

COLLIER COUNTY, FLORIDA

NRO WELLS 118N AND 120N IMPROVEMENTS



Collier County

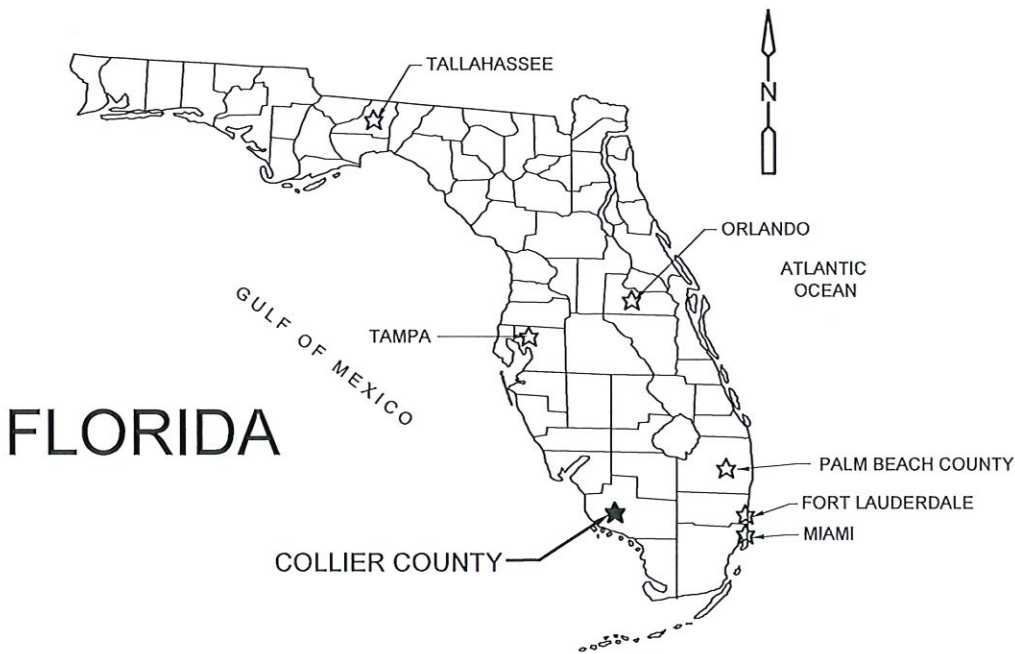
COLLIER COUNTY PROJECT NUMBER: 70085.28

COLLIER COUNTY COMMISSION:
DISTRICT 1: RICK LOCASTRO
DISTRICT 2: CHRIS HALL
DISTRICT 3: BURT L. SAUNDERS
DISTRICT 4: DAN KOWAL
DISTRICT 5: WILLIAM L. MCDANIEL, JR.
COUNTY MANAGER: AMY PATTERSON

ISSUED FOR BID
APRIL 2025



LOCATION MAP
NTS



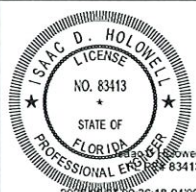
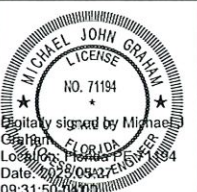
FLORIDA

VICINITY PLAN
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CDM Smith

9160 FORUM CORPORATE PARKWAY, SUITE 230
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FL COA NO. EB-0000020

CDM SMITH PROJECT NUMBER: 6295-296440

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 DATE: MARK J. SUNYAK PE NO. 62725	 DATE: ISAAC DAVID HOLOWELL PE NO. 83413	 DATE: SPENCER J. PERRY PE NO. 62587	 DATE: MICHAEL JOHN GRAHAM PE NO. 71194	 DATE: WILLIAM B. KAHON PE NO. 60135

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REUSE OF DOCUMENTS:

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C-2	PROPOSED NRO WELL 120N
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GENERAL NOTES

- ALL ELEVATIONS ARE REFERENCED TO NORTH AMERICAN VERTICAL DATUM OF 1988. C-1 ELEVATIONS ARE FROM RECORD DRAWINGS USING NAVD88. C-2 ELEVATIONS WERE CONVERTED USING CONVERSION FACTOR OF -1.27' NGVD29 TO NAVD88.
- LOCATIONS, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN ACCORDING TO THE BEST INFORMATION AVAILABLE AT THE TIME OF PREPARATION OF THESE PLANS, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY AND AGREE TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES AFFECTING HIS WORK.
- CONTRACTOR SHALL VERIFY ALL UTILITIES AND NOTIFY THE OWNER 72 HOURS PRIOR TO DIGGING IN ANY PORTION OF THE SITE.
- IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO CONSTRUCT HORIZONTAL AND VERTICAL TRANSITION OF PIPELINES BY DEFLECTION OF PIPE JOINTS USING NO MORE THAN 75 PERCENT OF THE MAXIMUM DEFLECTION RECOMMENDED BY THE PIPE MANUFACTURER. SHOP DRAWINGS SHALL BE FURNISHED TO THE ENGINEER FOR APPROVAL OF ALL PIPE CONNECTIONS, TRANSITIONS AND FITTINGS PRIOR TO FABRICATION OR DELIVERY TO JOB SITE.
- CONTRACTOR SHALL DISINFECT THE WELL AND DISCHARGE PIPING PER THE SPECIFICATIONS.
- THE CONTRACTOR SHALL COLLECT WATER SAMPLES FOR ANALYSIS OF PRIMARY AND SECONDARY DRINKING WATER STANDARDS TEST AS REQUIRED IN THE PROJECT SPECIFICATIONS. THIS INCLUDES PULLING SAMPLES AND SUBMITTING TO CERTIFIED LABORATORY FOR TESTING.
- THE CONTRACTOR SHALL REPLACE ALL DRAINAGE CULVERTS, FENCES, ETC. WITH THE SAME TYPE OF MATERIAL THAT WAS REMOVED DURING CONSTRUCTION.
- THE CONTRACTOR SHALL CONTACT THE ENGINEER'S OFFICE IMMEDIATELY UPON FINDING ANY CONFLICTS OR UNSUITABLE CONDITIONS DURING CONSTRUCTION ON ANY IMPROVEMENTS SHOWN ON THE DRAWINGS.
- EROSION CONTROL AND SEDIMENTATION CONTROL DEVICES SHALL BE IN PLACE PRIOR TO BEGINNING ANY DEMOLITION OR CONSTRUCTION. THEY SHALL BE INSTALLED AS REQUIRED IN THE SPECIFICATIONS AND IN ACCORDANCE WITH ALL REGULATORY AGENCY REQUIREMENTS.
- NO REPRESENTATION IS MADE REGARDING BALANCED EARTHWORK. ANY EXCESS MATERIAL, OR MATERIAL NOT SUITABLE FOR USE AS BACKFILL, SHALL BE PLACED IN PERMANENT STOCKPILE AREA DESIGNATED BY THE OWNER AND STABILIZED IN ACCORDANCE WITH THE SPECIFICATION. NO MATERIAL SHALL BE REMOVED FROM SITE WITHOUT APPROVAL IN WRITING FROM THE OWNER.
- CONTRACTOR IS RESPONSIBLE FOR CALCULATING AND PROVIDING/REMOVING ANY FILL REQUIRED FOR COMPLETION OF PROJECT.
- FINISHED GRADE FOR GROUND ELEVATIONS ON DRAWINGS REFER TO GRADE AFTER SODDING OR OTHER SURFACE TREATMENT.
- DUE TO ITS LOCATION WITH RESPECT TO THE WATER TABLE THE PORTION OF THE UNDEVELOPED SITE WITHIN THE PROJECT LIMITS IS SUBJECT TO SEASONAL STANDING WATER.
- SOD SHALL BE INSTALLED ON ALL SIDESLOPES AND DRAINAGE DITCHES, DISTURBED OR ALTERED DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT.
- ALL PIPING SHALL HAVE 30 INCH MINIMUM COVER UNLESS OTHERWISE NOTED.
- UNLESS OTHERWISE NOTED, ALL ABOVE-GROUND PIPE SHALL BE CEMENT-MORTAR LINED DUCTILE IRON WITH FLANGED JOINTS.
- UNLESS OTHERWISE NOTED, ALL BURIED PIPE AND FITTINGS SHALL BE HDPE DR11.
- ALL PIPE JOINTS, VALVES, AND FITTINGS SHOWN ON DRAWINGS SHALL HAVE RESTRAINED JOINTS.
- CONTRACTOR IS RESPONSIBLE FOR EVACUATING THE AIR IN EXISTING AND NEW PIPING PRIOR TO STARTUP AND TESTING.

