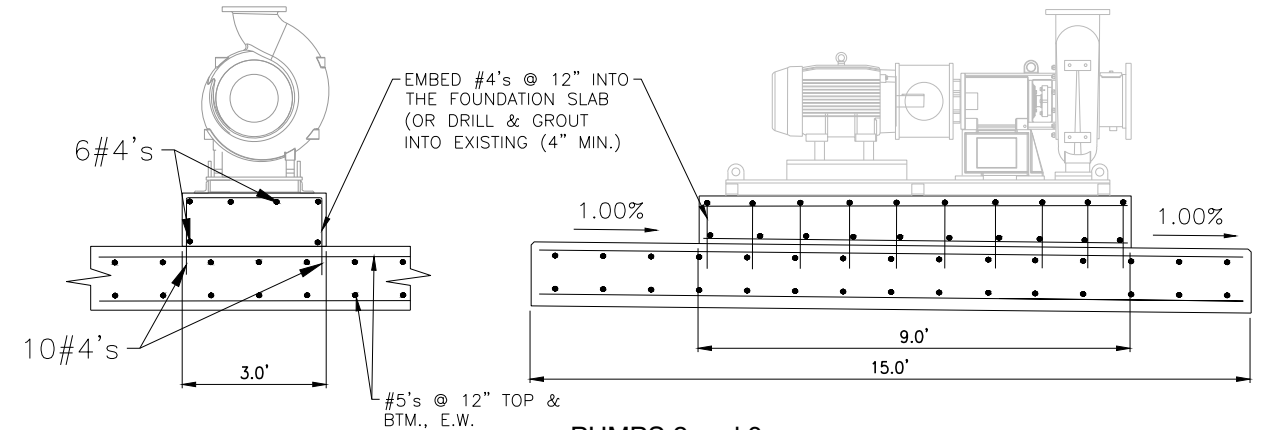
SECTION GP1

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



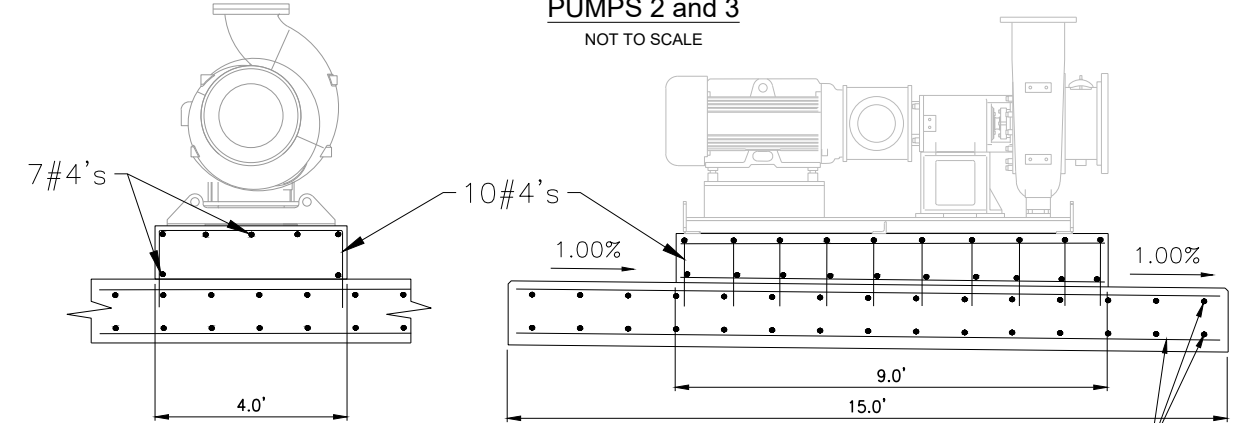
3 PIPE SUPPORT

1/8" = 1'-0"



PUMPS 2 and 3

NOT TO SCALE

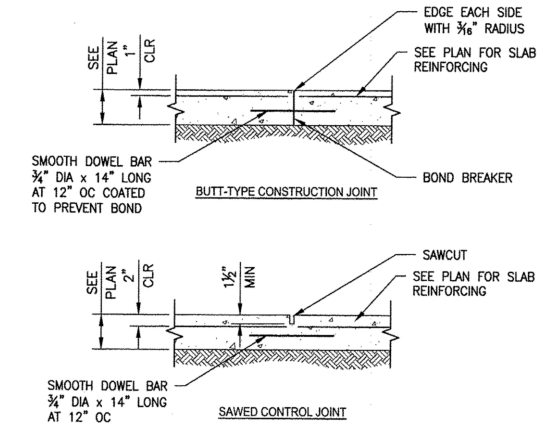


PUMPS 4 and 5

NOT TO SCALE

PUMP PEDESTAL DETAIL

NOT TO SCALE



1 SLAB ON GRADE DETAILS

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



Revision	Date	Description	By

DESIGNED BY:	A.P.D.
DRAWN BY:	E.M.N.
APPROVED:	A.P.D.
JOB CODE:	GGMPS
SCALE:	N.T.S.

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GOLDEN GATE MASTER PUMP STATION AND SITE IMPROVEMENTS

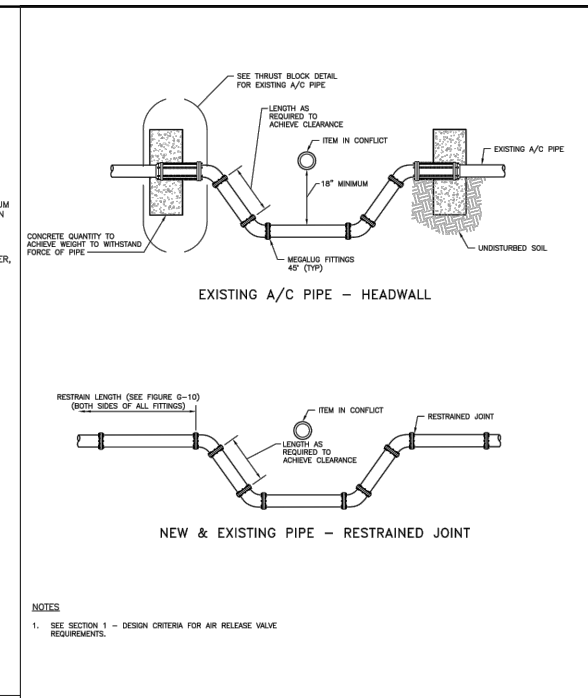
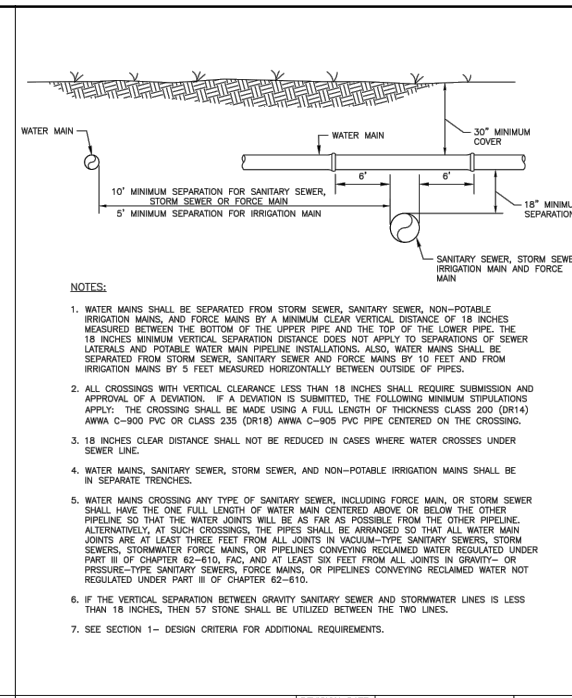
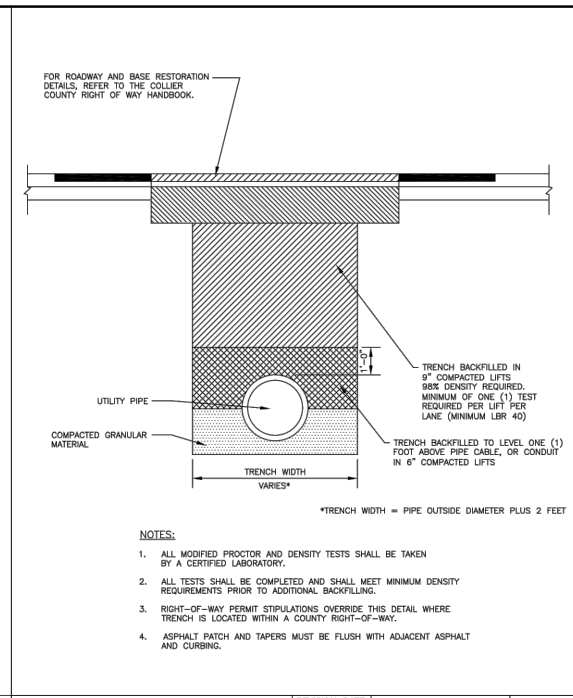
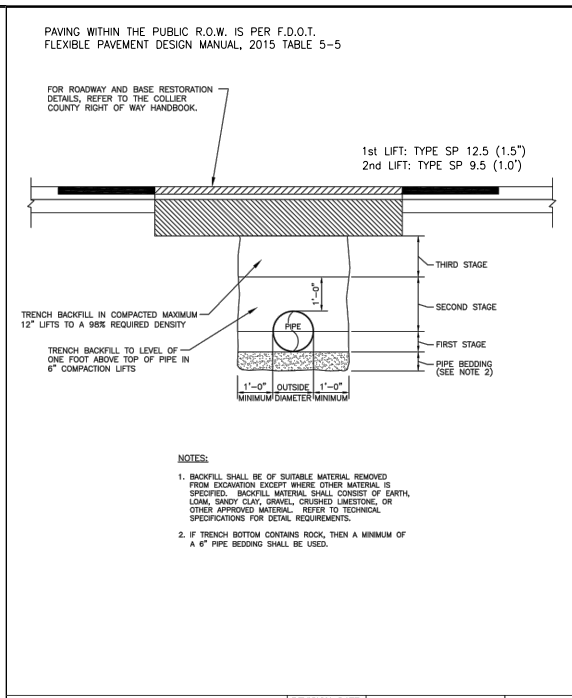
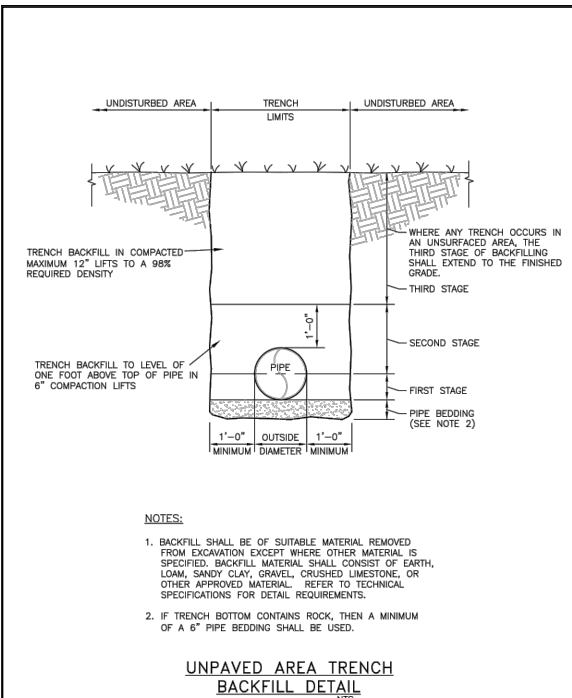
STRUCTURAL DETAILS

ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88) CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+)1.270'

MUNICIPALITY: COLLIER COUNTY
 SEC./TWN./RGE: 27 AND 28/49S/26E
 DATE: FEBRUARY, 2024
 SUBMITTAL TYPE: PHASE-1 BID
 SHEET 14

ALEXANDER PAUL DUNKO, P.E.
 FLORIDA P.E. LICENSE NO. 88695

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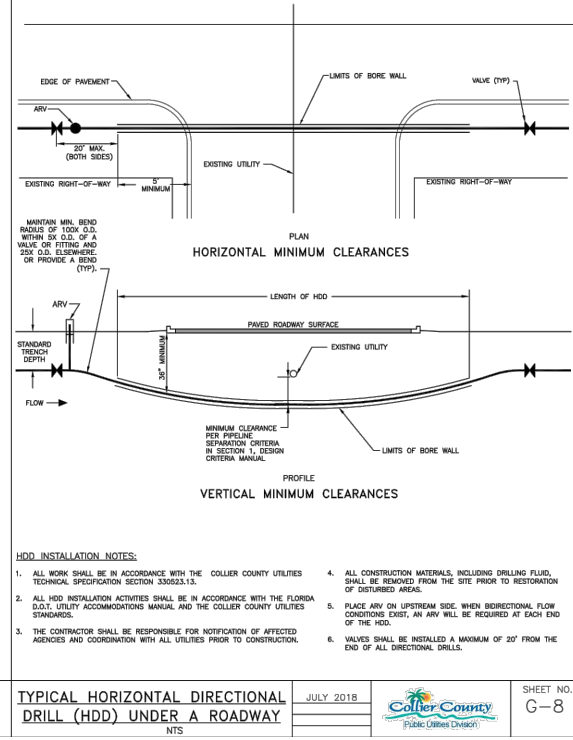
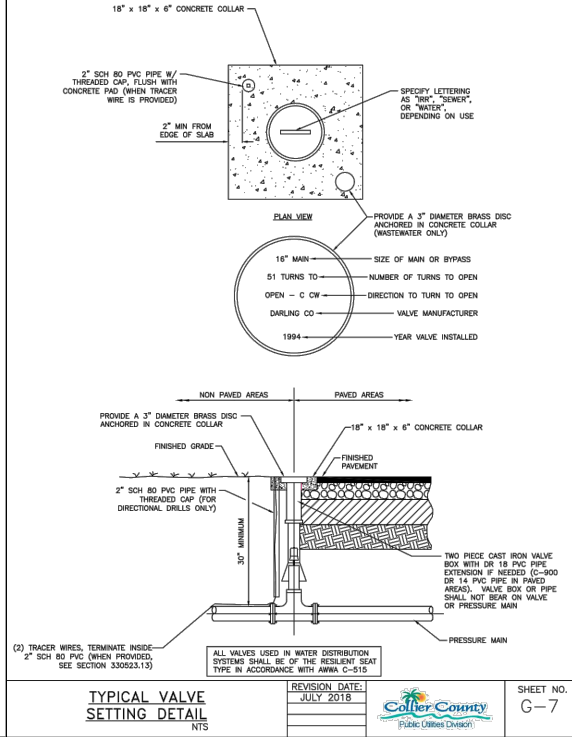
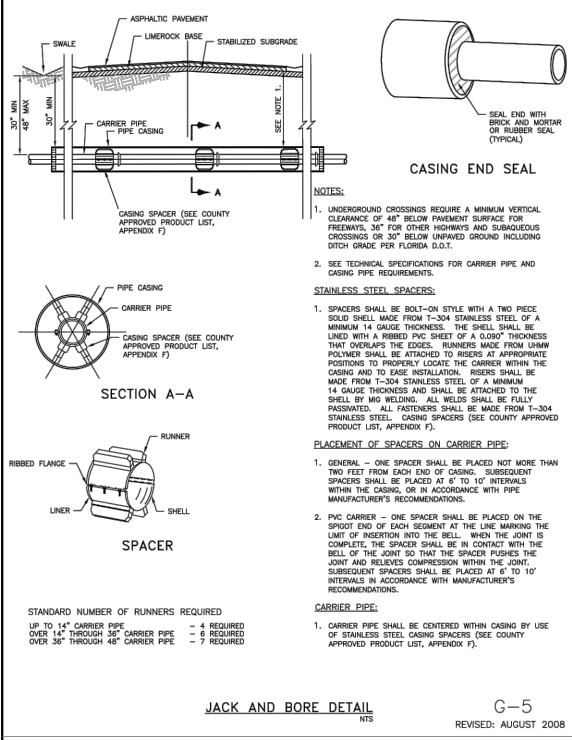
UNPAVED AREA TRENCH BACKFILL DETAIL
NTS
G-1
REVISED: APRIL 2006

PAVED AREA TRENCH RESTORATION DETAIL FOR PRIVATE ROADS
NTS
Collier County Public Utilities Division
REVISION DATE: JULY 2018
SHEET NO. G-2

ROAD AND TRENCH RESTORATION FOR LOCAL ROADS
NTS
Collier County Public Utilities Division
REVISION DATE: JULY 2018
SHEET NO. G-2B

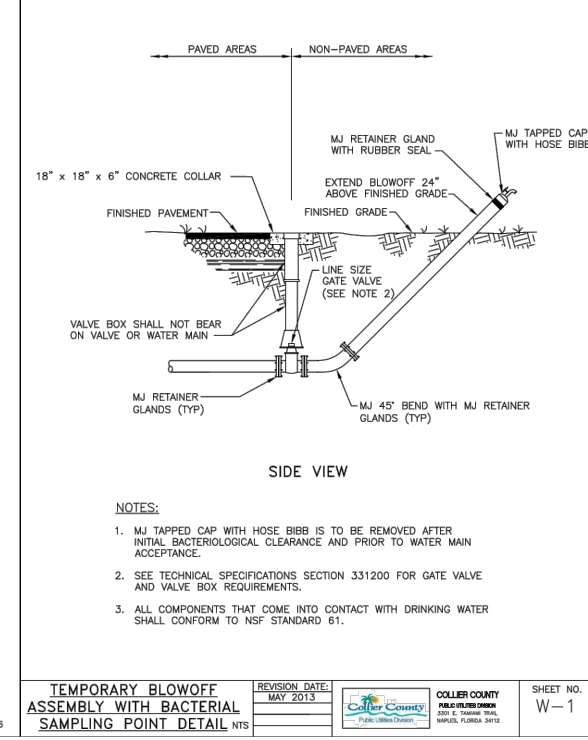
PIPE SEPARATION DETAIL
NTS
Collier County Public Utilities Division
REVISION DATE: JULY 2018
SHEET NO. G-3

PIPE CONFLICT DETAILS
NTS
G-4
REVISED: APRIL 2006



PIPE RESTRAINT SCHEDULE
NTS
G-10
REVISED: APRIL 2006

PIPE SIZE IN INCHES	RESTRAINED PIPE LENGTH IN FEET (1)	
	TEE (3)	REDUCER (4)
6 x 4	0	40
6 x 6	34	72
8 x 4	0	72
8 x 8	55	74
10 x 6	3	74
10 x 10	75	74
12 x 4	0	122
12 x 8	31	75
12 x 12	95	107
16 x 6	0	153
16 x 10	44	107
16 x 16	134	107
18 x 8	0	157
18 x 12	68	108
18 x 18	152	108
20 x 10	20	161
20 x 16	120	77
20 x 20	170	77
24 x 12	37	187
24 x 18	132	109
24 x 24	204	109
30 x 16	78	213
30 x 20	138	165
30 x 30	252	165
36 x 18	84	259
36 x 24	170	191
36 x 36	298	191



JACK AND BORE DETAIL
NTS
G-5
REVISED: AUGUST 2008

TYPICAL VALVE SETTING DETAIL
NTS
Collier County Public Utilities Division
REVISION DATE: JULY 2018
SHEET NO. C-7

TYPICAL HORIZONTAL DIRECTIONAL DRILL (HDD) UNDER A ROADWAY
NTS
Collier County Public Utilities Division
REVISION DATE: JULY 2018
SHEET NO. G-8

PIPE RESTRAINT SCHEDULE
NTS
G-10
REVISED: APRIL 2006

TEMPORARY BLOWOFF ASSEMBLY WITH BACTERIAL SAMPLING POINT DETAIL
NTS
Collier County Public Utilities Division
REVISION DATE: MAY 2013
SHEET NO. W-1



Revision	Date	Description	By

DESIGNED BY: A.P.D.
DRAWN BY: E.M.N.
APPROVED: A.P.D.
JOB CODE: GGMP5
SCALE: 11x17 1"=20'

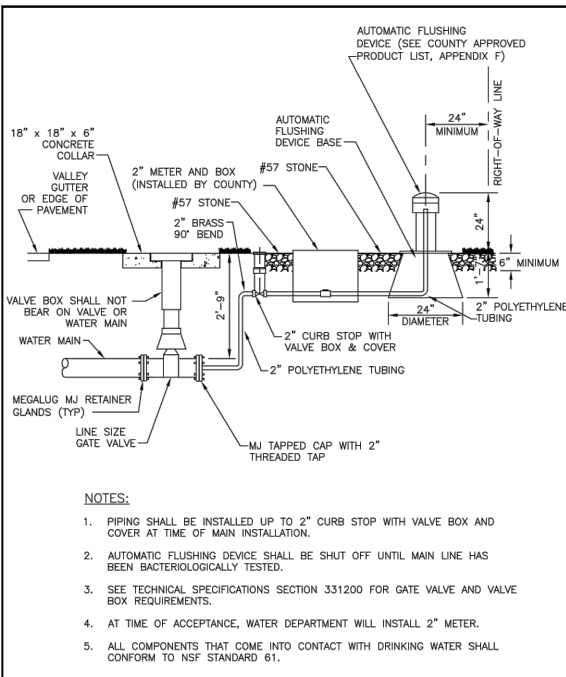
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GOLDEN GATE MASTER PUMP STATION AND SITE IMPROVEMENTS
MISCELLANEOUS DETAILS
ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88) CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+)1.270'