GENERAL

ADJUSTABLE
ALUMINUM
ANGLE
BARE ROOT
BELOW
BELOW LAND SURFACE
BENCHMARK
BETWEEN
CENTER LINE
CENTER TO CENTER
CORRUGATED METAL PIPE
CONCRETE
CONE PENETRATION TEST
CENTER (ED)
COUNTY UTILITY EASEMENT
DRAIN
DEMOLITION
DIAMETER
DIAGONAL
DIMENSION
DISCHARGE
DRAWING
EACH
ELEVATION
EFFLUENT
EDGE OF PAVEMENT
EXISTING
EXISTING YARD GRADE
FURNISHED BY OTHERS
FINISH
FLOOR
FINISH PLANT WATER
FINISH YARD GRADE
FEET/FOOT
FINISH WATER
HIGH
HIGH POINT
HEIGHT
INFLUENT
ION EXCHANGE EFFLUENT
IRRIGATION QUALITY WATER
LONG
LOW POINT
MATERIAL
MANUFACTURING
MANUFACTURER
MAXIMUM
MITERED END SECTION
MECHANICAL
METAL
MINIMUM
MOUNTED
MUD VALVE
NATIONAL ELECTRIC CODE
NOMINAL
NOT TO SCALE
NUMBER
ON CENTER
OPTION
OPPOSITE
OPENING
OR EQUAL
PERFORATED
PIECE
POINT
POUND(S)
PLATE
PRECAST
PRIMARY EFFLUENT
RADIUS
REINFORCED CONCRETE PIPE
REQUIRED
RECLAIMED WATER
ROOM
REVERSE OSMOSIS PERMEATE
RAW SEWAGE
RIGHT OF WAY
RAW WATER - BRACKISH
RAW WATER - FRESH

ABBREVIATIONS

SYMBOLS

ADJ
AL., ALUM.
<
BR
BEL
BLS
BM
BTWN.
C
C.C.
CMP
CONC
CPT
CTR
C.U.E.
D
DEMO
DIA., DIAM.
DIAG.
DIM.
DISCH
DWG.
EA
EL., ELEV.
EFF.
EOP
EXIST., EX.
EYG
FBO
FIN.
FL.
FPW
FYG
FT
FW
H.
H.P.
HT
INFL.
IXE
IQW
LG.
L.P.
MTL.
MFG.
MFR.
MAX.
MES
MECH.
MET.
MIN.
MTD.
MV
NEC
NOM.
N.T.S.
NO.
O.C.
OPT.
OPP.
OPNG
O/E.
PERF
PC.
PT.
LB(S).
PL
PRCST
PEFL
RAD., R.
RCP
REQ'D
REW
RM.
ROP
RS
R/W
RWB
RWF

GENERAL (CONT.)

SCHEDULE
SQUARE
STAINLESS STEEL
SIDEWALK
SECTION
SHEET
STANDARD
STEEL
STORM WATER
STANDARD PENETRATION TEST
STANDARD PENETRATION TEST @ WELLSITE
SYMMETRICAL
TEMPORARY
THICK
TOP OF BANK
TOP OF SLOPE
TYPICAL
UTILITY EASEMENT
VERTICAL
WATER
WATER LEVEL
WATER MAIN
WEATHERPROOF
WELL RESTORATION WATER
WEST
WITH

VALVES, FITTINGS, ETC.

AIR RELIEF VALVE
AIR VACUUM VALVE
BALL CHECK VALVE
BALL VALVE
BLIND FLANGE
BURIED GEAR OPERATOR
BUTTERFLY VALVE
COMBINATION AIR VALVE
CHECK VALVE
ELECTRIC VALVE ACTUATOR
ELEVATED GEAR OPERATOR
EXPANSION JOINT
FIRE HYDRANT
FITTINGS
FLANGED ADAPTER
FLEXIBLE COUPLING
FLOOR BOX (BUSHING TYPE)
FLOOR STAND
GLOBE VALVE
GROOVED END (VICTAULIC) JOINT
GATE VALVE
HARNESSED FLANGE ADAPTER COUPLING
HOSE BIBB
HYDRAULIC VALVE ACTUATOR
MECHANICAL JOINT PLUG
PLAIN END
PLUG VALVE
PRESSURE REGULATING VALVE
RESTRAINED
RUBBER FLAPPER CHECK VALVE
SILENT CHECK VALVE
SLANTING DISC CHECK VALVE
SOLENOID VALVE
THREADED
UNION
VALVE BOX
VICTAULIC COUPLING (GROOVED ENDS)
VICTAULIC COUPLING (SHOULDERED ENDS)
WALL SLEEVE
WALL PIECE (WITH WATER STOP)

PIPE

ASBESTOS CEMENT PIPE
BLACK STEEL PIPE
CAST IRON
CAST IRON PIPE
CAST IRON SOIL PIPE
CHLORINATED POLYVINYL CHLORIDE
CONCRETE PRESSURE PIPE
COPPER PIPE
CORRUGATED METAL PIPE
DUCTILE IRON PIPE

SYMBOLS

SCH
SQ.
SST
SDWK.
SEC.
SH., SHT.
ST'D
STL.
STW
SPT
SPTW
SYMM.
TEMP.
THK.
TOB.
TOS.
TYP.
U.E.
VERT.
WTR.
WL
WM
WPF.
WRW
W.
W/
W/

SYMBOLS

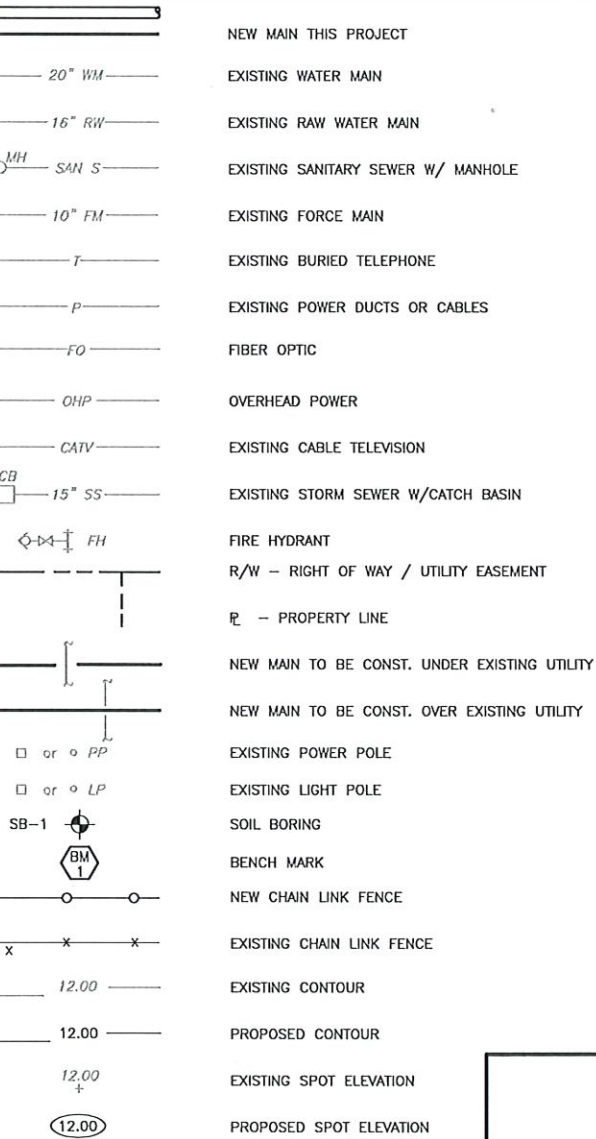
ARV
AVV
BCV
BV
B.F.
BO
BFV
CAV
CV
EVA
EO
EXJ
FH
FTG
FA
FC
FB
FS
GLV
GRV
GV
HFAC
HB
HVA
MJP
PE
PV
PRV
RJ
RFCV
SCV
SDCV
SV
TRD
UN
VB
VC (G)
VC (S)
WS
WP

PIPE (CONT.)