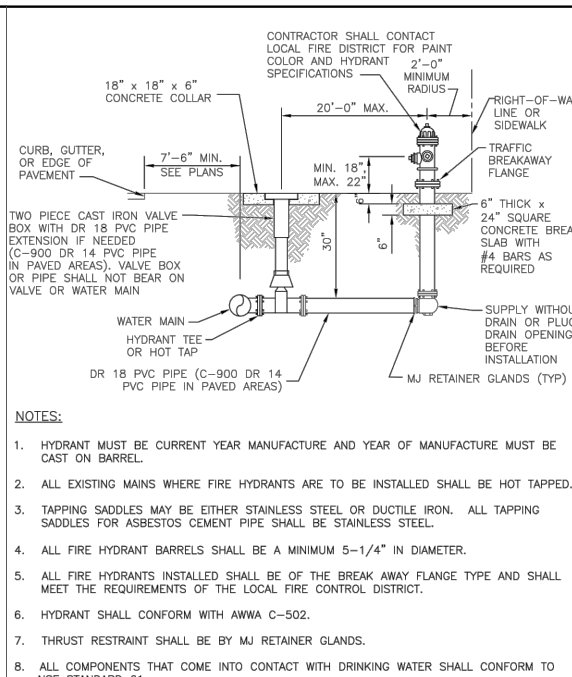
ALEXANDER PAUL DUNKO, P.E.
FLORIDA P.E. LICENSE NO. 88695

MUNICIPALITY: COLLIER COUNTY
SEC./TWN./RGE: 27 AND 28/49S/26E
DATE: FEBRUARY, 2024
SUBMITTAL TYPE: PHASE 1 BID
SHEET 15

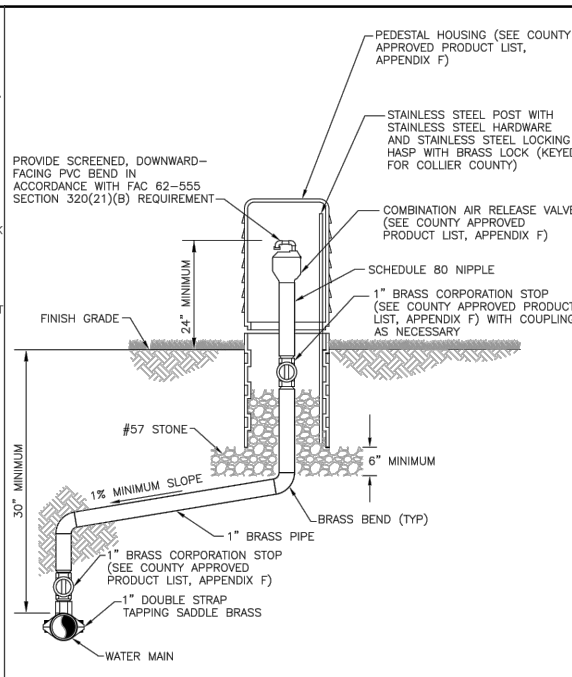
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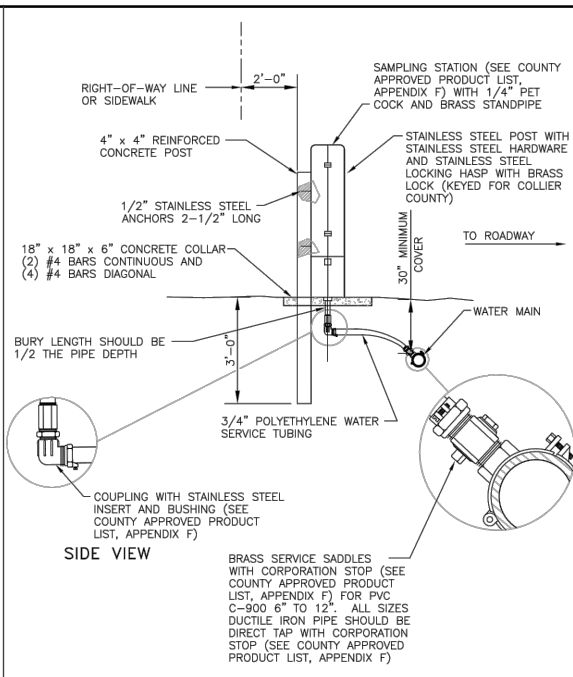
AUTOMATIC WATER MAIN FLUSHING DEVICE DETAIL
NTS
REVISION DATE: MAY 2013
COLLIER COUNTY
SHEET NO. W-2



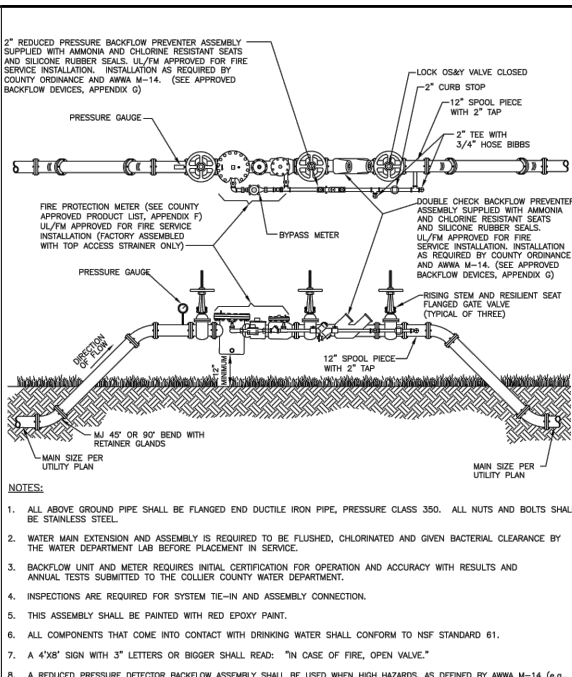
FIRE HYDRANT DETAIL
NTS
REVISION DATE: JULY 2018
COLLIER COUNTY
SHEET NO. W-3



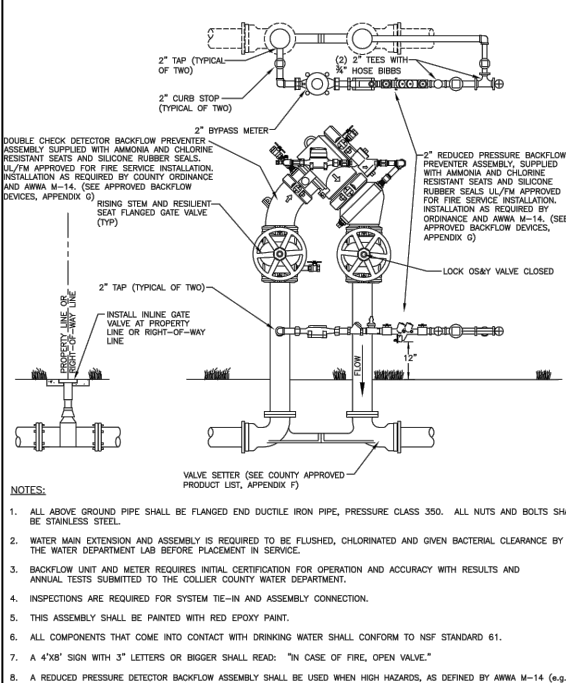
POTABLE WATER AIR RELEASE VALVE DETAIL
NTS
W-5
REVISED: AUGUST 2008



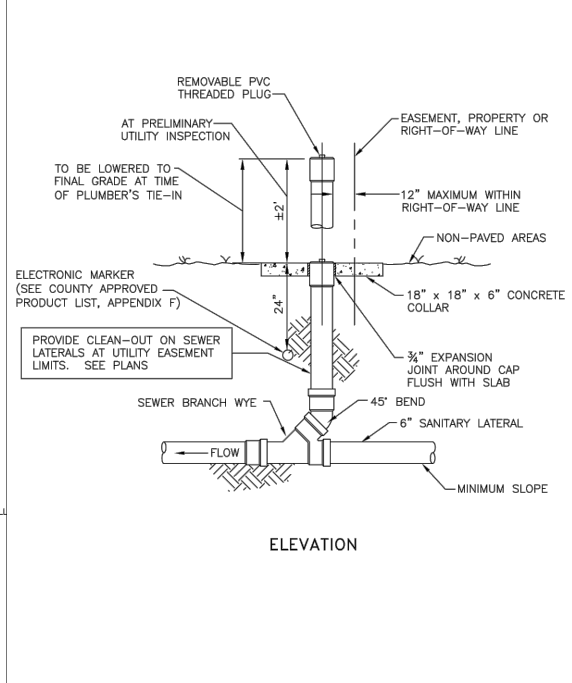
PERMANENT BACTERIAL SAMPLE POINT DETAIL
NTS
W-6
REVISED: AUGUST 2008



TEMPORARY BACKFLOW PREVENTER AND FIRE PROTECTION METER TIE-IN ASSEMBLY
NTS
W-9
REVISED: JULY 2011



DOUBLE CHECK DETECTOR BACKFLOW PREVENTER ASSEMBLY
NTS
W-9A
REVISED: JULY 2011



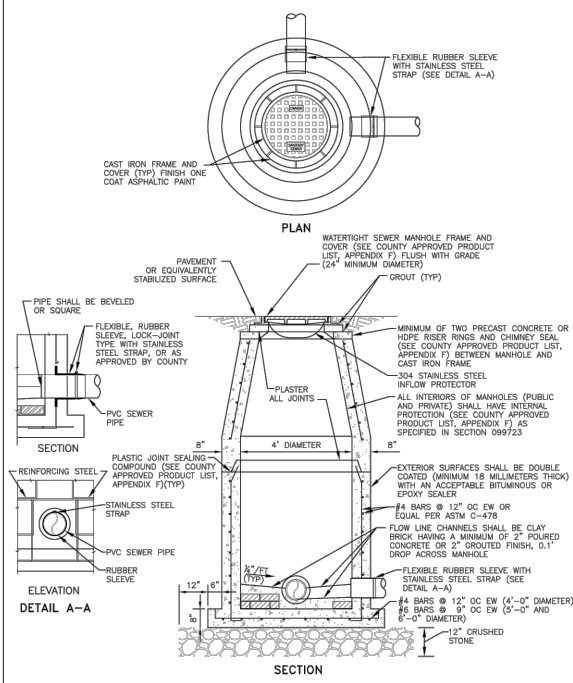
SEWER CLEAN-OUT DETAIL NON PAVED AREAS
NTS
REVISION DATE: MAY 2013
COLLIER COUNTY
SHEET NO. WW-12

SERVICE CONNECTION SIZING CHART

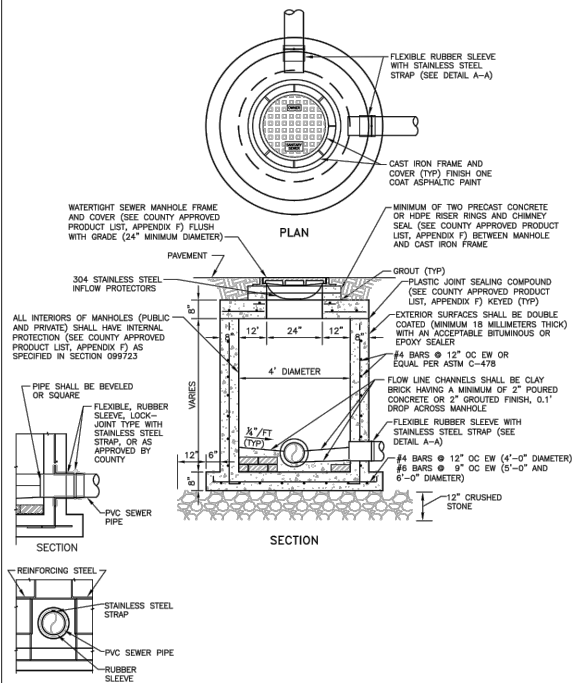
SINGLE SERVICE	CONNECTION TO MAIN	DOUBLE SERVICE	CONNECTION TO MAIN	BRANCH SIZE
3/4" METER	1-1/2"	(2) 3/4" METERS	1-3/4"	1"
1" METER	1-3/4"	(2) 1" METERS	1-3/4"	1"
1-1/2" METER	1-3/4"			
2" METER	2"			

NOTES:
1. 1-1/2" AND LARGER METERS SHALL BE SERVED BY SINGLE SERVICES ONLY.
2. WYE CONNECTORS (SEE COUNTY APPROVED PRODUCT LIST, APPENDIX F) SHALL BE USED FOR MULTI-SERVICE. SUCCESSIVE TAPS INTO WATER MAIN WILL BE NO CLOSER THAN 24" APART.
3. ALL CASING PIPE SHALL EXTEND A MINIMUM OF 5' BEYOND THE EDGE OF PAVEMENT, WITH A CASING DIAMETER TO BE NO LESS THAN 4". CONDUIT SHALL BE MARKED WITH AN ELECTRONIC MARKER (SEE COUNTY APPROVED PRODUCT LIST, APPENDIX F).
4. TAPPING SADDLE, CORPORATION STOP, POLY TUBING, CURB STOP, AND METER BOXES SHALL BE INSTALLED BY UNDERGROUND UTILITY CONTRACTOR AT THE TIME OF WATER MAIN INSTALLATION.
5. MATERIAL SPECIFICATIONS:
A. TAPPING SADDLES SHALL BE DOUBLE STRAP BRASS OR DUCTILE IRON (SEE COUNTY APPROVED PRODUCT LIST, APPENDIX F).
B. CORPORATION STOPS (SEE COUNTY APPROVED PRODUCT LIST, APPENDIX F) SHALL BE BALL TYPE AND MADE OF RED BRASS. OUTLET SHALL BE COMPRESSION TYPE POLYETHYLENE TUBE. COMPRESSION INSERT SHALL BE STAINLESS STEEL.
C. CURB STOPS (SEE COUNTY APPROVED PRODUCT LIST, APPENDIX F) SHALL BE BALL TYPE AND MADE OF RED BRASS. INLET SHALL BE COMPRESSION JOINT. OUTLET SHALL BE SWIVEL NUT FOR METER CONNECTION.
D. TUBING SHALL BE POLYETHYLENE, PE4710, (AWWA C-901, DR 8) AND BLUE IN COLOR.
6. ALL PLANTINGS SHALL BE A MINIMUM 3' FROM METER BOX, AND SHALL PROVIDE A 3' ACCESS OPENING.
7. ALL COMPONENTS THAT COME INTO CONTACT WITH DRINKING WATER SHALL CONFORM TO NSF STANDARD 61 AND THE REDUCTION OF LEAD IN DRINKING WATER ACT AND THE SAFE DRINKING WATER ACT.

SERVICE CONNECTION SIZING CHART AND NOTES
NTS
REVISION DATE: JULY 2018
COLLIER COUNTY
SHEET NO. W-12A



PRECAST REINFORCED CONCRETE MANHOLE DETAIL
NTS
REVISION DATE: JULY 2018
COLLIER COUNTY
SHEET NO. WW-3



SHALLOW MANHOLE DETAIL
NTS
W-4
REVISED: AUGUST 2008



Revision	Date	Description	By

DESIGNED BY: A.P.D.
DRAWN BY: E.M.N.
APPROVED: A.P.D.
JOB CODE: GGMP5
SCALE: 11x17 1"=20'

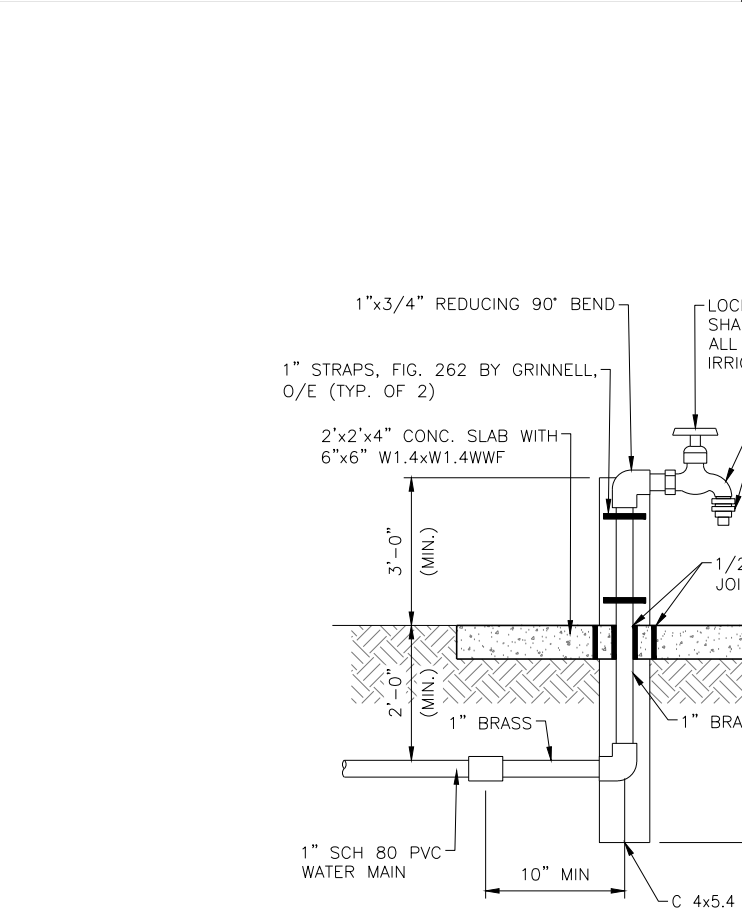
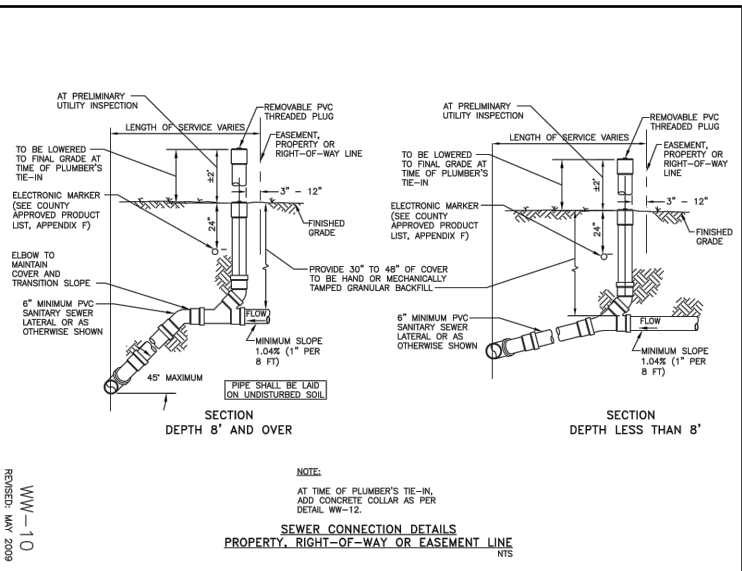
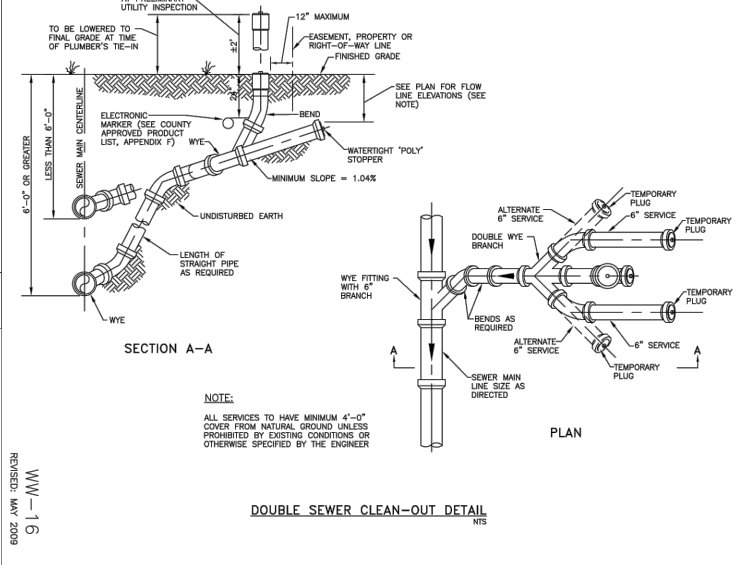
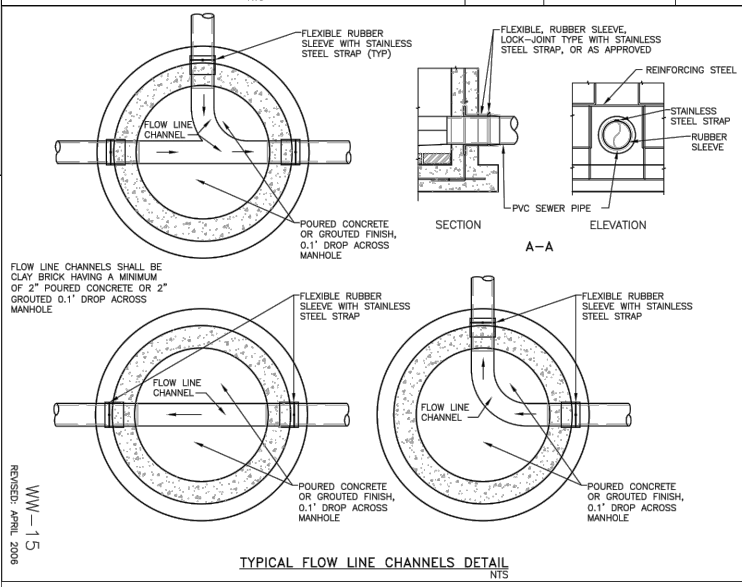
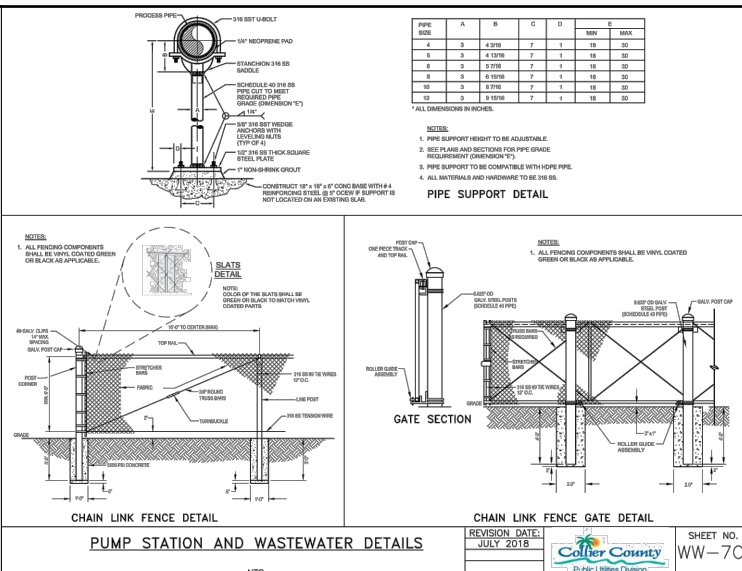
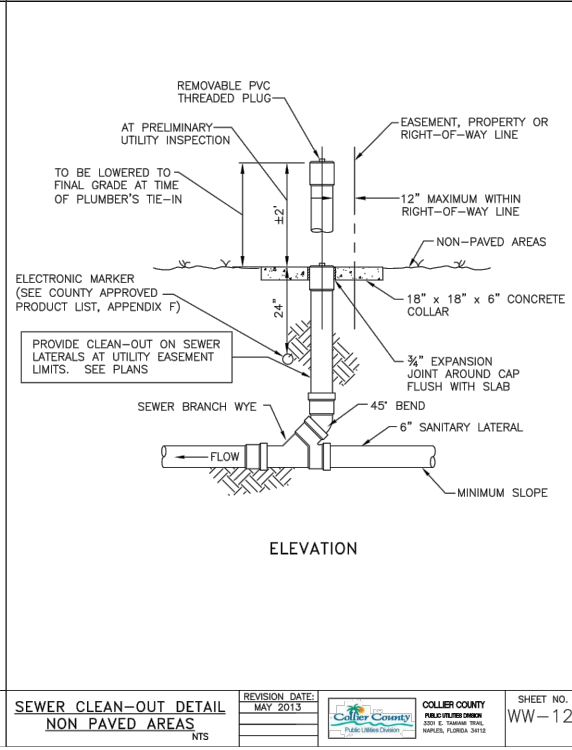
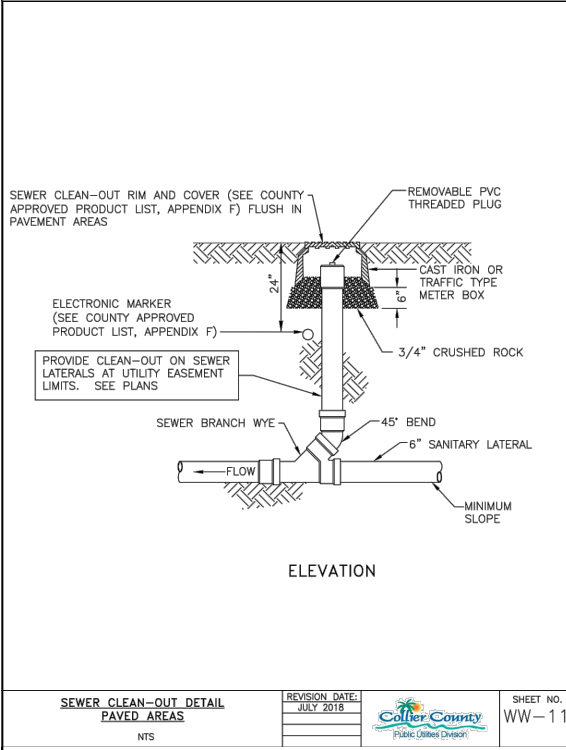
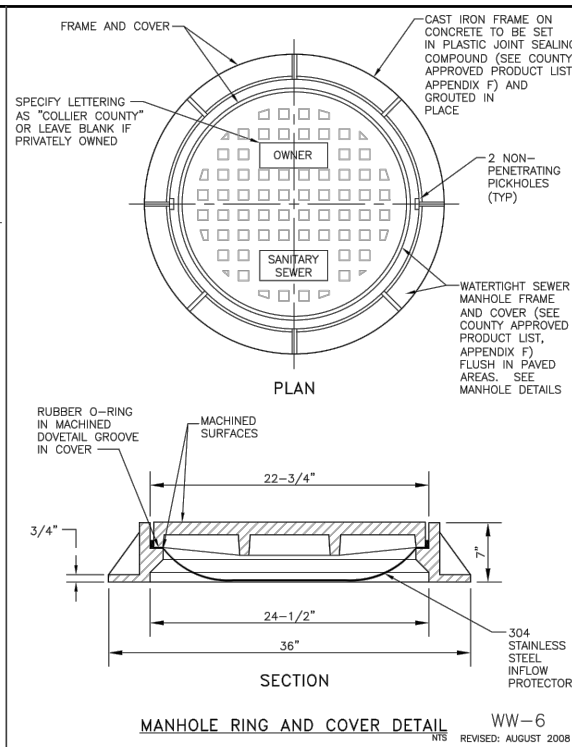
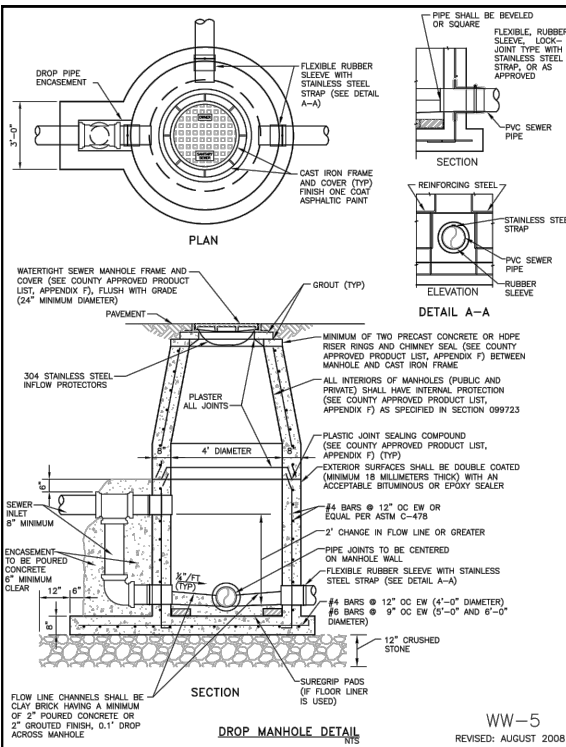
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GOLDEN GATE MASTER PUMP STATION AND SITE IMPROVEMENTS
MISCELLANEOUS DETAILS
ELEVATIONS SHOWN HEREON ARE BASED UPON NORTH AMERICAN VERTICAL DATUM 1988 (NAVD '88) CONVERSION FACTOR TO NATIONAL GEODETIC VERTICAL DATUM 1929 (NGVD '29) IS (+)1.270'

ALEXANDER PAUL DUNKO, P.E.
FLORIDA P.E. LICENSE NO. 88695

MUNICIPALITY: COLLIER COUNTY
SEC./TWN./RGE: 27 AND 28/49S/26E
DATE: FEBRUARY, 2024
SUBMITTAL TYPE: PHASE 1 BID
SHEET 16

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Revision	Date	Description	By

DESIGNED BY:	A.P.D.
DRAWN BY:	E.M.N.
APPROVED:	A.P.D.
JOB CODE:	GGMPS
SCALE:	11x17 1"=20'

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O. Grady Minor and Associates, P.A.
3800 Via Del Rey
Bonita Springs, Florida 34134

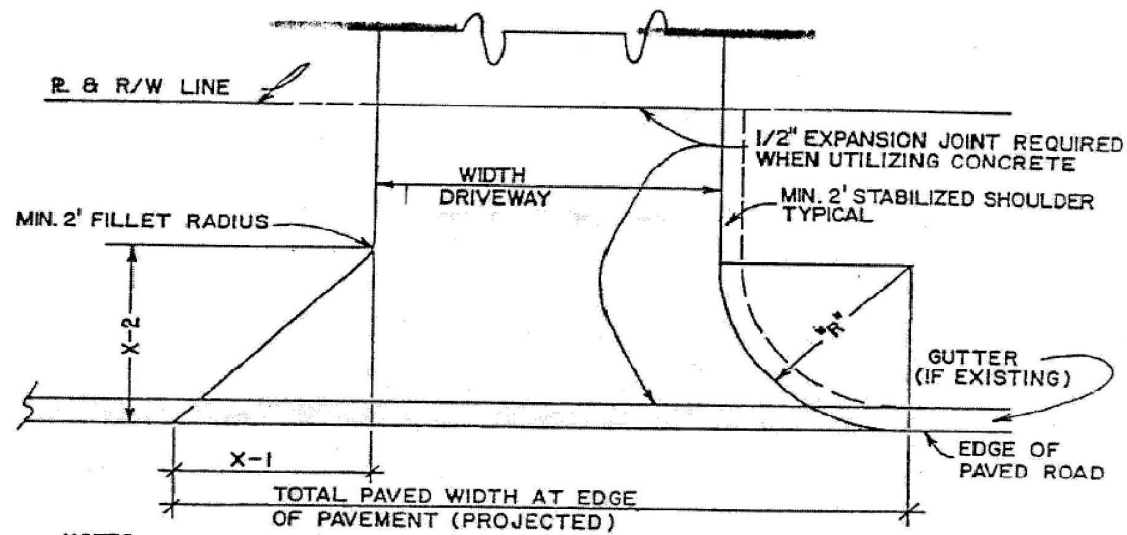
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MUNICIPALITY:
COLLIER COUNTY
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PHASE 1 BID
SHEET 17

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SINGLE FAMILY & DUPLEX DRIVEWAY



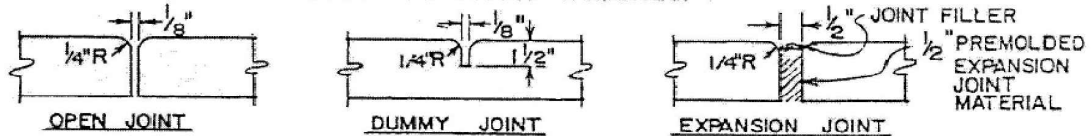
NOTES

1. TURNOUT (DIMENSIONS X-1 & X-2) SHALL BE REQUIRED WHEN USING CONCRETE UNLESS OTHERWISE APPROVED
2. WHERE GUTTER IS USED THE DIMENSIONS SHOWN SHALL BE AS PROJECTED FROM EDGE OF PAVEMENT
3. FLORIDA D.O.T. PRIMARY AND SECONDARY AND COUNTY ARTERIAL STREETS REQUIRE MINIMUM DIMENSIONS OF 12 FOOT DRIVE WIDTH WITH A MINIMUM RADIUS OF 15 FOOT. (REGARDLESS OF DRIVE WIDTH—A 15 FOOT RADIUS WILL BE REQUIRED)

MINIMUM DRIVEWAY DIMENSION COMBINATION					
DRIVEWAY WIDTH	RADIUS		TURNOUT		TOTAL WIDTH
	R	FILLET TOTAL WIDTH	X-1	X-2	
10'	10'	30'	10'	8'	30'
12'	9'	30'	9'	7'	30'
13'	8.5'	30'	8.5'	6.5'	30'
14'	8'	30'	8'	6'	30'
15'	7.5'	30'	7.5'	5.5'	30'
16'	7'	30'	7'	5'	30'
17'	6.5'	30'	6.5'	4.5'	30'
18'	6'	30'	6'	4'	30'
19'	5.5'	30'	5.5'	4'	30'
20'	5'	30'	5'	4'	30'
21'	4.5'	30'	4.5'	3'	30'
22'	4'	30'	4'	3'	30'
24'	3'	30'	3'	3'	30'

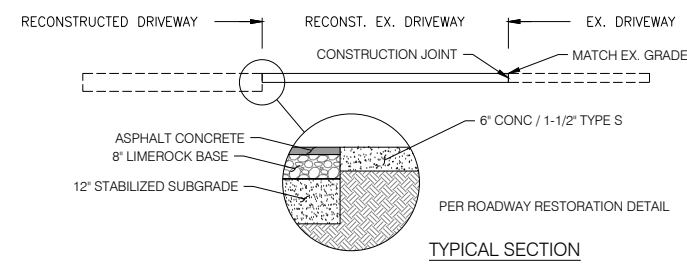
NOTES

THESE DIMENSION ARE NOT APPLICABLE TO DRIVEWAYS CONSTRUCTED AROUND CUL-DE-SACS AND SHARP RADIUS. CONTACT THE ENGINEERING DEPARTMENT FOR DETAILS CONCERNING VARIANCES.



plotdate 04/10/03

COLLIER COUNTY TRANSPORTATION OPERATIONS DEPARTMENT	REVISION 3-25-08 APPROVED	TITLE: RESIDENTIAL DRIVEWAYS AND VARIOUS JOINTS	SHEET 1 of 26
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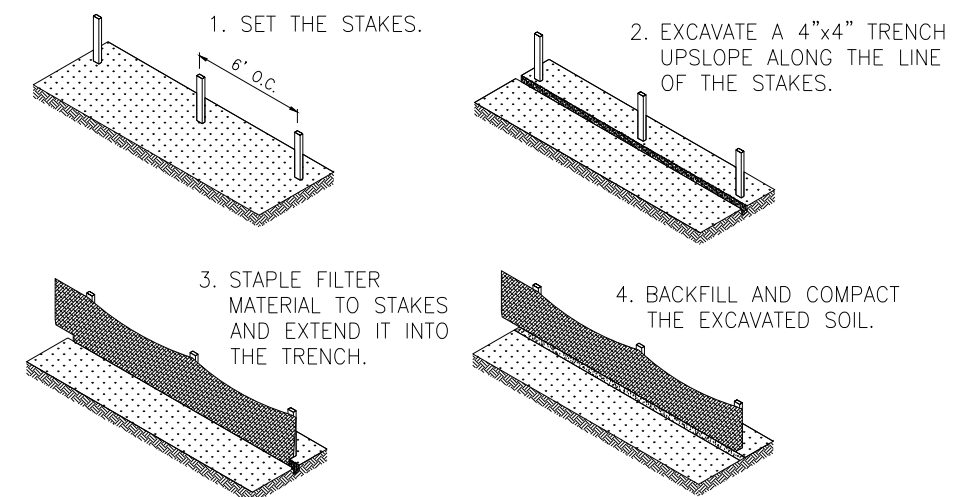


ASPHALT DRIVEWAY CONSTRUCTION NOTES:

1. SAW CUT IN A STRAIGHT LINE THE EXISTING EDGE OF PAVEMENT & EXISTING DRIVEWAY (WHERE APPLICABLE) AT MATCH LINE.
2. DRIVEWAYS FOR RESIDENTIAL USE SHALL BE CONSTRUCTED ON A STABILIZED SUBGRADE USING A MINIMUM OF SIX INCHES OF COMPACTED LIMESTONE BASE OR FOUR INCHES OF ABC-3 ('BLACK BASE') WITH ONE AND ONE-HALF INCHES OF ASPHALT CONCRETE SURFACE COURSE, CONFORMING TO F.D.O.T. SPECIFICATIONS FOR TYPE S.
3. DRIVEWAYS FOR MULTI-FAMILY, COMMERCIAL OR INDUSTRIAL USE SHALL BE CONSTRUCTED ON A STABILIZED SUBGRADE, USING A MINIMUM OF EIGHT INCHES OF COMPACTED LIMESTONE BASE (LBR-100) OR SIX INCHES OF ABC-3 ('BLACK BASE') WITH TWO INCHES OF ASPHALT CONCRETE SURFACE COURSE CONFORMING TO F.D.O.T. SPECIFICATIONS FOR TYPE S.
4. FOR GRAVEL DRIVEWAYS, BLEND IN EXISTING DRIVEWAY AT TERMINATION OF NEW APRON WITH LIKE MATERIAL (GRAVEL) AT PROPERTY LINE.

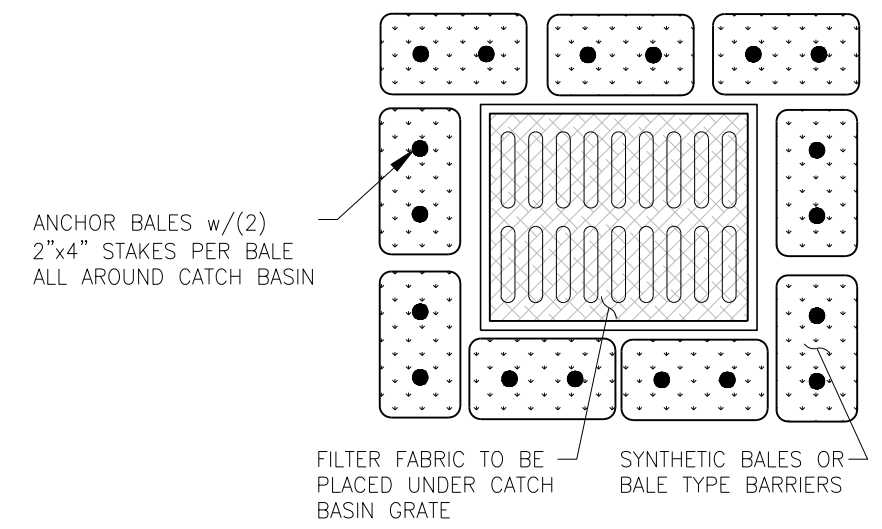
DRIVEWAY RESTORATION DETAIL

N.T.S.



TYPICAL SILT FENCE DETAIL

N.T.S.



CATCH BASIN PROTECTION DETAIL

N.T.S.