DUCTILE IRON
DUCTILE IRON PIPE SIZES
DIMENSIONAL RATIO
FIBERGLASS REINFORCED PIPE
FLANGE
GALVANIZED STEEL PIPE
HIGH DENSITY POLYETHYLENE
MECHANICAL JOINT
METAL REINFORCED PLASTIC PIPE
POLYETHYLENE
POLYVINYL CHLORIDE PRESSURE PIPE
REINFORCED CONCRETE PIPE
RESTRAINED JOINT
SLIP-ON JOINT
STEEL PIPE
STAINLESS STEEL
TIED JOINT
VITRIFIED CLAY PIPE

DI
DIPS
DR
FRP
FLG
GSP
HDPE
MJ
MRPP
PE
PVC
RCP
RJ
SJ
SP
SST
TJ
VCP

LEGEND



COLLIER COUNTY, FLORIDA

NRO WELLS 118N AND 120N
IMPROVEMENTS

SHEET INDEX AND ABBREVIATIONS

DATE:
MARK J. SUNYAK
PE NO. 62725
PROJECT NO. 6295-296440
FILE NAME: G001NFDX.DWG
SHEET NO.
G-1

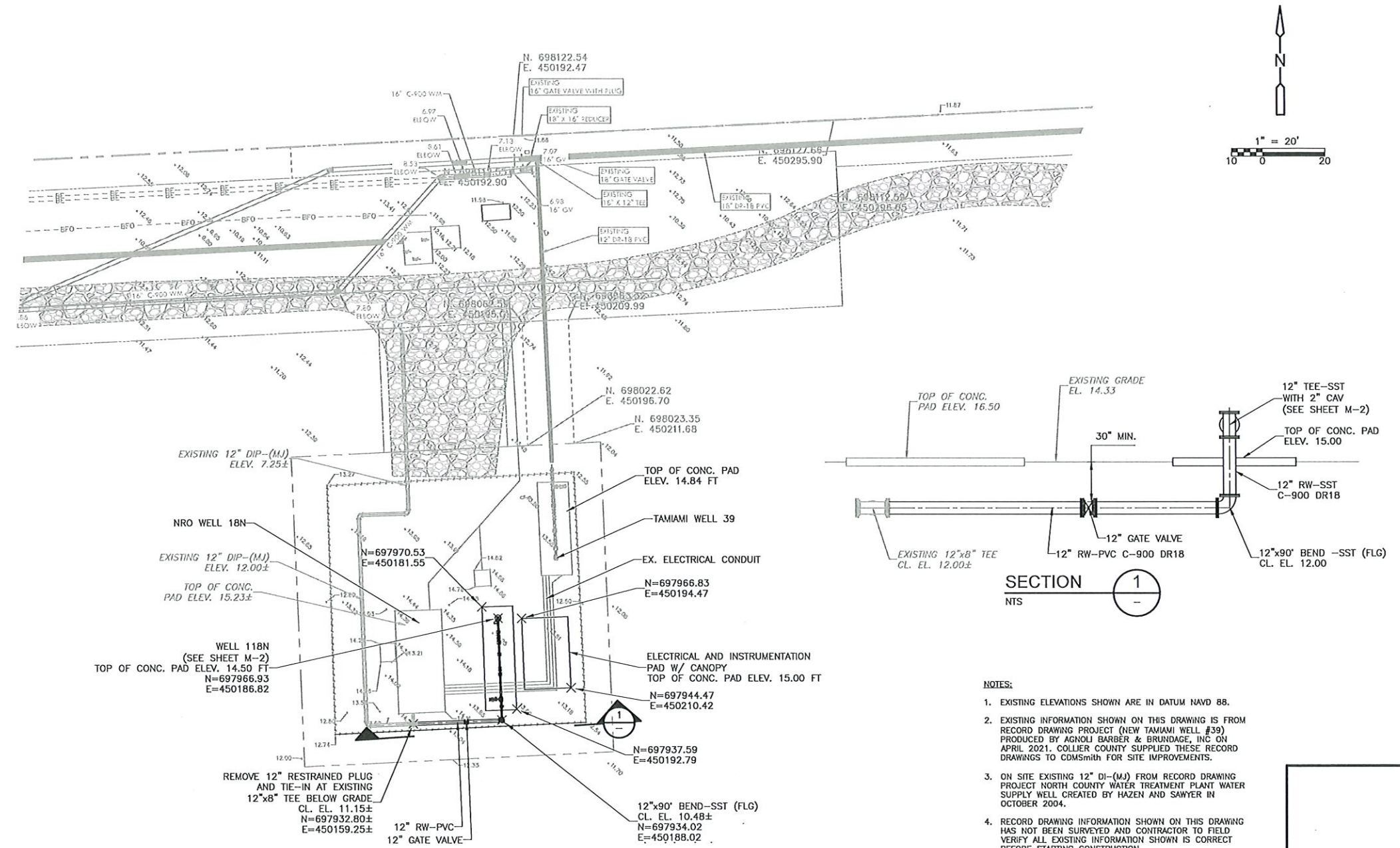
REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. BISHOP
DRAWN BY: D. AUST
SHEET CHK'D BY: M. STONEHOUSE
CROSS CHK'D BY: G. ISAACS
APPROVED BY: M. SUNYAK
DATE: APRIL 2025

**CDM
Smith**
9160 FORUM CORPORATE PARKWAY., Suite 230
Fort Myers, FL 33905
Tel. (239) 938-9900
FL COA No. EB-0000020

PROPOSED NRO WELL 118N

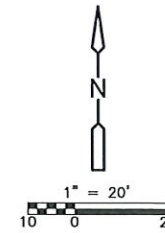
DATE: MARK J. SUNYAK PE NO. 62725	
PROJECT NO. 6295-296440 FILE NAME: C001STPL.DWG	
SHEET NO. C-1	



NOTES:

1. EXISTING ELEVATIONS SHOWN ARE IN DATUM NAVD 88.
2. EXISTING INFORMATION SHOWN ON THIS DRAWING IS FROM RECORD DRAWING PROJECT (NEW TAMAMI WELL #39) PRODUCED BY AGNOLI BARBER & BRUNDAGE, INC ON APRIL 2021. COLLIER COUNTY SUPPLIED THESE RECORD DRAWINGS TO CDMSmith FOR SITE IMPROVEMENTS.
3. ON SITE EXISTING 12" DI-(WJ) FROM RECORD DRAWING PROJECT NORTH COUNTY WATER TREATMENT PLANT WATER SUPPLY WELL CREATED BY HAZEN AND SAWYER IN OCTOBER 2004.
4. RECORD DRAWING INFORMATION SHOWN ON THIS DRAWING HAS NOT BEEN SURVEYED AND CONTRACTOR TO FIELD VERIFY ALL EXISTING INFORMATION SHOWN IS CORRECT BEFORE STARTING CONSTRUCTION.

Images:



- NOTES:**
1. EXISTING INFORMATION SHOWN ON THIS DRAWING IS FROM RECORD DRAWING PROJECT (NORTH COUNTY REGIONAL WATER TREATMENT PLANT WATER SUPPLY WELLS) PRODUCED BY HAZEN AND SAWYER ON OCTOBER 2004. COLLIER COUNTY SUPPLIED THESE RECORD DRAWINGS TO CDMSmith FOR SITE IMPROVEMENTS.
 2. ELEVATIONS SHOWN ON THIS DRAWING WERE CONVERTED FROM (NGVD) (NORTH COUNTY REGIONAL WATER TREATMENT PLANT WATER SUPPLY WELLS 0-2) PRODUCED BY HAZEN AND SAWYER ON OCTOBER 2004 TO (NAVD88) USING CONVERSION FACTOR OF 1.27. (NAVD88=NGVD29 - 1.27)
 3. RECORD DRAWING INFORMATION SHOWN ON THIS DRAWING HAS NOT BEEN SURVEYED AND CONTRACTOR TO FIELD VERIFY ALL EXISTING INFORMATION SHOWN IS CORRECT BEFORE STARTING CONSTRUCTION.

DESIGNED BY: M. SUNYAK
DRAWN BY: D. AUST
SHEET CHK'D BY: M. STONEHOUSE
CROSS CHK'D BY: G. ISAACS
APPROVED BY: M. SUNYAK
DATE: APRIL 2025