Revision	Date	Description	By

DESIGNED BY: A.P.D.
DRAWN BY: E.M.N.
APPROVED: A.P.D.
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SEC./TWN./RGE: 27 AND 28/49S/26E
DATE: FEBRUARY, 2024
SUBMITTAL TYPE: PHASE 1 BID
SHEET 18

ALEXANDER PAUL DUNKO, P.E.
FLORIDA P.E. LICENSE NO. 88695

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GENERAL NOTES

- 1. PERFORM WORK IN COMPLIANCE WITH CODES AND ORDINANCES APPLICABLE TO AUTHORITIES HAVING JURISDICTION, INCLUDING BUT NOT LIMITED TO: NATIONAL ELECTRICAL CODE, NATIONAL FIRE PROTECTION CODES, BUILDING CODES, ENERGY CODES, HEALTH AND SAFETY CODES, LOCAL LAWS AND REGULATIONS, AND ACCESSIBILITY REQUIREMENTS. ADJUST WORK REQUIRED BY THIS CONTRACT WHERE NECESSARY FOR COMPLIANCE.
2. ADHERE TO THE LATEST VERSION OF APPLICABLE INDUSTRY STANDARDS, INCLUDING BUT NOT LIMITED TO: ISA - INSTRUMENT SOCIETY OF AUTOMATION, IES HANDBOOK AND RECOMMENDED PRACTICES FOR LIGHTING, NETA ACCEPTANCE TESTING STANDARDS (ATS), INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE), ANSI, ELECTRONIC INDUSTRY ALLIANCE / TELECOMMUNICATIONS INDUSTRY ASSOCIATION (EIA / TIA), AND BUILDING INDUSTRY CONSULTING SERVICES INTERNATIONAL (BICSI).
3. PROVIDE EQUIPMENT AND MATERIALS LISTED AND LABELED BY A NATIONALLY RECOGNIZED TESTING LABORATORY ACCEPTABLE TO THE AUTHORITIES HAVING JURISDICTION. CONTROL PANELS SHALL BE UL 508A LISTED AND LABELED. ANY PLC PANEL, UL 508A CONTROL PANEL, MCC, SWITCHGEAR, STANDALONE MOTOR CONTROLLERS, OR OTHER LISTED ELECTRICAL EQUIPMENT MODIFIED IN THE FIELD AFTER IT HAS LEFT THE FACTORY SHALL BE EVALUATED BY AN NRTL TO PROVIDE A FIELD LISTING.
4. ADVISE TO OWNER'S SITE-SPECIFIC PROTOCOLS INCLUDING, BUT NOT LIMITED TO: SYSTEM OPERATIONS, HEALTH AND SAFETY, SITE ACCESS RESTRICTIONS, AND LOCK-OUT / TAG-OUT PROCEDURES.
5. PERFORM ELECTRICAL WORK IN ADHERENCE TO NECA 1 - STANDARD FOR GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION.
6. COORDINATE WORK WITH OTHER TRADES, AND WITH OWNER'S THIRD-PARTY CONTRACTORS AS APPLICABLE.
7. THE CONTRACTOR IS RESPONSIBLE FOR MEANS AND METHODS OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO: TEMPORARY PROVISIONS TO MAINTAIN FACILITY USE, TEMPORARY CONSTRUCTION POWER AND COMMUNICATIONS, TOOLS / EQUIPMENT / AND MATERIALS REQUIRED FOR EXECUTION OF THEIR WORK, WORKFORCE SUPERVISION AND STAFFING, SITE HEALTH AND SAFETY, CONSTRUCTION SCHEDULING, SEQUENCE OF CONSTRUCTION, AND PLANNING AND COORDINATION OF WORK.
8. PREPARE AND SUBMIT COORDINATION DRAWINGS FOR ELECTRICAL EQUIPMENT PLACEMENT, UNDERGROUND DUCT BANKS, AND OVERHEAD CONDUIT RACKS AND CABLE TRAYS. ILLUSTRATE CONDUIT STUB-UPS AND ENTRY LOCATIONS INTO EQUIPMENT ENCLOSURES. COORDINATE WITH ADJACENT ITEMS FOR CODE-REQUIRED CLEARANCES, AND ACCESS AS REQUIRED FOR OPERATIONS AND MAINTENANCE. (COORDINATION DRAWINGS ARE REQUIRED PRIOR TO EQUIPMENT SHOP DRAWING APPROVAL.)
9. PLAN, PERMIT AND EXECUTE TRAFFIC CONTROL MEASURES AS REQUIRED TO PERFORM WORK IN STREETS AND PUBLIC RIGHT-OF-WAY.
10. PROTECT NEW AND EXISTING EQUIPMENT AND MATERIALS FROM DAMAGE AND DETERIORATION DURING CONSTRUCTION. REPAIR OR REPLACE ITEMS DAMAGED DURING CONSTRUCTION TO THE EXTENT THEIR DAMAGE IS UNNOTICEABLE AND IN A MANNER THAT DOES NOT AFFECT FUNCTION, USE, OR LONGEVITY (AT NO COST TO THE OWNER). WARRANTIES SHALL NOT BE AFFECTED BY ANY REPAIRS MADE IN THE FIELD.
11. THE OWNER HAS THE RIGHT TO RETAIN OR REFUSE ANY AND REMOVED MATERIALS. COORDINATE WITH THE OWNER ON RETAINED ITEMS AND EXERCISE CARE IN REMOVAL, HANDLING AND STORAGE. ITEMS NOT RETAINED BY THE OWNER SHALL BE RECYCLED WHERE SUCH PROGRAMS EXIST. NON-RECYCLABLE ITEMS SHALL BE LAWFULLY DISPOSED OF BY THE CONTRACTOR.
12. FACILITY OPERATIONS AND USE SHALL BE MAINTAINED, EXCEPT AS EXPLICITLY IDENTIFIED FOR DECOMMISSIONING. PROVIDE TEMPORARY FACILITIES AND SERVICES NECESSARY TO MAINTAIN FACILITY OPERATIONS DURING CONSTRUCTION. COORDINATE SCHEDULING AND TEMPORARY PROVISIONS FOR SYSTEM OUTAGES WITH THE OWNER A MINIMUM OF TWO WEEKS IN ADVANCE OF WORK WHICH MAY AFFECT FACILITY OPERATIONS. THIS MAY INCLUDE TEMPORARY LIFE SAFETY SYSTEMS, TEMPORARY POWER, TEMPORARY COMMUNICATION NETWORKS, TEMPORARY CONTROLS SOFTWARE AND HARDWARE. THESE ITEMS ARE TO BE INCLUDED IN THE CONTRACTOR'S BID AND SHALL NOT BE A BASIS FOR CLAIMS OF ADDITIONAL COST OR TIME.
13. WHERE NEW UTILITIES ARE INCLUDED IN THE SCOPE OF WORK, COORDINATE EXACT DIVISION OF UTILITY WORK WITH LOCAL UTILITY COMPANIES PROVIDING SERVICES, WHERE CONTRACT REQUIREMENTS EXCEED THIS COORDINATED RESPONSIBILITY, PROVIDE SUITABLE CREDIT FOR WORK BEING PERFORMED BY OTHERS.
14. THE CONTRACT DOCUMENTS ARE DIAGRAMMATIC IN NATURE AND REPRESENT SYSTEMS THAT ARE COMPLETE AND FUNCTIONAL FOR THEIR INTENDED USE. PROVIDE SUPPLEMENTAL MATERIALS, LABOR AND OTHER ANCILLARY ITEMS REQUIRED FOR COMPLETE INSTALLATION. THESE ITEMS ARE TO BE INCLUDED IN THE CONTRACTOR'S BID AND SHALL NOT BE A BASIS FOR CLAIMS OF ADDITIONAL COST OR TIME.
15. THE CONTRACTOR SHALL COORDINATE WITH THE HVAC AND PROCESS EQUIPMENT SUPPLIERS. THE INTENT OF THE ELECTRICAL DRAWINGS IS TO PROVIDE A FULLY FUNCTIONAL HVAC AND PROCESS TREATMENT SYSTEM, AS SUCH, THE CONTRACTOR MAY BE REQUIRED TO MODIFY ELECTRICAL INSTALLATION INDICATED ON PLANS OR PROVIDE SUPPLEMENTAL MATERIALS, LABOR AND OTHER ANCILLARY ITEMS REQUIRED FOR COMPLETE INSTALLATION. THESE ITEMS ARE TO BE INCLUDED IN THE CONTRACTOR'S BID AND SHALL NOT BE A BASIS FOR CLAIMS OF ADDITIONAL COST OR TIME.
16. PROVIDE ADDITIONAL JUNCTION BOXES, PULL BOXES AND HANDHOLES NECESSARY TO LIMIT INSTALLED CONDUIT BENDS TO NO MORE THAN 360-DEGREES FOR OVERHEAD WORK, AND 270-DEGREES FOR UNDERGROUND WORK. LOCATE BOXES BASED OF CABLE PULLING TENSION AND ACCESSIBILITY. SIZE BOXES PER CABLE MANUFACTURES BENDING RADIUS REQUIREMENTS AND THE NEC. THESE ITEMS ARE TO BE INCLUDED IN THE CONTRACTOR'S BID AND SHALL NOT BE A BASIS FOR CLAIMS OF ADDITIONAL COST OR TIME. INSTALLATION OF NETWORK CABLING AND EQUIPMENT SHALL COMPLY WITH APPLICABLE EIA/TIA AND BICSI REQUIREMENTS.
17. CONVENIENCE OUTLETS SHOWN WITHOUT DESIGNATED CIRCUITRY SHALL INCLUDE CONDUIT AND WIRE BACK TO THE NEAREST 120V BRANCH CIRCUIT PANELBOARD USING WIRING METHODS CONSISTENT WITH SIMILAR CIRCUITS WITHIN THAT AREA. THIS WORK SHALL BE INCLUDED IN THE CONTRACTOR'S BID AND SHALL NOT BE A BASIS FOR CLAIMS OF ADDITIONAL COST OR TIME.
18. PROVIDE BRANCH CIRCUIT WIRING AND CONTROLS FOR INSTALLED LIGHTING SYSTEMS. THIS WORK IS TO BE INCLUDED IN THE CONTRACTOR'S BID AND SHALL NOT BE A BASIS FOR CLAIMS OF ADDITIONAL COST OR TIME.
19. ADJUST BRANCH CIRCUIT CONDUCTOR SIZES TO COMPENSATE FOR VOLTAGE DROP AND DERATING OF AMPACITY BASED ON THE NUMBER OF CONDUCTORS CONTAINED WITHIN A SUBJECT RACEWAY. FOR 20-AMPERE BRANCH CIRCUITS EXCEEDING 75-FEET IN OVERALL LENGTH, INCREASE CONDUCTORS TO #10AWG SIZE (OR GREATER) AS REQUIRED TO REDUCE VOLTAGE DROP TO NO MORE THAN THREE PERCENT LINE-TO-NEUTRAL. THESE ADJUSTMENTS ARE TO BE INCLUDED IN THE CONTRACTOR'S BID AND SHALL NOT BE A BASIS FOR CLAIMS OF ADDITIONAL COST OR TIME.
20. DIMENSIONAL TOLERANCES ARE NOT SPECIFICALLY INDICATED IN PLANS, DETAILS AND SPECIFICATIONS, ALIGN ABUTTING HORIZONTAL ITEMS WITHIN +/- 1/64". AND WALL-MOUNTED OR SUSPENDED ITEMS SEPARATED BY 12" OR MORE TO A TOLERANCE OF 1/16". PLUMB ITEMS SHALL NOT DEVIATE FROM TRUE VERTICAL BY MORE THAN 1/8" IN 10'-0". LEVEL EQUIPMENT TO WITHIN 1/32" ACROSS ITS HORIZONTAL SURFACE IN EACH DIRECTION.
21. ALL CONDUITS SHALL BE MINIMUM 3/4 INCH RGS (ABOVE GRADE) AND 1" PVC (BELOW GRADE) UNLESS OTHERWISE NOTED AND INCLUDE AN INSULATED GREEN GROUNDING CONDUCTOR SIZED PER THE NEC. MINIMUM WIRE SIZE SHALL BE #12 AWG UNLESS OTHERWISE NOTED. THIS GROUND WIRE SHALL BE CONNECTED AT EACH END TO THE EQUIPMENT GROUND. THIS ALSO INCLUDES INSTRUMENTATION DEVICES SUCH AS LEVEL, PRESSURE, FLOW TRANSMITTERS, LIMIT SWITCHES, CONDUITS, NETWORK AND I/O CABLES.
22. COMPLETELY CONCEAL POLY-VINYL CHLORIDE (PVC) CONDUITS WITHIN CONCRETE OR BELOW GRADE (UNLESS SPECIFICALLY INDICATED OTHERWISE.) PROVIDE RIGID GALVANIZED STEEL RISERS AND ELBOWS (WITH OR WITHOUT PVC COATING AS SPECIFIED) FOR EMBEDDED / UNDERGROUND PVC CONDUIT RUNS.
23. SECURELY FASTEN EQUIPMENT AND MATERIALS INTO PLACE TO PROVIDE RESTRAINT AGAINST MOVEMENT AND SEPARATION DURING CONDITIONS OF REGULAR USE AND DURING SEISMIC EVENTS. PROVIDE AND SUBMIT FOR APPROVAL STRUCTURAL DESIGN AND CALCULATIONS BY A REGISTERED PROFESSIONAL ENGINEER FOR SEISMIC RESTRAINT.
24. UNDERGROUND POWER AND CONTROL CONDUIT SYSTEMS SHALL BE SEPARATED BY 12" MINIMUM AND SHALL BE RUN THROUGH SEPARATE JUNCTION BOXES AND MANHOLES.
25. ALL EXTERIOR AREAS SHALL BE CONSIDERED WET AND CORROSIVE. EXTERIOR ELECTRICAL ENCLOSURES SHALL BE NEMA 4X STAINLESS STEEL UNLESS SPECIFICALLY NOTED OTHERWISE.
26. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING A COORDINATED ELECTRICAL POWER DISTRIBUTION SYSTEM IN ACCORDANCE WITH NEC ARTICLE 240.12 AND ARTICLE 700.27 COORDINATION STUDIES SHALL BE APPROVED PRIOR TO ORDERING ELECTRICAL DISTRIBUTION EQUIPMENT AND BREAKERS.
27. ELECTRICAL SYSTEM INSTALLED IN HAZARDOUS LOCATIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CHAPTER 5, ARTICLE 500 OF THE NEC. EQUIPMENT SHALL BE RATED FOR THE HAZARDOUS AREA IN WHICH IT IS PLACED. CONDUITS LEAVING HAZARDOUS AREAS SHALL BE SEALED PER THE NEC. STANDARDS SUCH AS NFPA 820 AND API 500 SHALL BE USED IN ACCORDANCE WITH CHAPTER 5 OF THE NEC.
28. THE CONTRACTOR SHALL SIZE WIRING NOT EXPLICITLY SHOWN ON THE DRAWINGS ACCORDING TO THE REQUIREMENT OF THE NEC FOR THE SPECIFIC APPLICATION AND CONDITIONS. THE INSTALLATION SHALL BE IN ACCORDANCE WITH THE CONTRACT REQUIREMENTS.
29. THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING UNDERGROUND UTILITIES AND PROTECTING SAID UTILITIES DURING THE INSTALLATION OF THE ELECTRICAL SYSTEM.
30. WHERE SELECTIVE DEMOLITION TO EXISTING PAVEMENTS AND SIDEWALKS ARE REQUIRED TO PERFORM CONSTRUCTION ACTIVITIES, NEATLY SAW-CUT SURFACES ALONG EDGES OF WORK AREA.
31. CORE-DRILLING SHALL BE UTILIZED FOR CONCRETE WALLS AND FLOORS WHERE PENETRATIONS ARE REQUIRED. LOCATE REINFORCING STEEL PRIOR TO CORE DRILLING AND AVOID CUTTING STEEL WHERE POSSIBLE. WHERE CUTTING OF REINFORCING STEEL IS UNAVOIDABLE, SUBMIT AN RFI AND OBTAIN STRUCTURAL APPROVAL FOR THE NECESSARY REPAIRS ASSOCIATED WITH CUTTING REINFORCING STEEL.
32. VERIFY VOLTAGE AND PHASE PRIOR TO ORDERING AND AGAIN PRIOR TO TERMINATION OF CONDUCTORS ON EQUIPMENT AND DEVICES. DAMAGES RESULTING FROM LACK OF VERIFICATION SHALL BE BORNE BY THE CONTRACTOR.
33. SECURE SURFACE-MOUNTED ELECTRICAL EQUIPMENT AND RACEWAYS WITH CHANNEL STRUT. MINIMUM STRUT LENGTH TO BE 12 INCHES, WHERE POSSIBLE.
34. APPLY DUCT SEAL TO CONDUITS ENTERING CONTROL PANELS AND ELECTRICAL EQUIPMENT ENCLOSURES.
35. ADJUST EQUIPMENT RATINGS AND CAPACITIES TO COMPENSATE FOR SITE-SPECIFIC AMBIENT TEMPERATURE CONDITIONS AND ELEVATIONS. SIZE EQUIPMENT AS HEAVY DUTY WHERE CONDITIONS OF USE WARRANT.
36. PERFORM FINAL POWER STUDIES AND ARC-FLASH EVALUATION AFTER EQUIPMENT HAS BEEN SELECTED, BUT PRIOR TO ORDERING. ALLOWING FOR ADJUSTMENTS TO OVERCURRENT DEVICE SELECTION AND EQUIPMENT RATINGS AS DETERMINED BY THE STUDY. UNSUITABLE EQUIPMENT ORDERED PRIOR TO PERFORMING THESE STUDIES SHALL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.
37. WIRE STARTERS IN ACCORDANCE WITH NEMA STANDARD ICS 18-2001 (CURRENT VERSION), CLASS IIB WIRING. SUBMIT ENGINEERED SHOP DRAWINGS FOR STARTERS SHOWN TO BE WIRED.
38. MAINTAIN A COMPREHENSIVE SET OF UP TO DATE AS-CONSTRUCTED RECORD DOCUMENTS, WHICH SHALL BE KEPT AND AVAILABLE FOR ON-SITE REVIEW AT ALL TIMES. USING CONFORMED DOCUMENTS AS A BASE, UTILIZE COLOR-CODED MARKUPS TO INDICATE FIELD MODIFICATIONS; RED TO INDICATE ADDED WORK OR REVISED LOCATIONS OF NEW WORK, GREEN FOR DELETED CONTENT, PURPLE FOR EXISTING CONDITIONS, AND BLUE FOR NON-TECHNICAL EXPLANATORY NOTES. YELLOW HIGHLIGHTING MAY BE USED TO INDICATE WORK COMPLETED AND IN FULL COMPLIANCE WITH THE CONFORMED SET.

ABBREVIATIONS

Table with 4 columns: Abbreviation, Description, Abbreviation, Description. Includes entries like % PERCENTAGE, 2P TWO POLE, A AMPERES OR AMBER, OR AERATOR, AC ABOVE COUNTER, ACS ACCESS CONTROL STATION, AF AMPERE FUSE, AFF ABOVE FINISHED FLOOR, AFG ABOVE FINISHED GRADE, AHJ AUTHORITY HAVING JURISDICTION, AHU AIR HANDLING UNIT, AI ANALOG INPUT, AIC AMPERES INTERRUPTING CURRENT, AIL AMBER INDICATING LIGHT, AIR ANALYSIS INDICATING RECORDER, AIT ANALYSIS INDICATING TRANSMITTER, AL ALUMINUM, ALT ALTERNATE OR ALTERNATOR, AM AMMETER, AMP AMPERE, ANN ANNUNCIATOR, AO ANALOG OUTPUT, AS AMPERE SWITCH, ATS AUTOMATIC TRANSFER SWITCH, AUTO AUTOMATIC, AUX AUXILIARY, AWG AMERICAN WIRE GAUGE, BAS BUILDING AUTOMATION SYSTEM, BC BARE COPPER, BKR CIRCUIT BREAKER, BLDG BUILDING, C CONDUIT, CAT CATEGORY, CB CIRCUIT BREAKER, CH COUNTER HEIGHT, CHG CHARGER-BATTERY, CKT CIRCUIT OR CIRCUIT BREAKER, CNTRL CONTROL, CP CONTROL PANEL, CR CONTROL RELAY OR CORROSION RESISTANT, CSI CONTROL SYSTEM INTEGRATOR, CT CURRENT TRANSFORMER, CU COPPER OR CONDENSING UNIT, DB DUCT BANK, DCMA DIRECT CURRENT MILLIAMPERES, DI DISCRETE INPUT, DIAG DIAGRAM, DISC DISCONNECT, DN DOWN, DO DISCRETE OUTPUT, DP DISTRIBUTION PANEL, DS DISCONNECT SWITCH, DWG(S) DRAWING(S), EC ELECTRICAL CONTRACTOR, ECU ENERGY CONTROL UNIT, EF EXHAUST FAN, EH ELECTRIC HEATER, EL ELEVATION, EMER EMERGENCY, EMT ELECTRICAL METALLIC TUBING, ENCL ENCLOSURE, ENET ETHERNET, EP OR E EXPLOSION PROOF EQUIPMENT, EQIP EQUIPMENT, ETM ELAPSED TIME METER, ETR EXISTING TO REMAIN, EUH ELECTRIC UNIT HEATER, EWH ELECTRIC WATER HEATER, EXDR EXISTING DEVICE TO REMAIN, EXST EXISTING, EXT EXTERIOR, EXTN EXTENSION, FA FIRE ALARM, FACP FIRE ALARM CONTROL PANEL, FAH FLOW ALARM HIGH, FBC FLORIDA BUILDING CODE, FCV FLOW CONTROL VALVE, FDR FEEDER, FE FLOW ELEMENT, FI FLOW INDICATOR, FIT FLOW INDICATING TRANSMITTER, FIRE ALARM & MASS NOTIFICATION CONTROL PANEL, FO FIBER OPTIC, FQI FLOW TOTALIZER, FT FLOW TRANSMITTER, FV FLOW VALVE, FVR FULL VOLTAGE REVERSING, GB GROUND BUS, GC GENERAL CONTRACTOR, GEN GENERATOR, GFCI GROUND-FAULT CIRCUIT INTERRUPTER, GFI GROUND-FAULT INTERRUPTING, GFP GROUND-FAULT PROTECTION OF EQUIPMENT, GIL GREEN INDICATING LIGHT, GND GROUND, GRP GROUP, GRS GALVANIZED RIGID STEEL, H HORN OR HIGH, HC HAND CONTROL, HH HANDHOLE, HOA HAND-OFF-AUTO, HP HORSEPOWER, HPS HIGH PRESSURE SWITCH, HR HAND RESET OR HOUR, HS HAND SWITCH, HTR HEATER, HZ HERTZ, I INTERLOCK, I/O INPUT/OUTPUT, IC ISOLATION CONTACTOR, IDS INTRUSION DETECTION SYSTEM, IG ISOLATED GROUND, INST INSTANTANEOUS, INT INTERVAL TIMER, INTLK INTERLOCK, ISP INSTRUMENT AND SAMPLE PANEL, JB JUNCTION BOX, K KEY, KCMIL THOUSAND CIRCULAR MILS, KV KILOVOLTS, KVA KILOVOLT-AMPERES, KVAR KILOWARS (REACTIVE KILOVOLT-AMPERES), KW KILOWATTS, KWH KILOWATT HOUR, KY TIME RELAY, LAH HIGH LEVEL ALARM, LAL LOW LEVEL ALARM, LC/C LIGHTING CONTROL / CONTACTOR, LCP LOCAL CONTROL PANEL, LCV LEVEL CONTROL VALVE, LET LEVEL ELEMENT TRANSMITTER, LF LINEAR FEET, LI LEVEL INDICATOR, LIC LEVEL INDICATING CONTROLLER, LIR LEVEL INDICATING RECORDER, LLH LEVEL LAMP HIGH, LUMEN, LOR LOCAL-OFF-REMOTE, LOS LOCK-OUT STOP, LP LIGHTING PANEL, LR & L LATCHING RELAY, LS LEVEL SWITCH, LSH LEVEL SWITCH HIGH, LSHL LEVEL SWITCH HIGH/LOW, LSIG LONG, SHORT, INSTANTANEOUS, GROUND, LSL LEVEL SWITCH LOW, LT LEVEL TRANSMITTER, LT LEVEL TRANSMITTER OR LIGHT, LTFMC LIQUID TIGHT FLEXIBLE METAL CONDUIT, LTG LIGHTING, LTS LIGHTING AND LIGHTS, LV LOW VOLTAGE, LYR LEVEL RELAY, M MOTOR STARTER COIL OR CYCLE TIMER, mA MILLIAMPERES, MAN MANUAL, MAX MAXIMUM, MCB MAIN CIRCUIT BREAKER, MCC MOTOR CONTROL CENTER, MCM THOUSAND CIRCULAR MILS, MCP MAIN CONTROL PANEL, MCP MOTOR CIRCUIT PROTECTOR, MDP MAIN DISTRIBUTION PANEL, MH MANHOLE, MIN MINUTE, MINIMUM, MIN MINUTES OR MINIMUM, MLO MAIN LUGS ONLY, MM MULTIMODE, MPC MINI POWER CENTER, MS MAGNETIC STARTER, MS MANUAL MOTOR STARTER, MTR MOTOR, MTS MANUAL TRANSFER SWITCH, mV MILLIVOLTS, N NEUTRAL, N/A NOT APPLICABLE, N1 NEMA 1 ENCLOSURE, N12 NEMA 12 ENCLOSURE, N3R NEMA 3R ENCLOSURE, NA NON-AUTO, NC NORMALLY CLOSED, NEC NATIONAL ELECTRICAL CODE, NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION, NEUT NEUTRAL, NF NON-FUSED, NFPA NATIONAL FIRE PROTECTION ASSOCIATION, NO NORMALLY OPEN, NU NUMBER, NP NAMEPLATE, NTS NOT TO SCALE, OC OPEN/CLOSE, OL OVERLOAD, OLR OVERLOAD RELAY, OO ON-OFF, OOR ON-OFF RESET, OUT OUTPUT, P&ID PROCESS & INSTRUMENTATION DIAGRAM, PC PHOTOELECTRIC CELL, PCV PRESSURE CONTROL VALVE, PDT PRESSURE DIFFERENTIAL TRANSMITTER, PE PHOTOELECTRIC CELL, PRESSURE ELEMENT, PH PHASE, PI PRESSURE INDICATOR, PIT PRESSURE INDICATING TRANSMITTER, PLC PROGRAMMABLE LOGIC CONTROLLER, PM PHASE MONITOR, PMP PUMP, PNL PANEL, POE POWER OVER ETHERNET, PP POWER PANEL, PR SHIELDED PAIR, PRI PRIMARY, PSH PRESSURE SWITCH HIGH, PSI POUNDS PER SQUARE INCH, PSL PRESSURE SWITCH LOW, PVC POLYVINYL CHLORIDE CONDUIT, R RED, RELAY, OR RUN, RCP REFLECTED CEILING PLAN, RE RELOCATE, RECEPT RECEPTACLE, REF REFERENCE, RGA RIGID GALVANIZED ALUMINUM, RGS RIGID GALVANIZED STEEL, RIL RED INDICATING LIGHT, RIO REMOTE I/O PANEL, RM ROOM, RP REPLACE, RTP RESISTANCE TEMPERATURE DETECTOR, RTM RUNNING TIME METER, RTU REMOTE TELEMETRY UNIT, RVNR REDUCED VOLTAGE, NON REVERSING, RVS REDUCED VOLTAGE STARTER, RVSS REDUCED VOLTAGE SOFT STARTER, S START CONTACTOR, S, SEC SECOND, S2 NEMA SIZE 2 STARTER, SC SPEED CONTROL, SEC SECONDARY OR SECONDS, SEL SELECTOR, SER SERVICE ENTRANCE RATED, SH SHEET OR SHIELDED, SM SINGLE MODE, SPD SURGE PROTECTION DEVICE, SPEC SPECIFICATION, SS SELECTOR SWITCH OR STAINLESS STEEL, SSS SOLID STATE SOFT START, STP SHIELDED TWISTED PAIR, SV SOLENOID VALVE, SWBD SWITCHBOARD, T THERMOSTAT, TB TERMINAL BOX, TERMINAL BLOCK, TDR TIME DELAY RELAY, TEL TELEPHONE, TI TEMPERATURE INDICATOR, TO TIME DELAY OPENING CONTACT OR THERMAL OVERLOAD, TOA TEST-OFF-AUTO, TSP TWISTED SHIELDED PAIR, TYP TYPICAL, UA COMMON ALARM, UE UNDERGROUND ELECTRIC, UG UNDERGROUND, UL UNDERWRITERS LABORATORIES, UNO UNLESS NOTED OTHERWISE, UP UTILITY POWER, UPS UNINTERRUPTIBLE POWER SUPPLY, UT UNDERGROUND TELECOMMUNICATIONS, V VOLTS, VA VOLT AMPS, VAC VOLTS ALTERNATING CURRENT, VDC VOLTS DIRECT CURRENT, VFD VARIABLE FREQUENCY DRIVE, VFM VOLTMETER, W WIRE, WATTS, W/ WITH, W/O WITHOUT, WAP WIRELESS ACCESS PORT, WI WEIGHT INDICATOR, WP WEATHER-PROOF, XFMR TRANSFORMER, XLP CROSS-LINKED POLYETHYLENE, YC STATUS CONTROL, YL STATUS INDICATION, ZS POSITION SWITCH, ZSC POSITION SWITCH CLOSED, ZSO POSITION SWITCH OPEN

5/17/2024 11:11:34 AM - O:\PROJECTS\ORLANDO\HIER08486\200-08486-2001\3\CAD\SHEETFILES\MASTER PUMP STATION-001 ELECTRICAL NOTES & SYMBOLS.DWG - SEIGNORRE, JASON



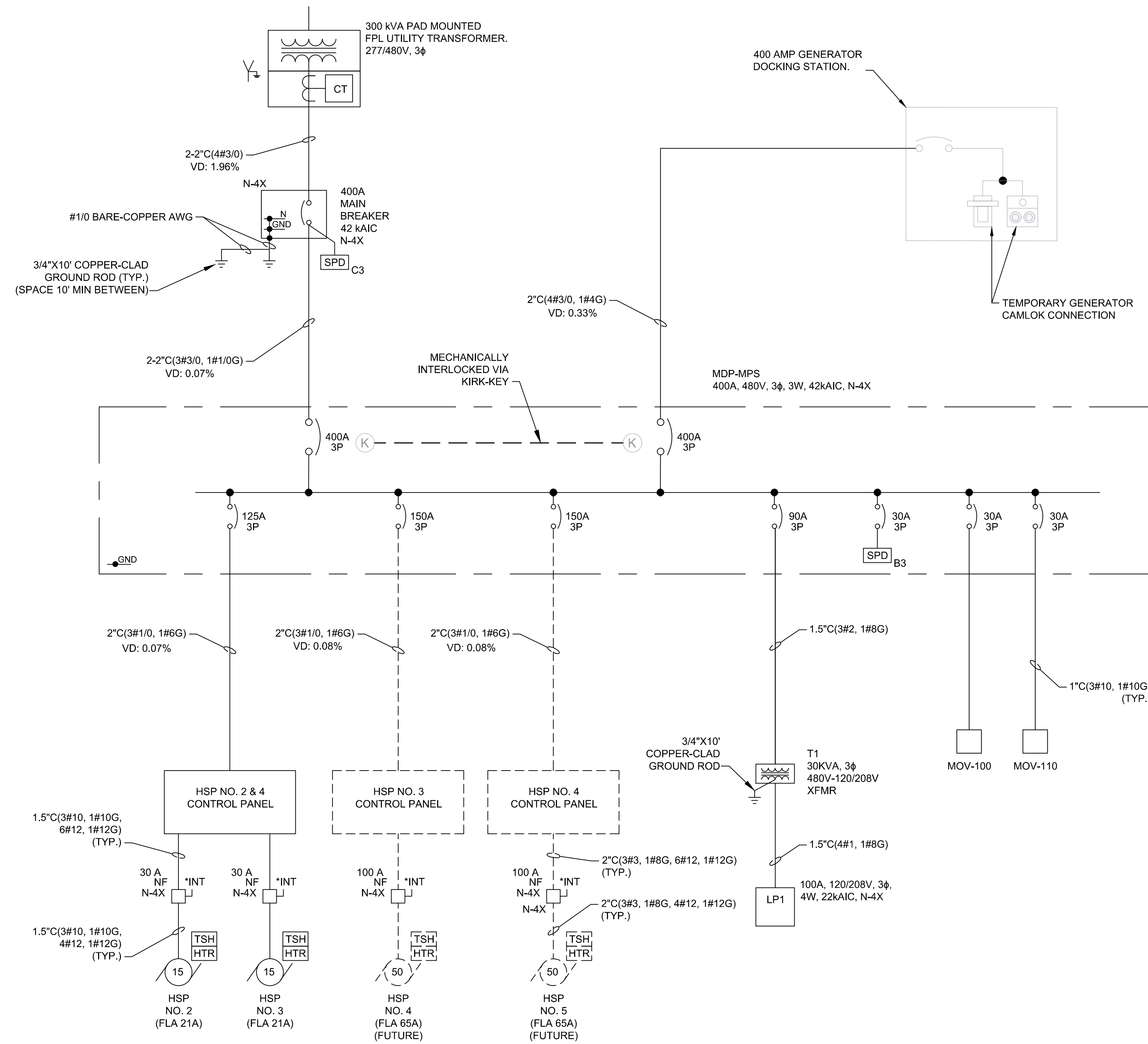
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COLLIER COUNTY UTILITIES
GOLDEN GATE WWTP
MASTER PUMP STATION
ELECTRICAL NOTES
& SYMBOLS

Project No.: 200-08486-20013
Designed By: JAS
Drawn By: JAS
Checked By: TW

E-003

5/7/2024 11:14:45 AM - O:\PROJECTS\ORLANDO\IER08486\200-08486-20013\CAD\SHEETFILES\MASTER PUMP STATION-E-301 ELECTRICAL SINGLE LINE DIAGRAM.DWG - SEIGNOIRET, JASON



SINGLE LINE DIAGRAM
SCALE: NONE

- NOTES:**
- HSP NO. 2 & 4 CONTROL PANEL PROVIDED BY PUMP MANUFACTURER WITH TWO 20 HP VFD'S.
 - HSP NO. 3 AND HSP NO. 4 CONTROL PANELS PROVIDED BY PUMP MANUFACTURER WITH 60 HP VFD'S.
 - PROVIDE DISCONNECT SWITCHES FOR HSP NO. 2, 3, AND 4 WITH INTERLOCK SWITCHES.
 - CABLES BETWEEN VFD'S AND MOTORS SHALL BE VFD CABLE.

SERVICE CALCULATION	
LOAD NAME	CONNECTED LOAD
HSP #2 (15 HP)	21A
HSP #3 (15 HP)	21A
HSP #4 (50 HP FUTURE)	65A
HSP #5 (50 HP FUTURE)	65A
30 kVA XFMR	36A
25% OF CONTINUOUS LOAD	52A
TOTAL	260A

TETRA TECH
ENGINEERING BUSINESS NO. 2429
www.tetra-tech.com
10600 CHEVROLET WAY, SUITE 102
ESTERO, FL 33928
PHONE: (239) 390-1467 FAX: (239) 390-1769



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COLLIER COUNTY UTILITIES
GOLDEN GATE WWTP
MASTER PUMP STATION
SINGLE-LINE DIAGRAM