**CDM
Smith**
9160 FORUM CORPORATE PARKWAY, Suite 230
Fort Myers, FL 33905
Tel. (239) 938-9600
FL COA No. EB-0000020

COLLIER COUNTY, FLORIDA
NRO WELLS 118N AND 120N
IMPROVEMENTS

PROPOSED NRO WELL 120N

DATE:
MARK J. SUNYAK
PE NO. 62725

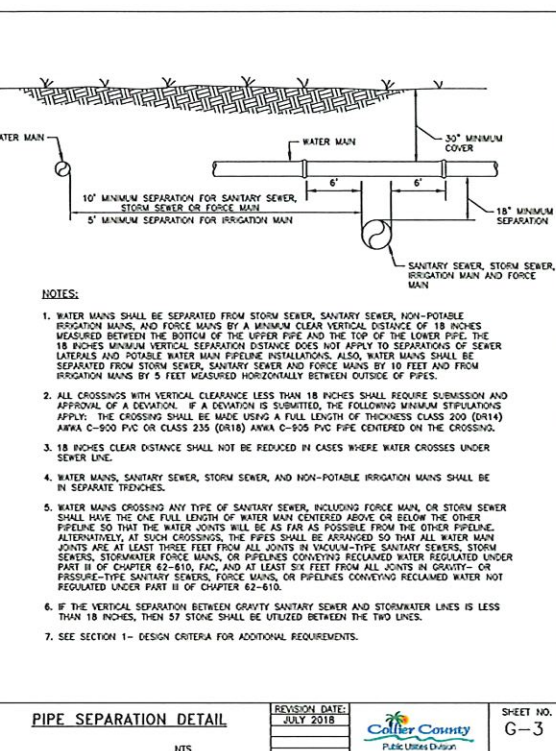
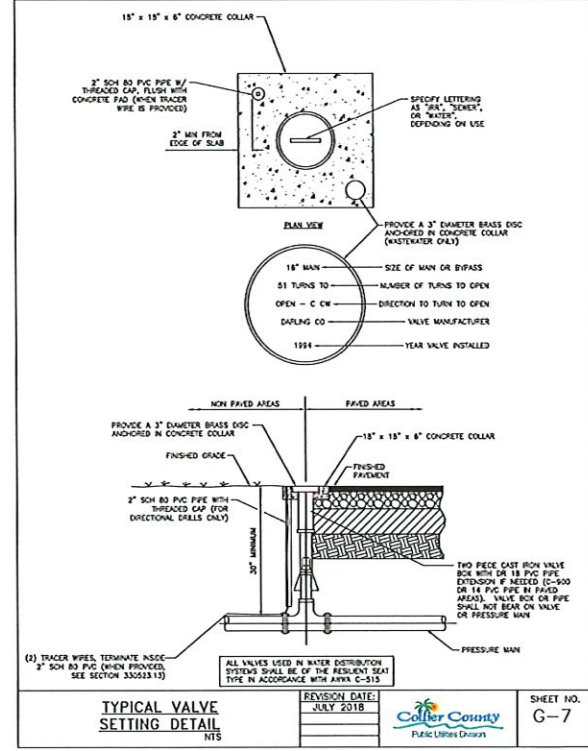
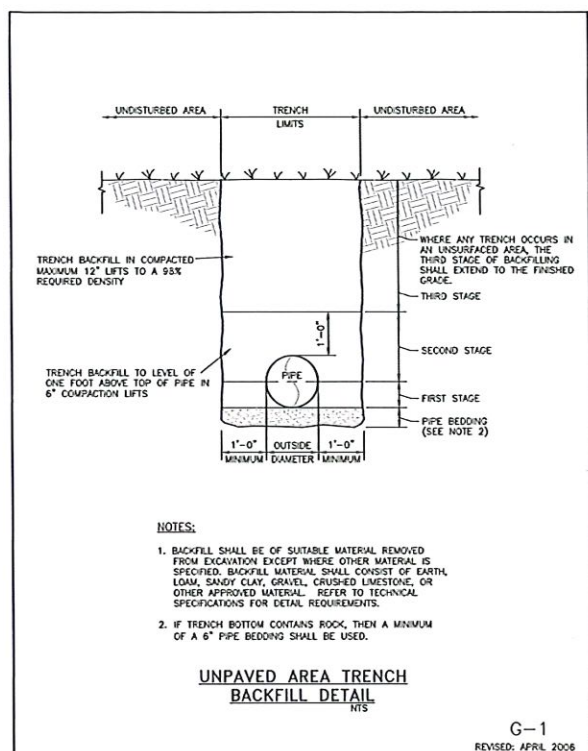
PROJECT NO.	6295-296440
FILE NAME:	C002STPL.DWG

SHEET NO.

C-2

BID SET

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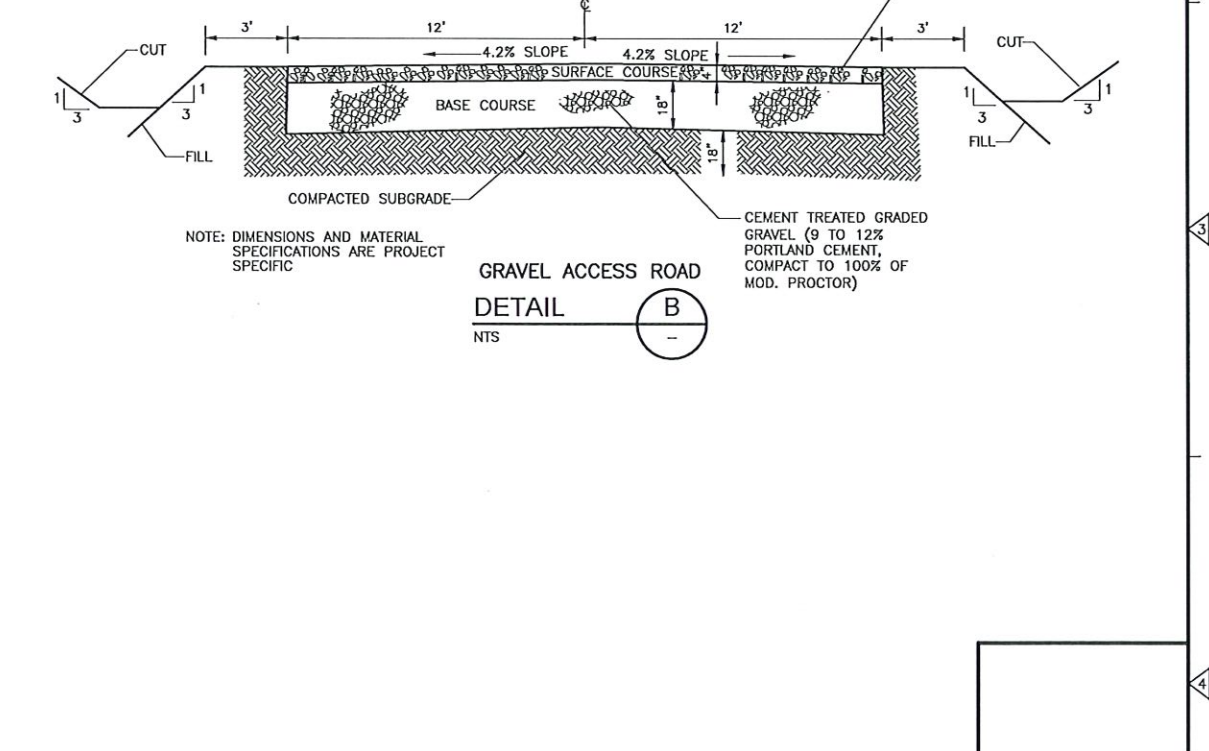
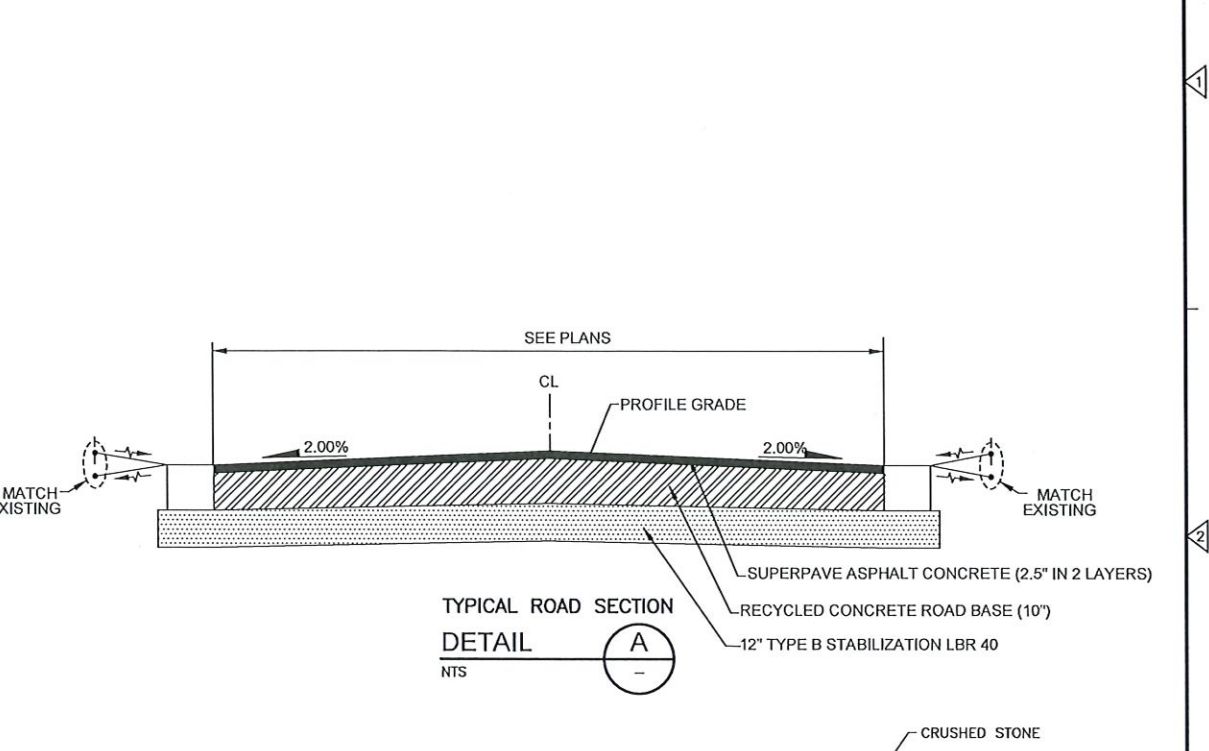
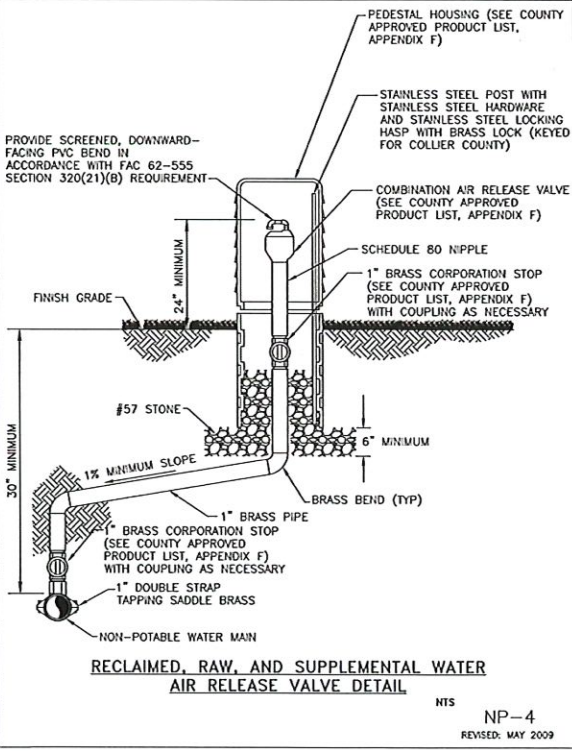
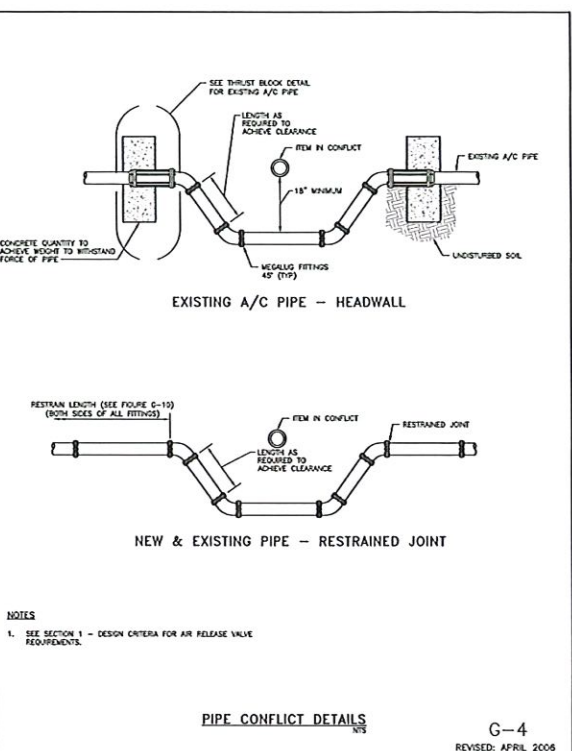
PIPE SIZE IN INCHES	RESTRAINED PIPE LENGTH IN FEET (1)					45° VERTICAL BENDS
	90°	45°	22-1/2°	11-1/4°	DEAD ENDS (2)	
6 x 4	23	9	5	2	55	23
6 x 6	32	13	6	3	77	32
8 x 4	40	17	8	4	100	41
8 x 6	48	20	10	5	120	50
10 x 6	55	23	11	6	141	58
10 x 8	71	29	14	7	181	75
12 x 6	77	32	15	8	200	83
12 x 8	84	35	17	9	218	90
14 x 8	98	40	19	10	253	105
16 x 8	112	47	22	11	303	125
16 x 10	127	53	25	13	350	145