Project No.: 200-08486-20013
Designed By: JAS
Drawn By: JAS
Checked By: TW

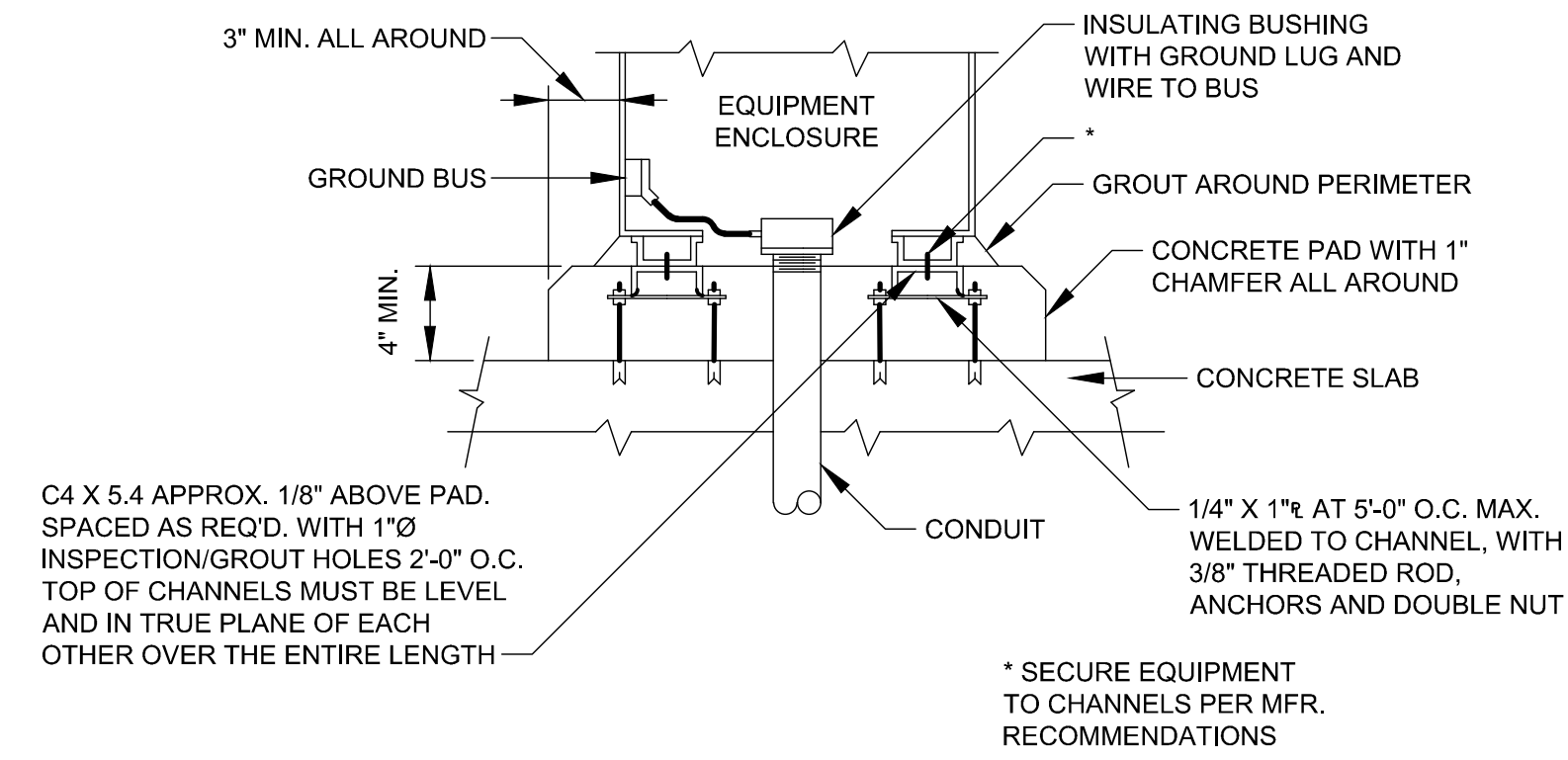
E-301

Copyright Tetra Tech

Bar Measures 1 inch

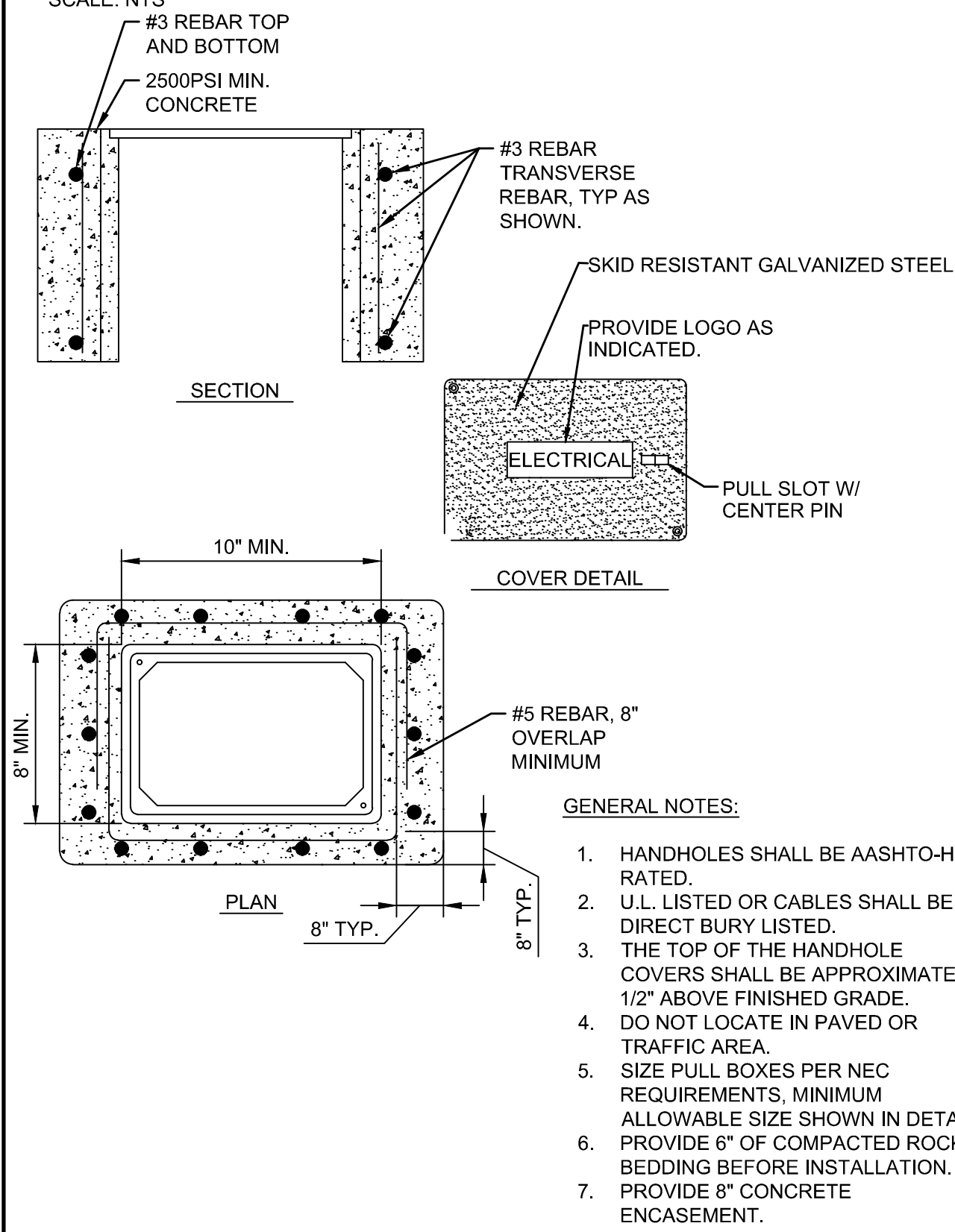
1 OUTDOOR PAD MOUNTED EQUIPMENT DETAIL

SCALE: NTS



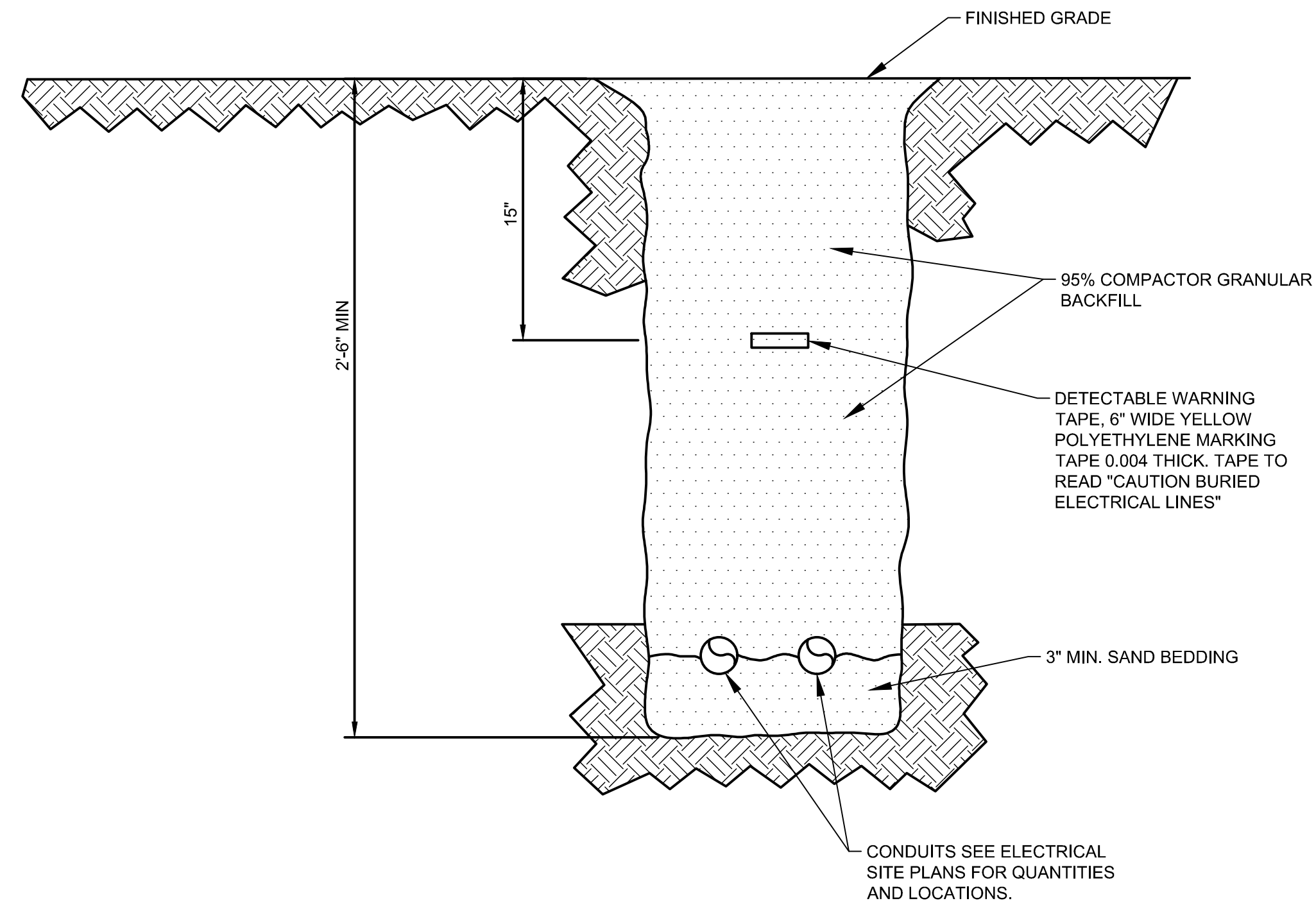
2 HANDHOLE DETAIL

SCALE: NTS



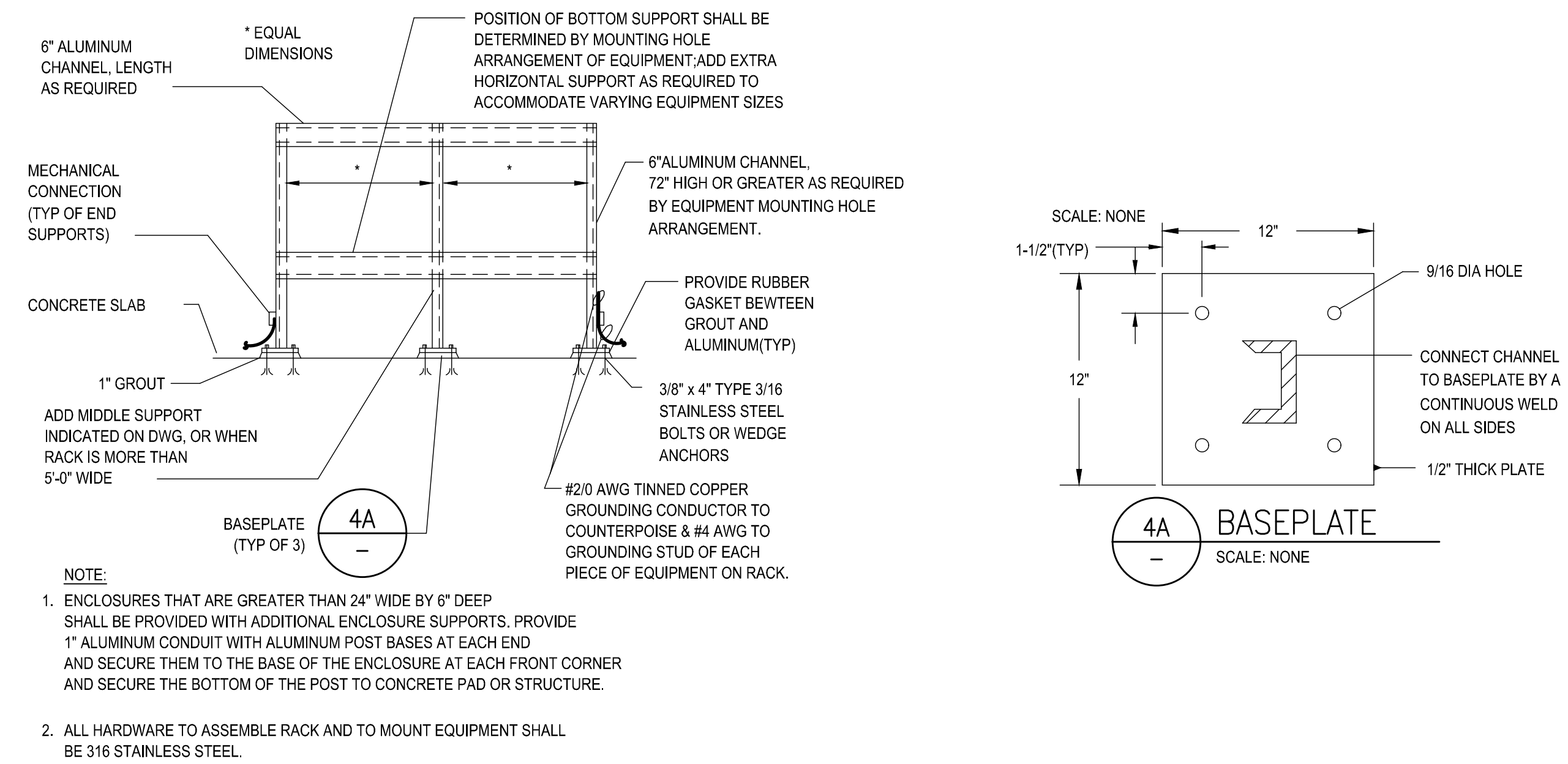
3 TRENCHING DETAIL

SCALE: NTS



4 EQUIPMENT RACK DETAIL

SCALE: NTS



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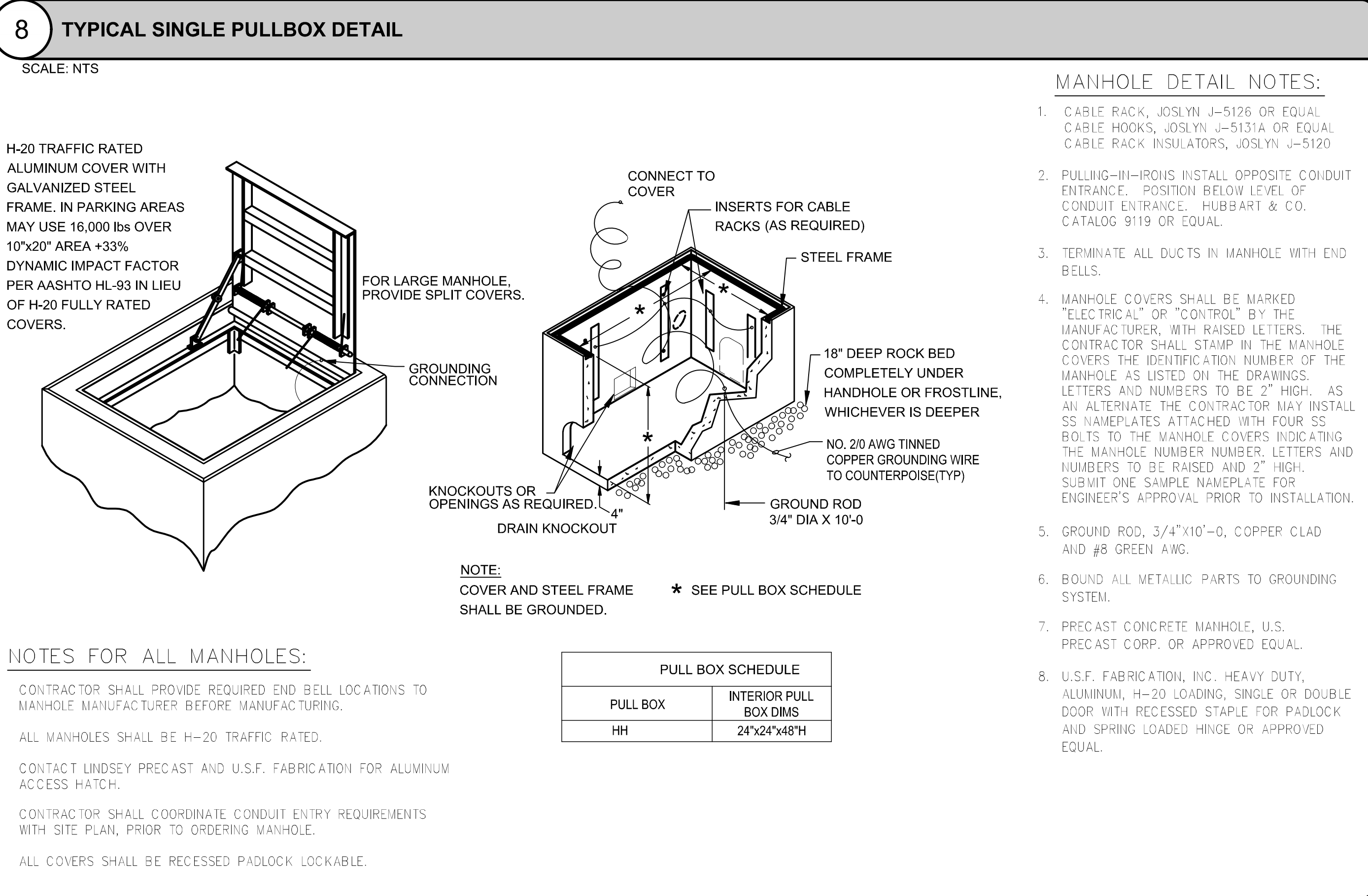
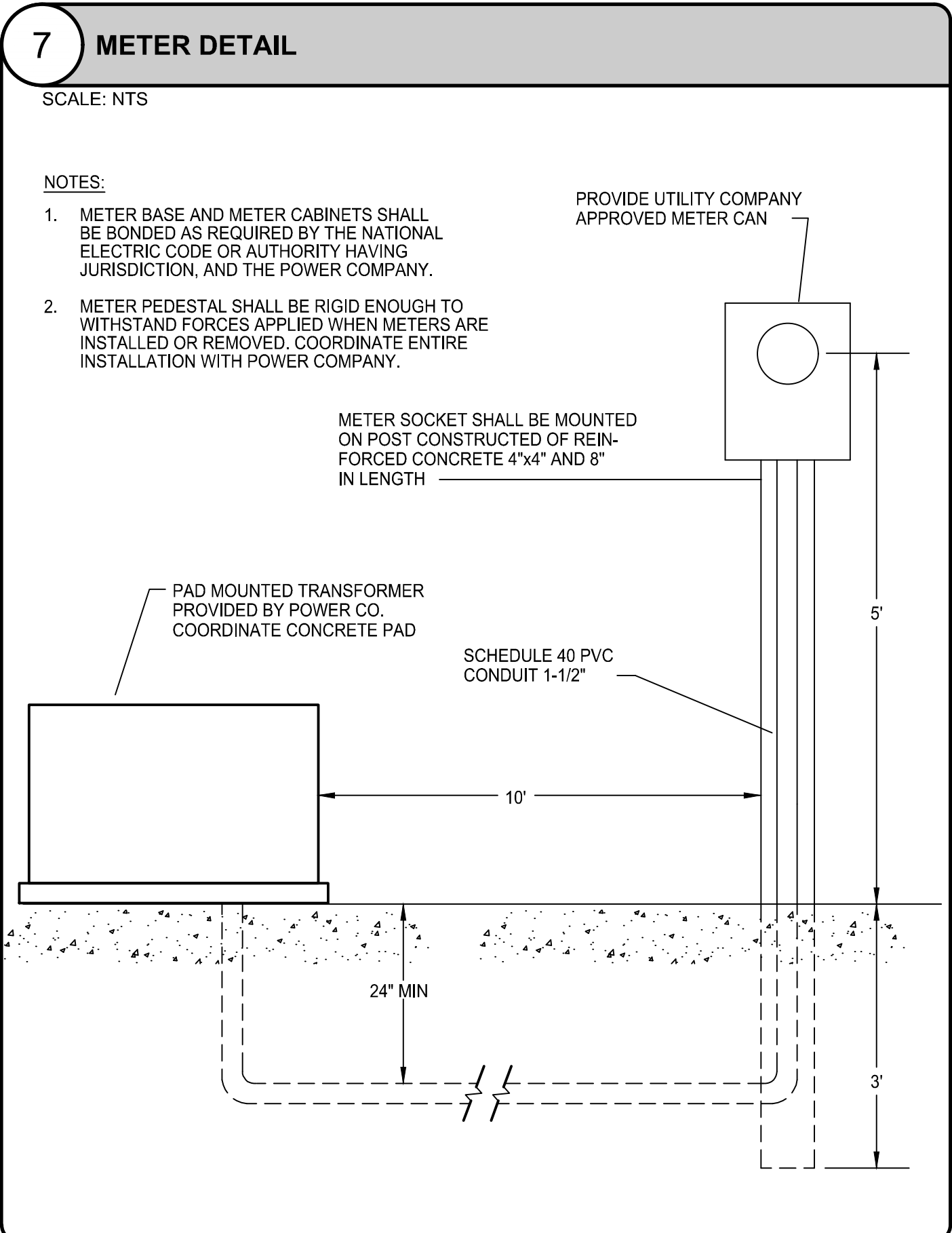
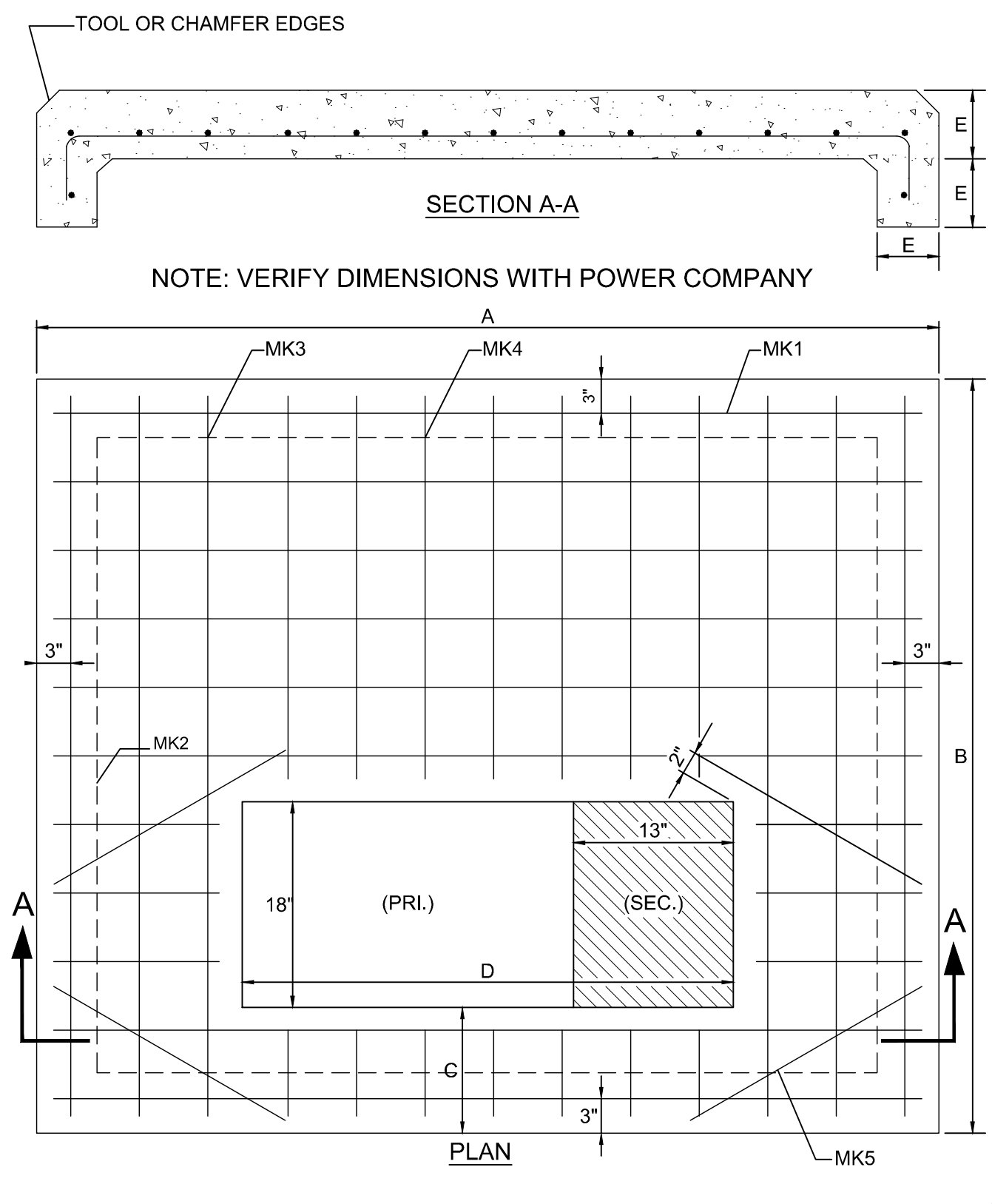
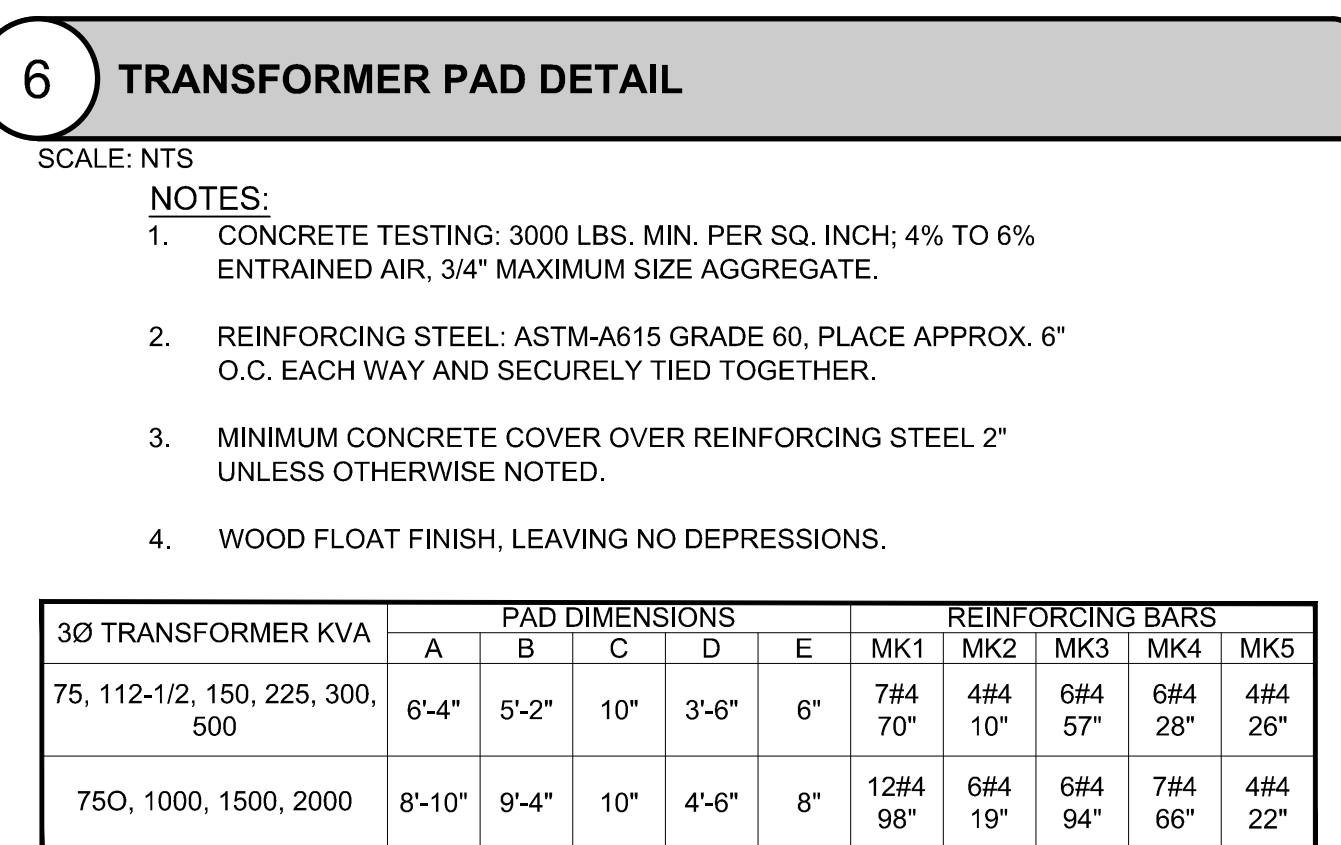
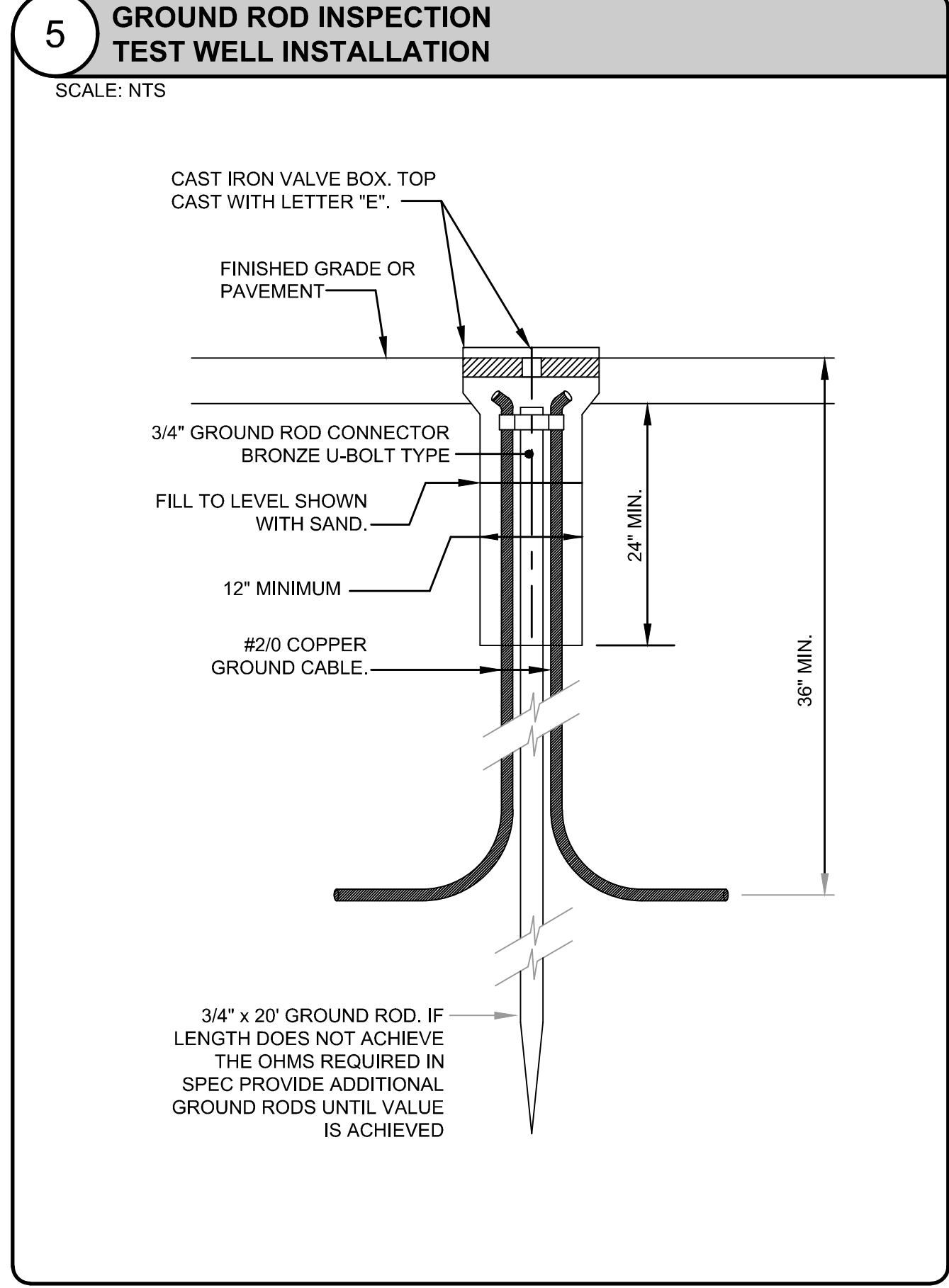
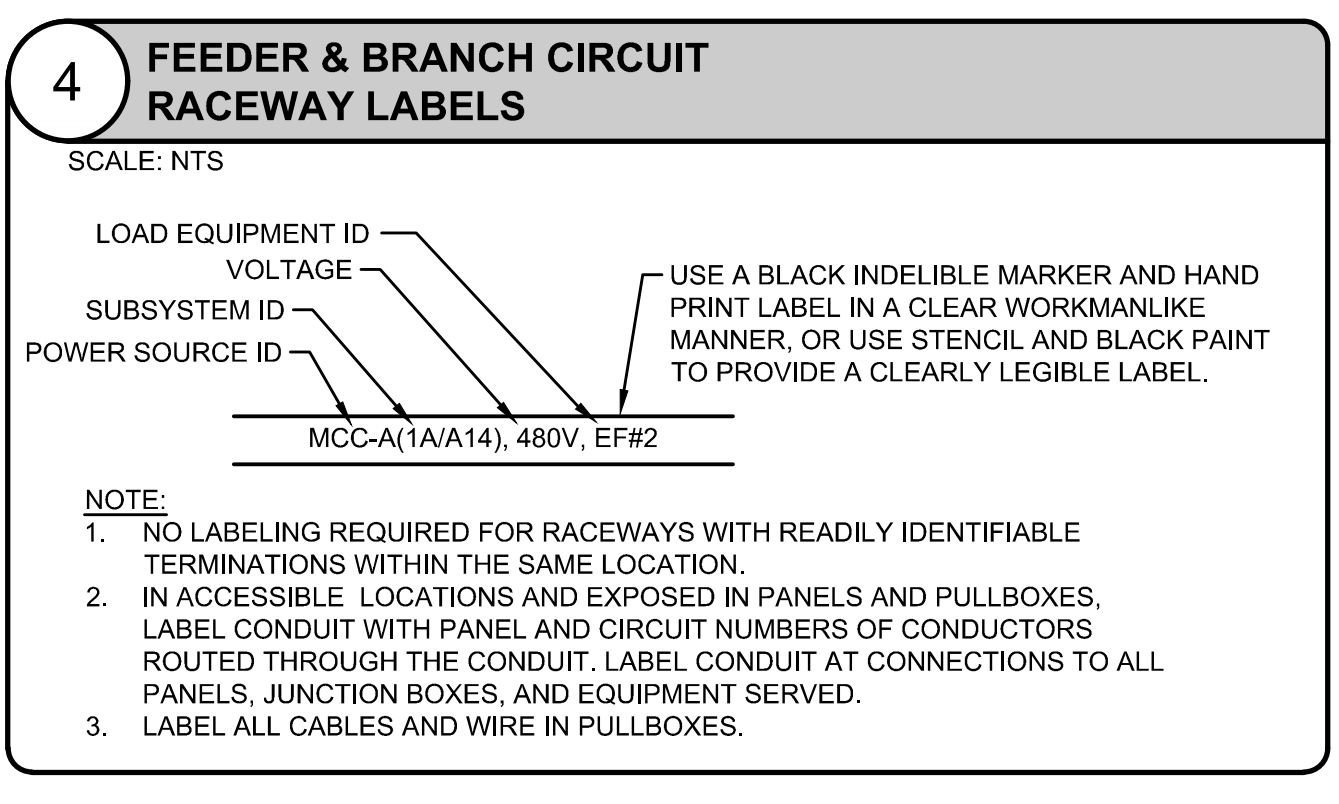
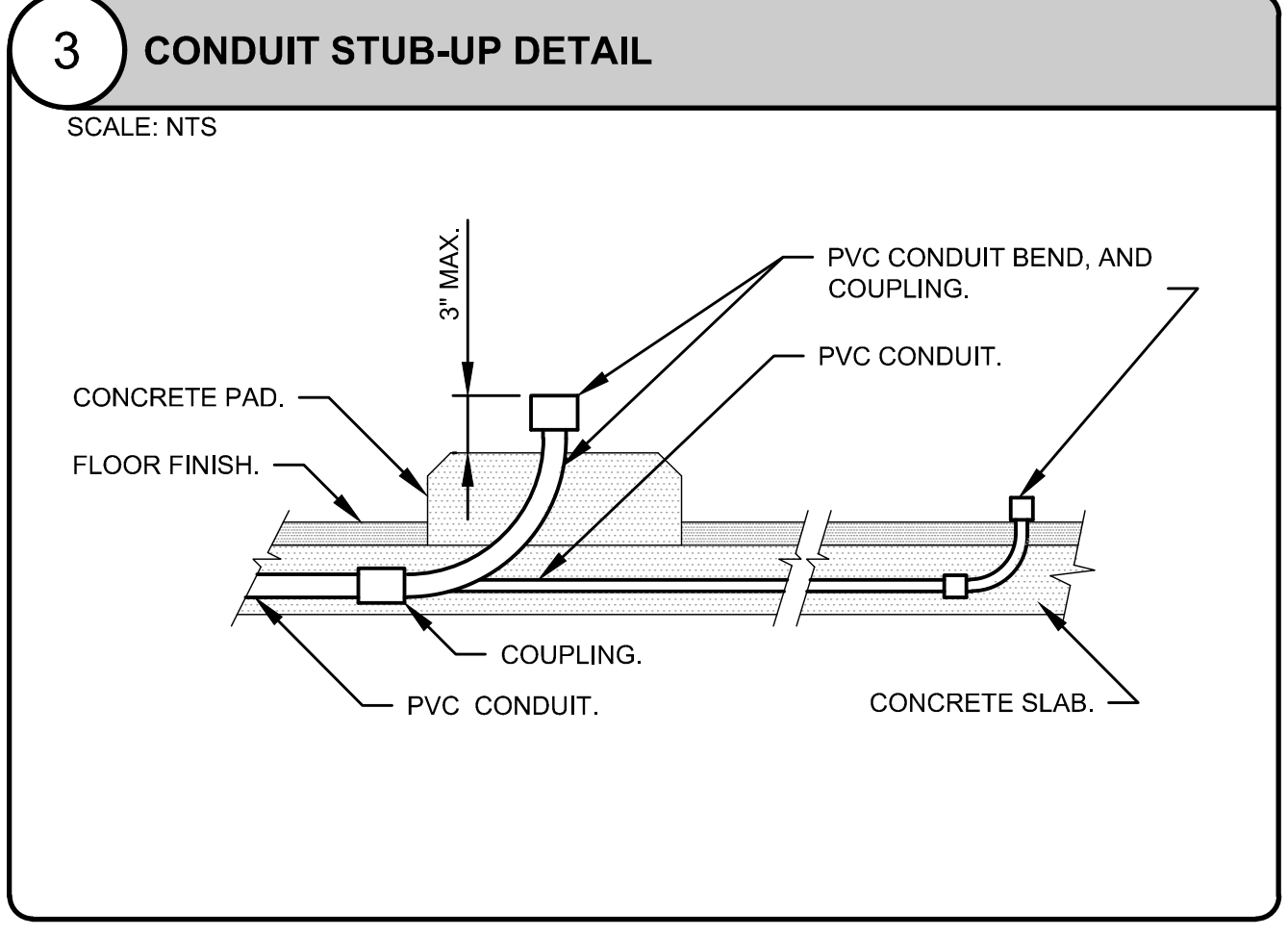
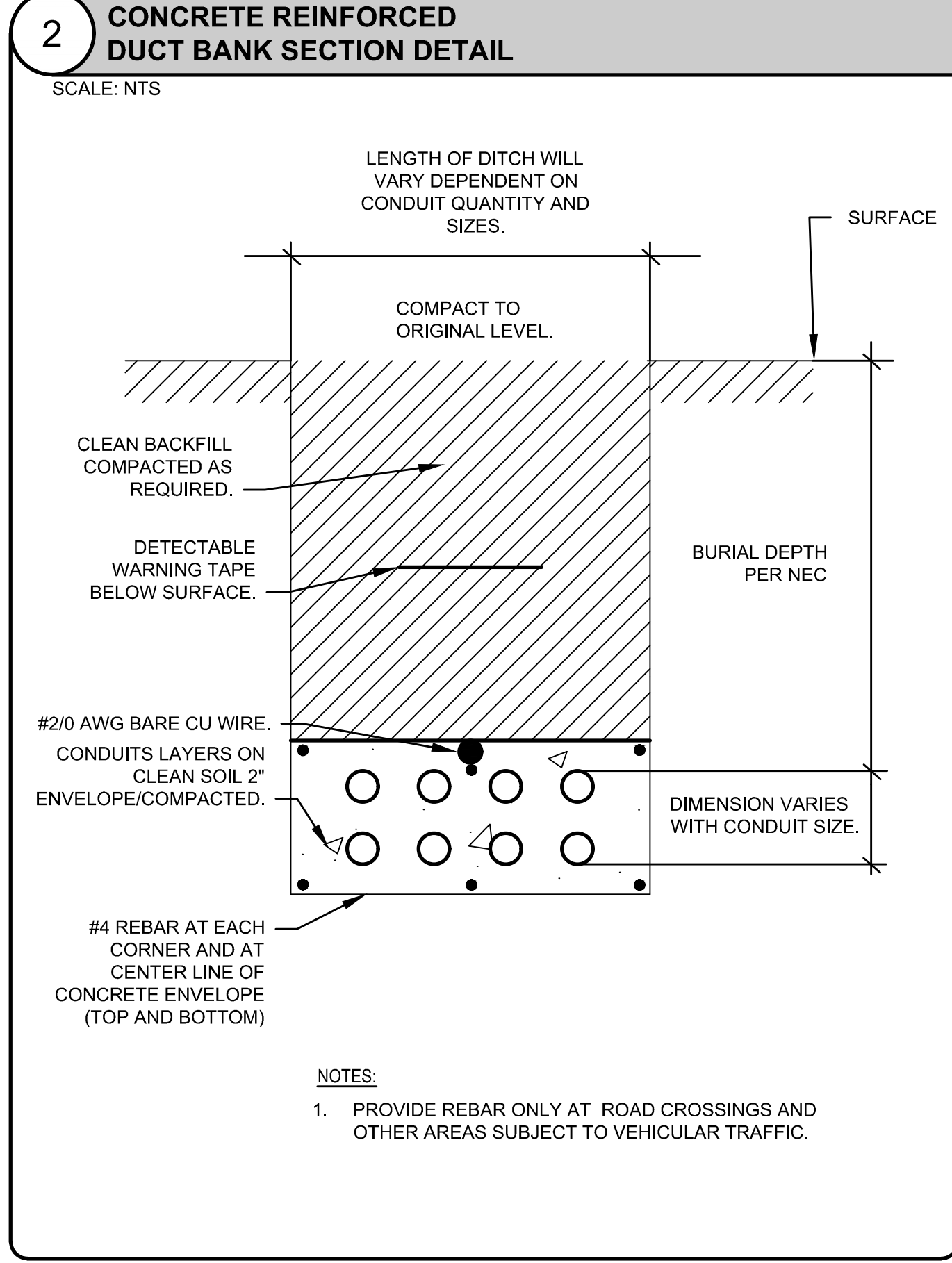
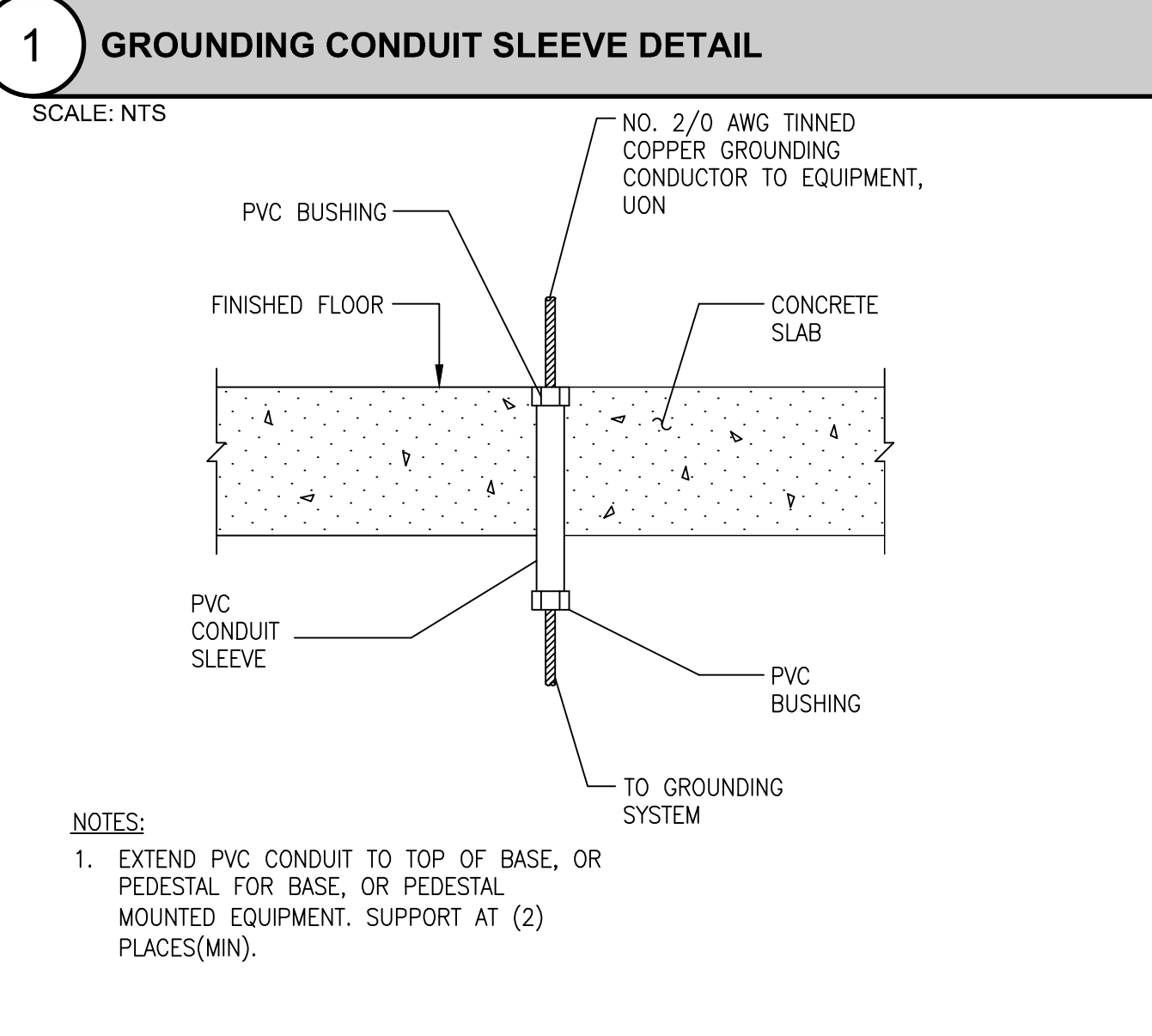


MARK	DATE	DESCRIPTION	BY

COLLIER COUNTY UTILITIES
CENTRAL COUNTY WATER RECLAMATION FACILITY EXPANSION
ELECTRICAL DETAILS

Project No.: 200-08486-20013
Designed By: JAS
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E-501



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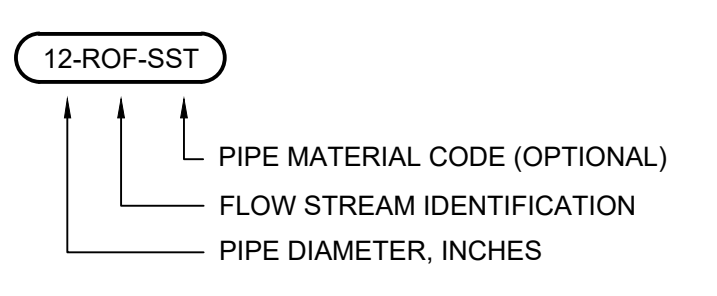
COLLIER COUNTY UTILITIES
CENTRAL COUNTY WATER RECLAMATION FACILITY EXPANSION
ELECTRICAL DETAILS