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 6	55	74
10 x 6	3	74
10 x 10	75	122
12 x 4	0	122
12 x 6	31	75
12 x 12	95	107
16 x 6	0	153
16 x 10	144	107
16 x 16	134	107
18 x 6	0	157
18 x 12	68	108
18 x 18	152	152
20 x 10	20	161
20 x 16	120	77
20 x 20	170	170
24 x 12	37	187
24 x 18	132	109
24 x 24	204	204
30 x 16	78	213
30 x 20	138	165
30 x 30	252	252
36 x 18	84	259
36 x 24	170	191
36 x 36	288	288

NOTES:
1. RESTRAIN ALL PIPE JOINTS WITHIN THE DISTANCE SHOWN ON THE TABLES MEASURED FROM THE POINT OF CONNECTION.
2. ISOLATION VALVES SHALL BE TREATED AS DEAD ENDS WITH RESTRAINT ON BOTH SIDES OF THE VALVE.
3. RESTRAINT IS FOR BRANCH OF TEE. IF BRANCH SIZE IS NOT ON TABLE, USE NEXT LARGEST BRANCH.
4. RESTRAINT IS FOR LARGE DIAMETER SIDE OF REDUCER. IF REDUCER SIZE IS NOT ON TABLE, USE NEXT SMALLER REDUCER (SMALL END).
5. THIS SCHEDULE IS TO BE USED FOR DUCTILE IRON AND PVC PIPE.

PIPE RESTRAINT SCHEDULE
NTS

G-10
REVISED: APRIL 2008



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: A. BISHOP
DRAWN BY: D. AUST
SHEET CHK'D BY: M. STONEHOUSE
CROSS CHK'D BY: G. ISAACS
APPROVED BY: M. SUNYAK
DATE: APRIL 2025

CDM Smith
9160 FORUM CORPORATE PARKWAY, Suite 230
Fort Myers, FL 33905
Tel: (239) 938-6600
FL CCR No. EB-0000020

COLLIER COUNTY, FLORIDA
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CIVIL DETAILS
CD-1

DATE: MARK J. SUNYAK
PE NO. 62725
PROJECT NO. 6295-296440
FILE NAME: CD01STPL.DWG
SHEET NO. CD-1

XREFs: [CDWS_2234] Images:
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p:\edmanthi-gz02-p\edmanthi-gz02-p\Bentley\cdm\p\11\6295\296440\04 Design Services NL_Bld\04 Structural\10 Bld_CADD\5001STNT.dwg
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GENERAL NOTES

DESIGN CRITERIA:

- CODES:
- FLORIDA BUILDING CODE EIGHTH EDITION (2023)
 - ACI 318-19 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"

DESIGN LOADS:

- LIVE LOADS:
- PROCESS SLABS-ON-GRADE 200 PSF

SUPERIMPOSED DEAD LOADS:

- ROOFS AS NOTED
- FLOORS AS NOTED

- WIND DESIGN DATA:
- ULTIMATE DESIGN WIND SPEED, V_{ult} (3-SECOND GUST): ASCE 7-22
 - NOMINAL DESIGN WIND SPEED, V_{nd} : 170 MPH
 - TORNADO SPEED, V_t : 132 MPH
 - EFFECTIVE PLAN AREA, A_e : 50 MPH
 - RISK CATEGORY: 10,000 SF
 - WIND EXPOSURE CATEGORY: III
 - ENCLOSURE CLASSIFICATION: C
 - INTERNAL PRESSURE COEFFICIENT: OPEN-CLEAR

RAIN DESIGN DATA:

- 15 MINUTE RAINFALL INTENSITY N/A
- ROOF RAIN LOAD N/A

FLOOD DESIGN DATA:

- 1% ANNUAL CHANCE FLOOD BASE FLOOD ELEVATION ZONE AH NAVD 88
- EL 13.50'

CONCRETE 28-DAY STRENGTH:

- SLABS-ON-GRADE 4000 PSI

REINFORCING STEEL:

- ALL BARS ASTM A615, GRADE 60

FOUNDATIONS:

- ALLOWABLE BEARING PRESSURE FOR SHALLOW FOUNDATIONS OVER SUBSURFACE PREPARED AS PER SPECIFICATIONS: 1500 PSF

GENERAL CONDITIONS:

ALL STRUCTURAL DRAWINGS SHALL BE USED IN CONJUNCTION WITH THE MECHANICAL, CIVIL, ELECTRICAL AND SHOP DRAWINGS AND SPECIFICATIONS.

THE CONTRACTOR SHALL REVIEW AND VERIFY DIMENSIONS SHOWN IN ALL PLANS AND REVIEW ALL FIELD CONDITIONS THAT MAY AFFECT THE INSTALLATION OF THE FACILITY, SHOULD DISCREPANCIES APPEAR, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING TO OBTAIN ENGINEER'S CLARIFICATION BEFORE COMMENCING WITH THE WORK.

FOR ALL ITEMS EMBEDDED IN OR PASSED THROUGH CONCRETE, THE CONTRACTOR SHALL INITIALLY REFER TO MECHANICAL DRAWINGS FOR TYPE, SIZE, LOCATION AND SPECIAL INSTALLATION REQUIREMENTS FOR THESE ITEMS.

THE CONTRACTOR SHALL TAKE ANY AND ALL NECESSARY MEASURES TO PROTECT EXISTING STRUCTURES FROM DAMAGE WHEN WORKING IN AND AROUND EXISTING STRUCTURES PERFORMING WORK SUCH AS DEMOLITION, FOUNDATION EXCAVATION AND OTHERS.

SIZE AND LOCATION OF EQUIPMENT PADS AND ANCHOR BOLTS SHALL BE PER EQUIPMENT MANUFACTURER'S REQUIREMENTS.