Project No.: 200-08486-20013
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Drawn By: JAS
Checked By: TW

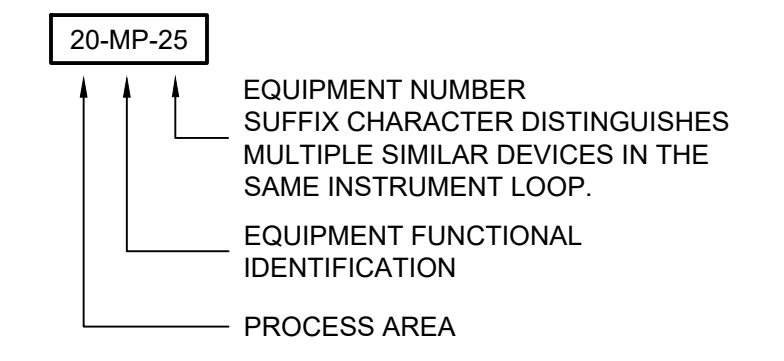
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ANNOTATION SYMBOLS

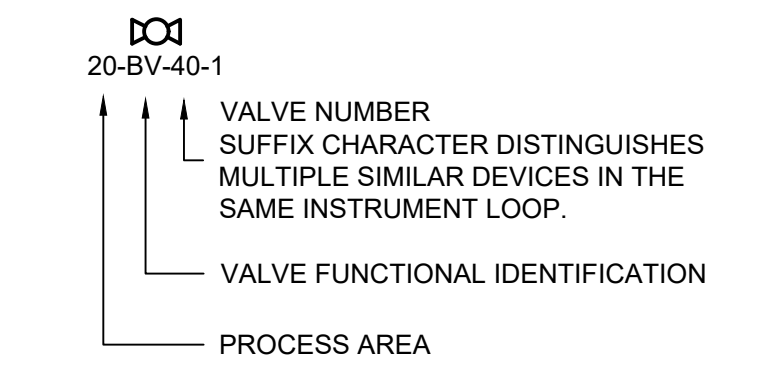
PIPE TAGS



EQUIPMENT TAGS

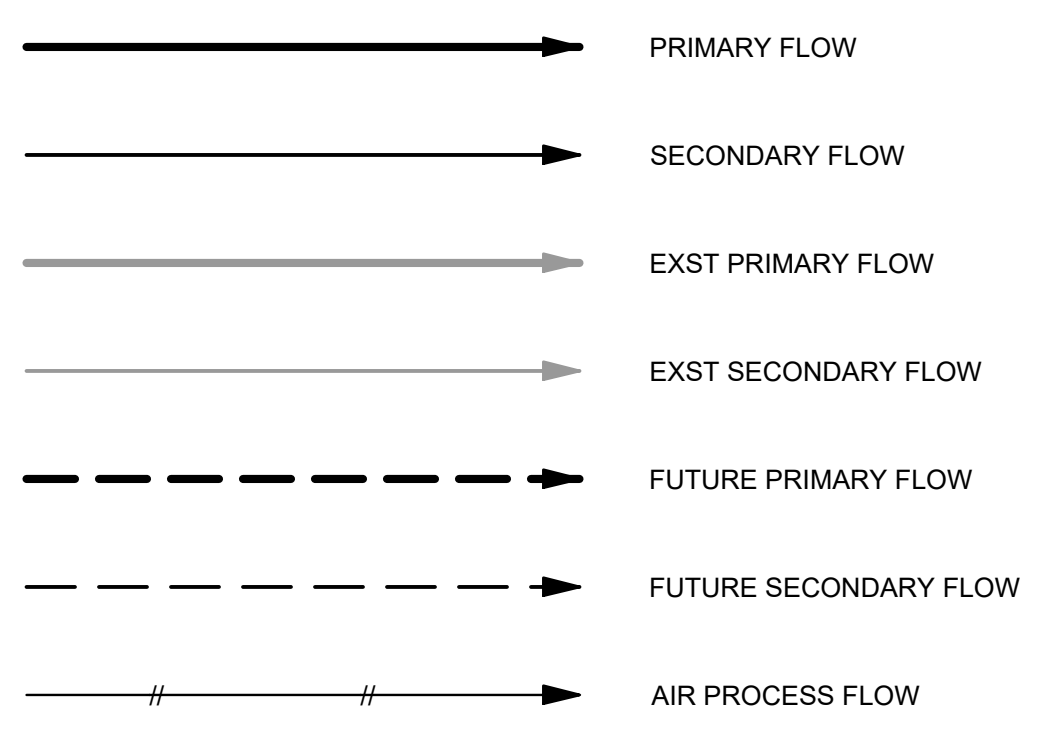


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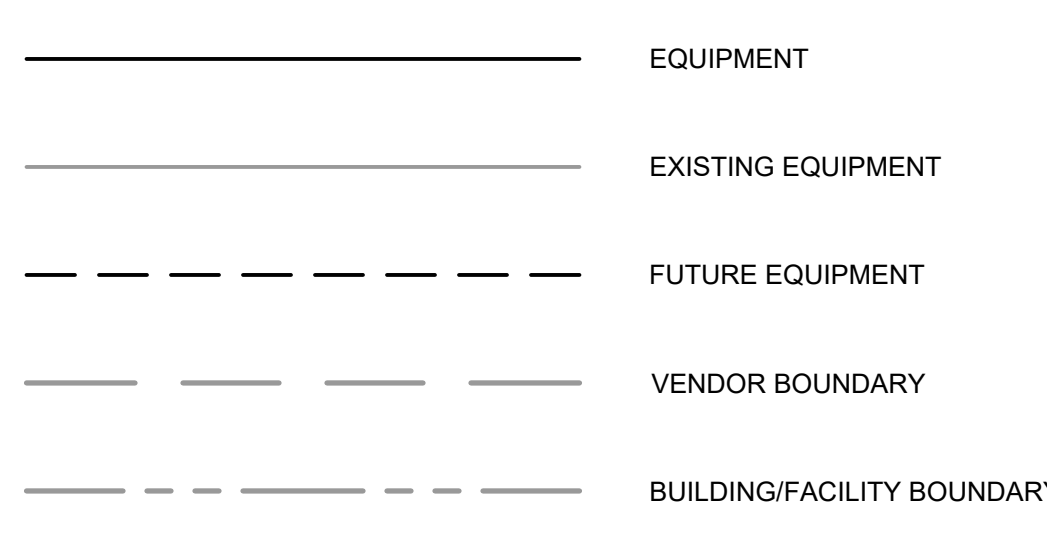


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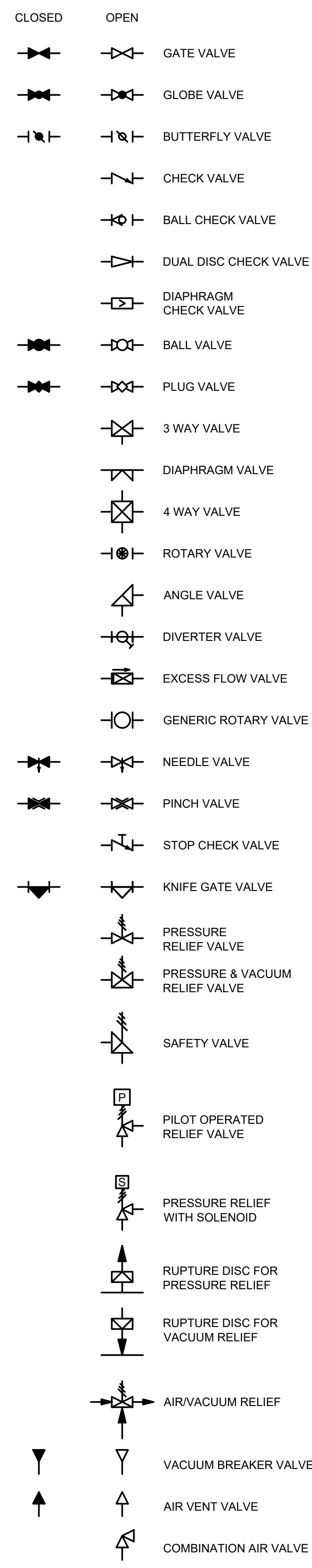
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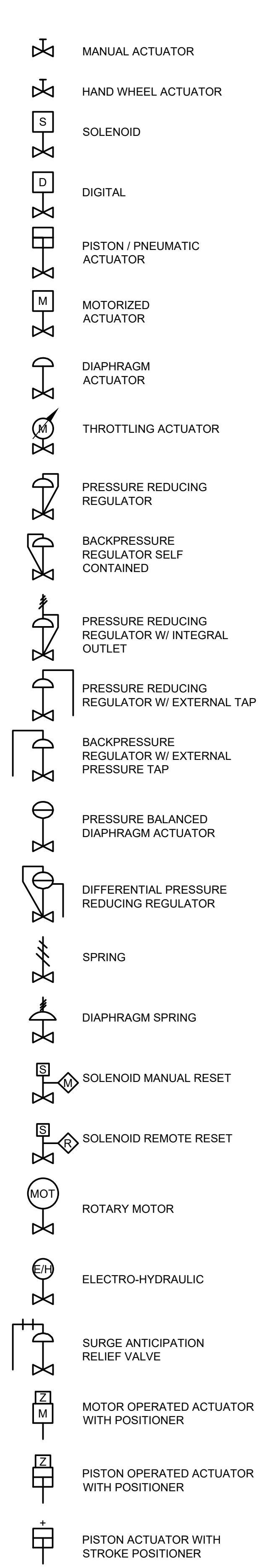
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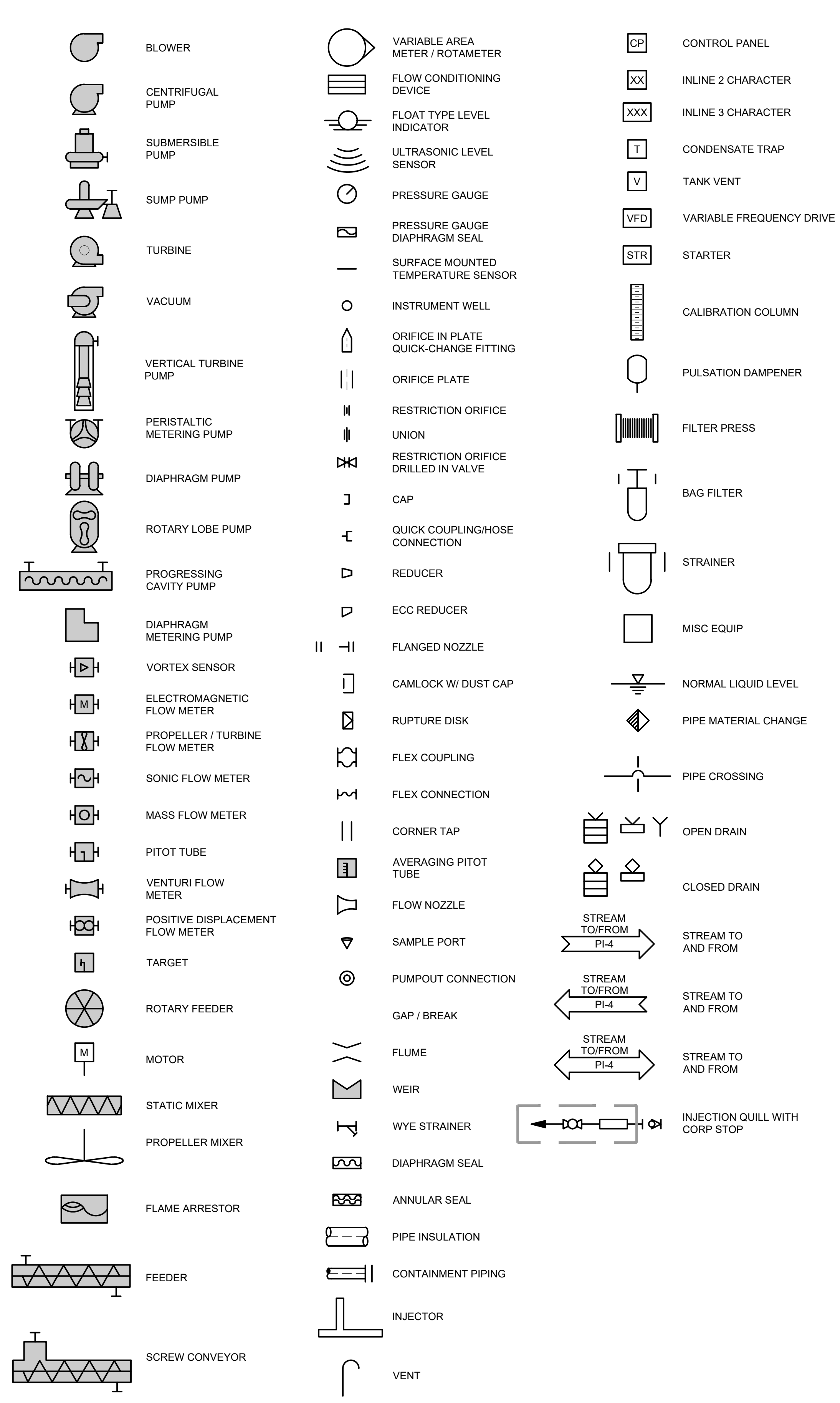
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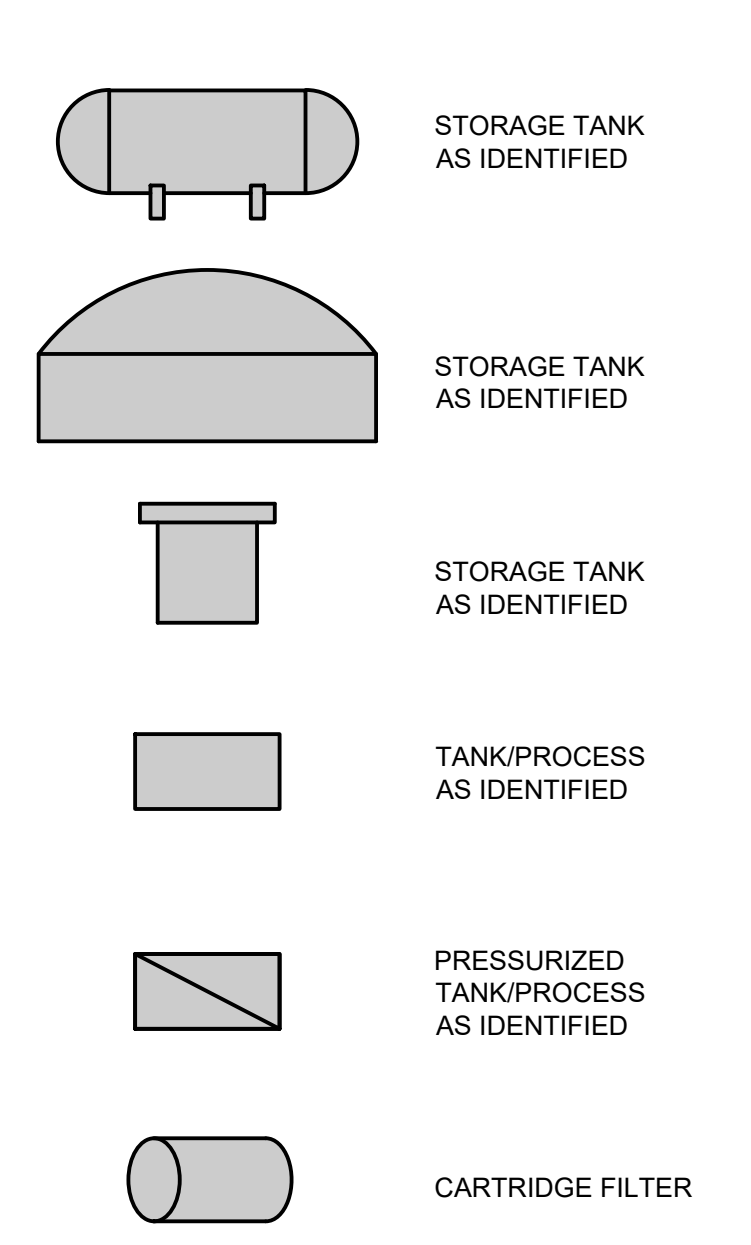
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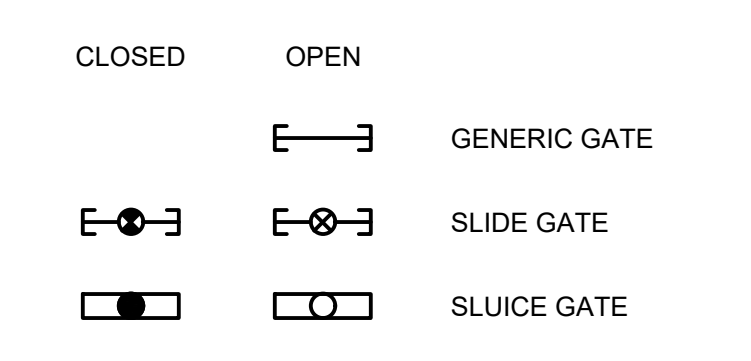
SINGLE LINE EQUIPMENT LEGEND



TANKS AND VESSELS



GATES



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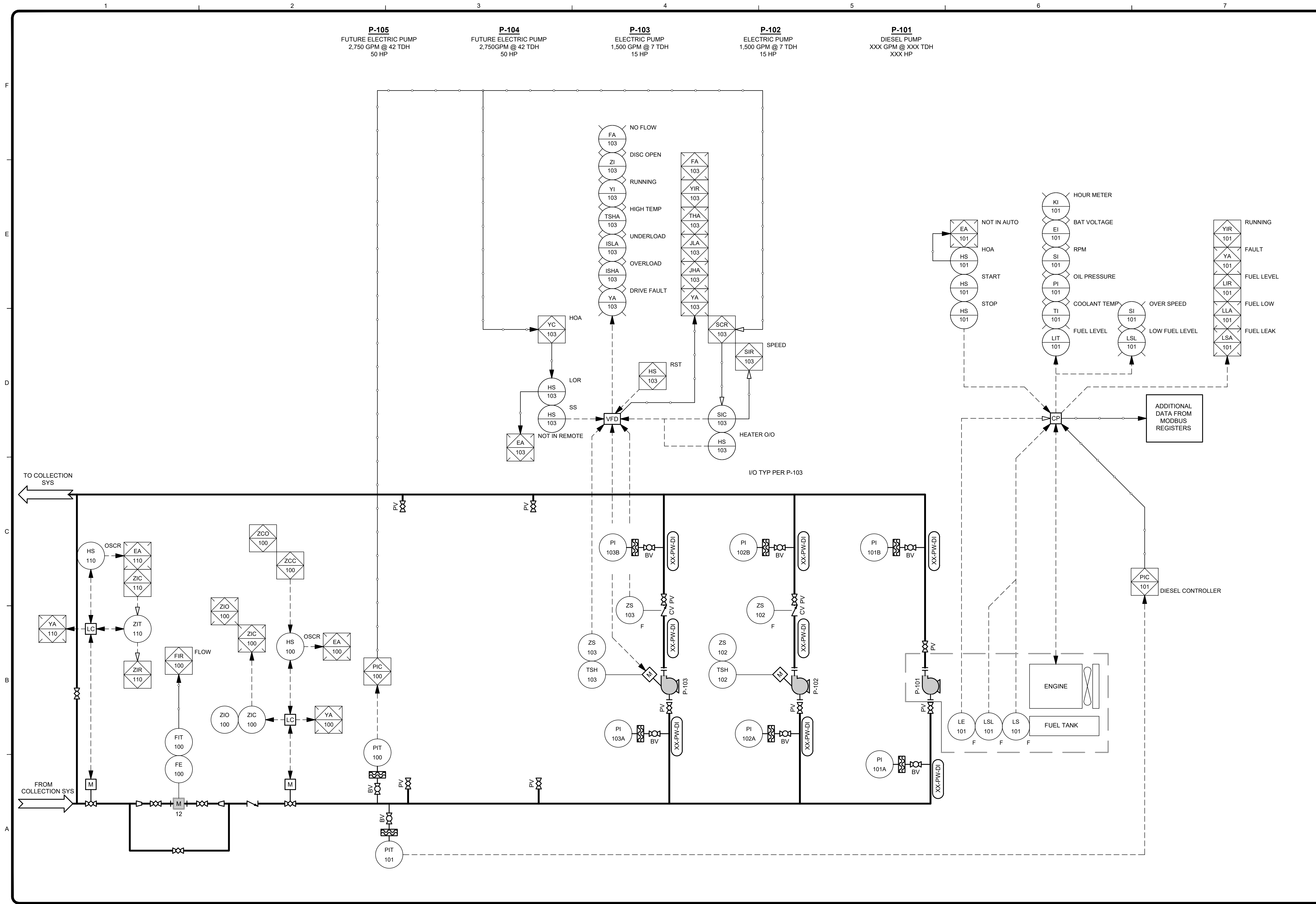
Collier County logo

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COLLIER COUNTY UTILITIES
GOLDEN GATE WWTP
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