ANY EQUIPMENT THAT MAY INDUCE VIBRATION TO THE STRUCTURE SHALL BE ADEQUATELY ISOLATED FROM THE STRUCTURES.

ALL DETAILS AND SECTIONS SHOWN ON THE DRAWINGS ARE INTENDED TO BE TYPICAL AND SHALL BE CONSTRUED TO APPLY TO ANY SIMILAR SITUATION ELSEWHERE ON THE PROJECT, EXCEPT WHERE A DIFFERENT DETAIL IS SHOWN.

UNLESS OTHERWISE NOTED, ALL PIPES UNDER SOIL SUPPORTED STRUCTURAL SLABS AND FOOTINGS SHALL BE ENCASED IN REINFORCED CONCRETE AS SHOWN ON THE STRUCTURAL DRAWINGS. PIPES SHALL BE PRESSURE TESTED BEFORE ENCASING. NOT ALL PIPING SHOWN ON STRUCTURAL DRAWINGS. REFER TO CIVIL AND PROCESS MECHANICAL DRAWINGS FOR PIPING SIZE AND LOCATIONS.

CONCRETE:

ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH ACI 318 REQUIREMENTS.

ALL CONCRETE SHALL BE AIR-ENTRAINED UNLESS OTHERWISE NOTED.

WATER REDUCING AGENT SHALL BE IN ACCORDANCE WITH ASTM C494.

ALL CONCRETE SURFACES EXPOSED TO AIR, UNLESS OTHERWISE NOTED IN SPECIFICATIONS, SHALL BE TREATED WITH AN APPROPRIATE CURING COMPOUND AS SOON AS CEMENT FINISHING IS COMPLETED OR FORMS ARE REMOVED.

ALL EXPOSED CORNERS OF CONCRETE SHALL HAVE A MINIMUM CHAMFER OF $\frac{3}{4}$ " UNLESS OTHERWISE NOTED.

THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL FOR THE LOCATION OF CONSTRUCTION JOINTS THAT ARE NOT SHOWN ON THE DRAWING.

REINFORCING STEEL:

REINFORCEMENT SHALL CONFORM TO ASTM A615, GRADE 60 REQUIREMENTS.

ALL ACCESSORIES SHALL BE IN CONFORMANCE WITH ACI 315 REQUIREMENTS. REINFORCING STEEL SHALL HAVE THE FOLLOWING CLEAR COVER UNLESS OTHERWISE NOTED:

- CONCRETE CAST AGAINST EARTH 3"
- FORMED SURFACES IN CONTACT WITH SOIL, SEWAGE, WATER OR EXPOSED TO WEATHER 2"
- FORMED SURFACES NOT EXPOSED TO WEATHER OR IN CONTACT WITH SOIL:
- SLABS 1"

LAP SPLICES SHALL BE AS SHOWN ON THE DRAWINGS. FOR LAP SPLICES NOT SHOWN ON THE DRAWINGS, THE CONTRACTOR SHALL OBTAIN ENGINEER'S APPROVAL.

THE CONTRACTOR SHALL PREPARE PLACING DRAWINGS AND SCHEDULES IN CONFORMANCE WITH ACI 315 REQUIREMENTS.

GEOTECHNICAL REPORT:

GEOTECHNICAL MEMORANDUM PREPARED BY CDM SMITH ENTITLED "B-24-106 COLLIER NRO 118 & 120" DATED SEPTEMBER 30, 2024.

DELEGATED SUBMITTALS

- THE FOLLOWING PORTIONS OF THE PROJECT ARE DELEGATED SUBMITTAL ITEMS AND HAVE NOT BEEN DESIGNED BY THE ENGINEER OF RECORD:
 - EQUIPMENT AND PIPE SUPPORT ANCHORAGE
 - PRE-ENGINEERED METAL CANOPY
- SIGNED AND SEALED DRAWINGS AND DESIGN CALCULATIONS FOR DELEGATED SUBMITTAL ITEMS SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW DURING THE CONSTRUCTION PHASE OF THE PROJECT.
- DELEGATED SUBMITTAL ITEMS SHALL BE SIGNED AND SEALED BY A CIVIL OR STRUCTURAL ENGINEER REGISTERED IN THE STATE OF FLORIDA.
- DELEGATED SUBMITTAL ITEMS SHALL NOT BE ERECTED OR INSTALLED UNTIL THE ENGINEER OF RECORD HAS REVIEWED THE SUBMITTAL DOCUMENTS AND INDICATED THAT THEY HAVE BEEN REVIEWED AND FOUND TO BE IN CONFORMANCE WITH THE SPECIFICATIONS AND DESIGN CRITERIA.

ABBREVIATIONS:

AL	ALUMINUM	MAX	MAXIMUM
BLDG	BUILDING	MIN	MINIMUM
BOT	BOTTOM	MISC	MISCELLANEOUS
CC	CENTER TO CENTER	NF	NEAR FACE
CJ	CONTROL JOINT	NTS	NOT TO SCALE
CONC	CONCRETE	OC	ON CENTER
CONST JT	CONSTRUCTION JOINT	PCJ	PARTIAL CONTRACTION JOINT
CONT	CONTINUOUS	PL	PLATE
DIA	DIAMETER	PLF	POUNDS PER LINEAR FOOT
DWG	DRAWING	PROJ	PROJECTION
EF	EACH FACE	PSF	POUNDS PER SQUARE FOOT
EJ	EXPANSION JOINT	PSI	POUNDS PER SQUARE INCH
EL	ELEVATION	REINF	REINFORCEMENT
EW	EACH WAY	SPECS	SPECIFICATIONS
FF	FAR FACE	SS	STAINLESS STEEL
FTG	FOOTING	STD	STANDARD
HORIZ	HORIZONTAL	T&B	TOP AND BOTTOM
HP	HIGH POINT	T/STRUCTURE	TOP OF STRUCTURE
ID	INSIDE DIAMETER	TYP	TYPICAL
LP	LOW POINT	UON	UNLESS OTHERWISE NOTED
MAT'L	MATERIAL	VERT	VERTICAL

NOTE: THESE ABBREVIATIONS ARE FOR USE ON STRUCTURAL DRAWINGS ONLY.

COLLIER COUNTY, FLORIDA

NRO WELLS 118N AND 120N
IMPROVEMENTS

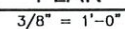
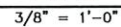
STRUCTURAL GENERAL NOTES

DATE:
WILLIAM B KIAHON
PE NO. 60135

PROJECT NO. 6295-296440
FILE NAME: S001STNT.DWG

SHEET NO.

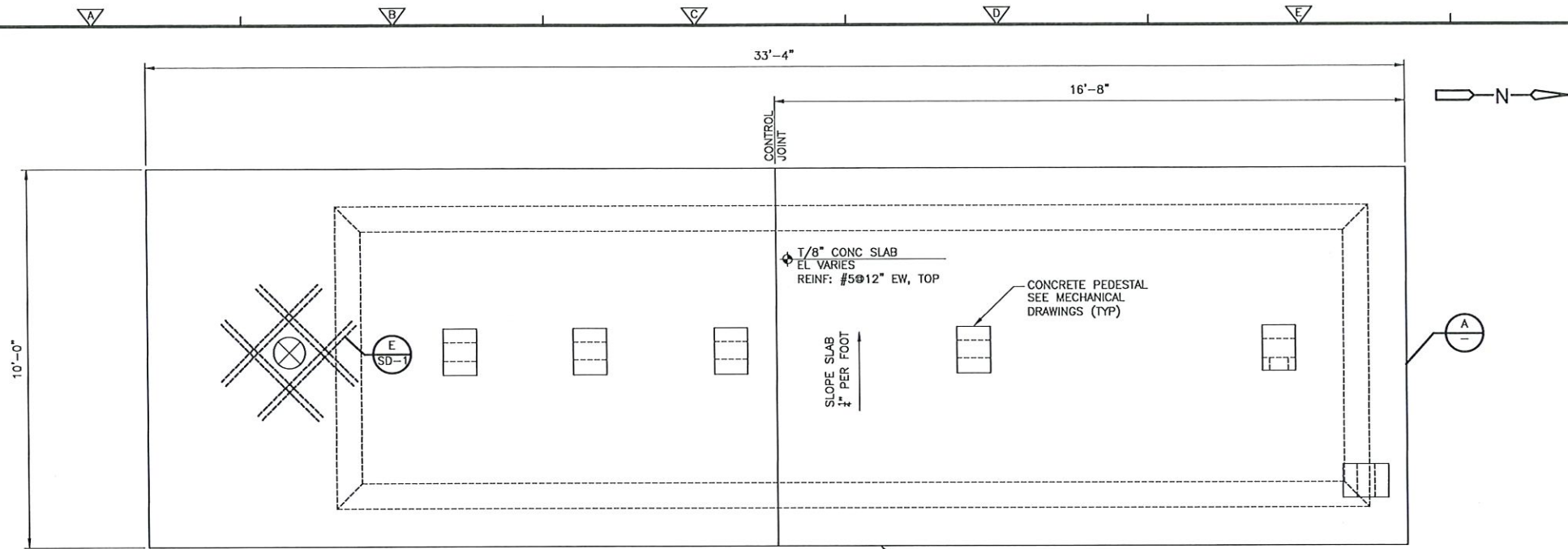
S-1



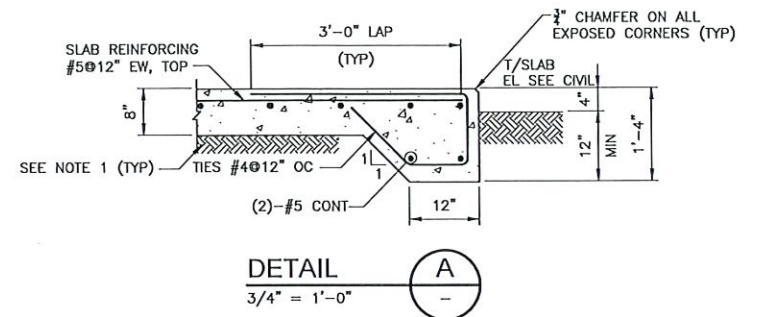
NOTES:

- BID SET

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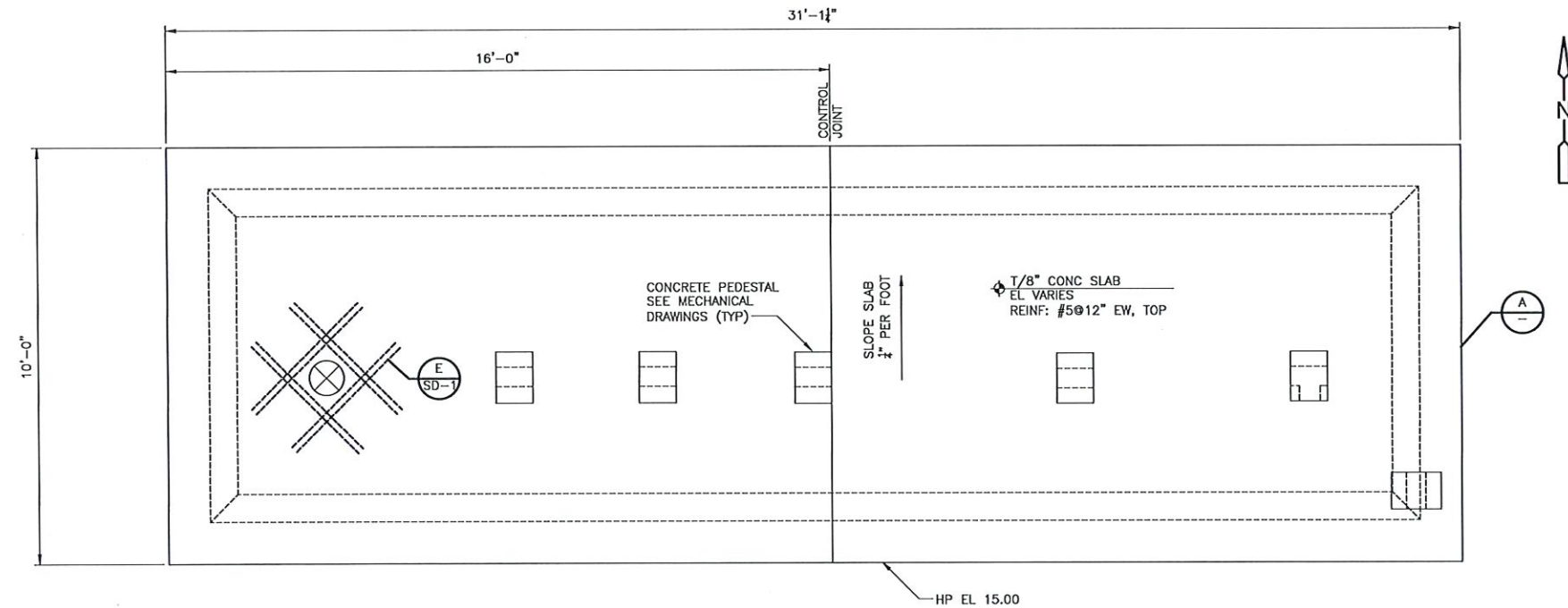


WELL PAD 118
PLAN
1/2" = 1'-0"



NOTES:

1. CLEAR AND GRUB THE SITE IN AREA NOT HAVING LIMEROCK FILL AT THE SURFACE TO A MINIMUM DEPTH OF 12 INCHES AND AT LEAST 5 FEET BEYOND THE FOOTPRINT OF THE PAD AAS RECOMMENDED IN THE SPECIFICATIONS. SCARIFY NATIVE SOIL AND LIMEROCK FILL TO A DEPTH OF 9 INCHES, MOISTURE CONDITION AND RECOMPACT TO A MINIMUM 98% MODIFIED PROCTOR DENSITY IN ACCORDANCE WITH ASTM D-1557. IF REQUIRED, BRING CONSTRUCTION AREA UP TO FINISHED SUBGRADE LEVELS USING STRUCTURAL FILL FOLLOWING THE SUBGRADE PREPARATION. THE MOISTURE CONTENT OF EXISTING SUBGRADE OF STRUCTURAL FILL MATERIAL SHALL BE $\pm 2\%$.



WELL PAD 120
PLAN
1/2" = 1'-0"

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: W. KIAHON
DRAWN BY: P. SCHIAVO
SHEET CHK'D BY: P. KALARIA
CROSS CHK'D BY: W. KIAHON
APPROVED BY: W. KIAHON
DATE: APRIL 2025

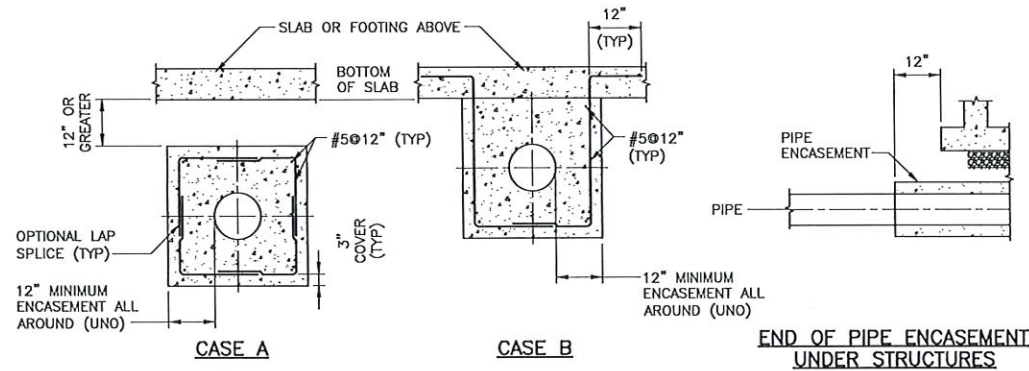
CDM Smith
9160 FORUM CORPORATE PARKWAY, Suite 230
Fort Myers, FL 33905
Tel: (239) 538-8600
FL COA No. EB-0000020

COLLIER COUNTY, FLORIDA
NRO WELLS 118N AND 120N
IMPROVEMENTS

PROPOSED NRO WELL 118N AND 120N
EQUIPMENT PADS
PLANS AND DETAIL

DATE:
WILLIAM B KIAHON
PE NO. 60135
PROJECT NO. 6295-296440
FILE NAME: S003WEPL.DWG
SHEET NO.
S-3

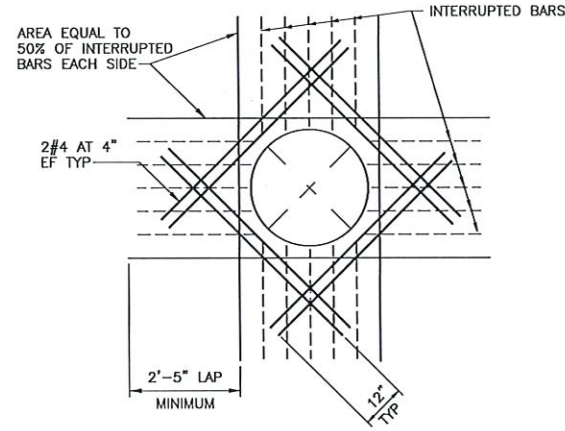
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CONCRETE PIPE ENCASEMENT
DETAIL A
NTS

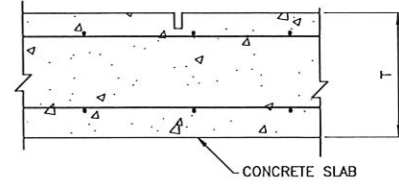
PIPE ENCASEMENT NOTES:

1. MINIMUM ENCASEMENT
PIPES LESS THAN 12"Ø - 6"
PIPES 12"Ø AND GREATER - 12"
2. ALL PIPES SHALL BE PRESSURE TESTED BEFORE CONCRETE PLACEMENT.
3. ALL BELOW GRADE PIPES SHALL BE SUPPORTED ON CONCRETE BLOCKS PRIOR TO CASTING OF CONCRETE BEDDING. SIZE AND SPACING OF CONCRETE BLOCK SUPPORTS SHALL BE PER PIPE MANUFACTURER.
4. FOR ALL PIPES 12"Ø AND LARGER, ENCASEMENT SHALL BE CAST IN TWO POURS. INITIAL CAST SHALL BE CURED FOR 12 HOURS BEFORE CASTING THE SECOND POUR.
5. THE DEPTH OF THE INITIAL POUR SHALL BE SELECTED TO PREVENT FLOATATION OF THE PIPE. CONTRACTOR SHALL TAKE ALL NECESSARY MEASURES TO PREVENT FLOATATION OF THE PIPE DURING CONCRETING.
6. ENCASE ALL PIPES BELOW SLABS AND FOOTINGS. EXTEND ENCASEMENT AS SHOWN IN DETAIL.
7. MAINTAIN MINIMUM COVER FOR LAPS FOR PIPES SMALLER THAN 6"Ø.
8. FOR CASE "B", PROVIDE A JOINT IN THE PIPE AT EACH JOINT IN STRUCTURE. PROVIDE CONSTRUCTION JOINTS IN ENCASEMENT AT LOCATIONS OF CONSTRUCTION JOINTS IN STRUCTURE. PROVIDE PARTIAL CONTRACTION JOINTS IN ENCASEMENT AT LOCATIONS OF CONTROL JOINTS AND EXPANSION JOINTS IN STRUCTURE.



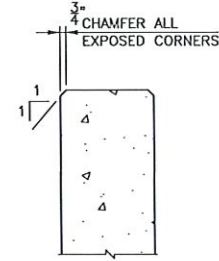
REINFORCEMENT AT
CIRCULAR OPENINGS GREATER THAN 12"
DETAIL E
NTS

- NOTES:
1. SAWCUT WIDTH 1/8" MINIMUM-1" MAXIMUM.
 2. SAWCUT DEPTH 1" MINIMUM-1 1/2" MAXIMUM.
 3. FILL JOINT TO FULL DEPTH WITH SELF-LEVELING SEALANT. USE BACKER ROD OR BOND BREAKER TAPE PER MANUFACTURER

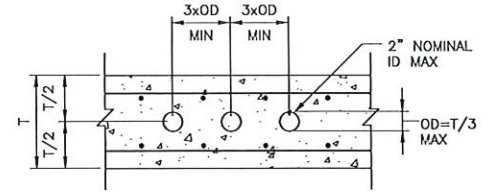


T = SLAB THICKNESS

CONTROL JOINT
DETAIL B
NTS



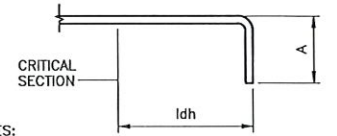
CHAMFER
DETAIL C
NTS



CONDUIT NOTES:

1. NO CONDUIT SHALL BE EMBEDDED IN STRUCTURAL BEAMS, COLUMNS, WALLS OR SLABS UNLESS SPECIFICALLY SHOWN ON THE STRUCTURAL DRAWING
2. CONDUIT SHALL BE PLACED 6" BELOW SLABS
3. WHERE CONDUIT MUST PASS THROUGH A SLAB OR WALL, MINIMUM SIZE AND SPACING REQUIREMENT PER THIS DETAIL
4. ALUMINUM SHALL NOT BE EMBEDDED IN CONCRETE UNLESS COATED TO PREVENT ALUMINUM-CONCRETE REACTION

CONDUIT IN SLAB
DETAIL D
NTS



NOTES:

1. TOP BARS ARE HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12" OF CONCRETE IS CAST BELOW THE BAR. HORIZONTAL WALL BARS ARE TOP BARS.
2. 90° HOOKS SHALL BE LOCATED WITHIN THE CONFINED CORE OF A COLUMN OR BOUNDARY ELEMENT.
3. TABLE IS VALID FOR DESIGN BASED ON ACI 318-14 AND 350-06
4. TABLE IS BASED ON f'c = 4500 psi. LAP SPLICE AND DEVELOPMENT LENGTHS SHALL BE ADJUSTED FOR OTHER CONCRETE COMPRESSIVE STRENGTHS AS FOLLOWS:

f'c	MULTIPLIER
3000 PSI	1.23
3500 PSI	1.14
4000 PSI	1.06

5. FOR COVER AND SPACING GEOMETRY NOT SHOWN ALL HOOKS, SPLICES AND DEVELOPMENT LENGTHS SHALL BE APPROVED IN WRITING BY THE ENGINEER OF RECORD.
6. LAPPED SPLICES SHALL NOT BE MADE AT POINTS OF MAXIMUM STRESS UNLESS NOTED OTHERWISE. INDICATED ON THE DRAWING OR DETERMINED BY ENGINEER.
7. UNLESS NOTED OTHERWISE ON DRAWINGS, THE BARS AT A LAP SPLICE SHALL BE IN CONTACT WITH EACH OTHER.
8. FOR STRAIGHT DEVELOPMENT LENGTH, DIVIDE SPLICE LENGTH BY 1.3, ROUNDING OFF TO THE NEXT WHOLE NUMBER, BUT NOT LESS THAN 12".

2" & 3" COVER 6" OR GREATER SPACING		F'c=4,500 PSI Fy=60,000 PSI					
BAR SIZE	90° HOOK ldh	ALL (INCHES)					
		SPLICE		STRAIGHT DEVELOPMENT			
		A	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	
3	7	6	14	12	12	12	
4	9	8	19	14	14	12	
5	12	10	23	18	18	14	
6	14	12	28	21	21	17	
7	16	14	40	31	31	24	
8	18	16	46	35	35	29	
9	21	19	57	44	44	34	
10	23	22	70	54	54	41	
11	26	24	84	65	65	50	

1-1/2" COVER 6" OR GREATER SPACING		F'c=4,500 PSI Fy=60,000 PSI					
BAR SIZE	90° HOOK ldh	ALL (INCHES)					
		SPLICE		STRAIGHT DEVELOPMENT			
		A	TOP BARS	OTHER BARS	TOP BARS	OTHER BARS	
3	7	6	14	12	12	12	
4	9	8	19	14	14	12	
5	12	10	23	18	18	14	
6	14	12	28	21	21	17	
7	16	14	40	31	35	27	
8	18	16	46	35	44	34	
9	21	19	57	44	54	42	
10	23	22	70	54	69	51	
11	26	24	84	65	79	61	

STANDARD HOOKS, LAP SPLICE AND DEVELOPMENT LENGTHS
(FOR UNCOATED BARS)

LAP SPLICE
DETAIL G
NTS

REV.	NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	W. KIAHON
DRAWN BY:	P. SCHIAVO
SHEET CHK'D BY:	P. KALARIA
CROSS CHK'D BY:	W. KIAHON
APPROVED BY:	W. KIAHON
DATE:	APRIL 2025

CDM Smith
9160 FORUM CORPORATE PARKWAY, Suite 230
Fort Myers, FL 33905
Tel: (239) 938-9500
FL COA No. EB-0000020

COLLIER COUNTY, FLORIDA
NRO WELLS 118N AND 120N
IMPROVEMENTS

STRUCTURAL DETAILS

DATE:
WILLIAM B KIAHON
PE NO. 60135
PROJECT NO. 6295-296440
FILE NAME: SD01STD1.DWG
SHEET NO.
SD-1

XREF: [CDAS_2234] Images: []
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PROCESS PIPE IDENTIFICATION

MATERIALS

CI	CAST IRON
CPVC	CHLORINATED POLYVINYL CHLORIDE
DI	DUCTILE IRON
DIPS	DUCTILE IRON PIPE SIZES
DR	DIMENSIONAL RATIO
HDPE	HIGH DENSITY POLYETHYLENE
PE	POLYETHYLENE
PVC	POLYVINYL CHLORIDE PRESSURE PIPE
SST	STAINLESS STEEL

PIPE JOINTS

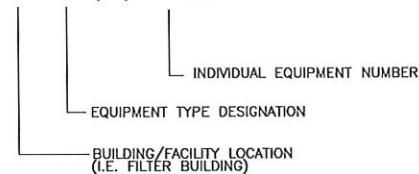
BF	BLIND FLANGE
FLG	FLANGE
PE	PLAIN END
MJ	MECHANICAL JOINT
RJ	RESTRAINED JOINT
TRD	THREADED

VALVES

BFV	BUTTERFLY VALVE
BV	BALL VALVE
CAV	COMBINATION AIR VALVE
CV	CHECK VALVE
GLV	GLOBE VALVE
GV	GATE VALVE
PRV	PRESSURE REGULATING VALVE
RFCV	RUBBER FLAPPER CHECK VALVE
SV	SOLENOID VALVE

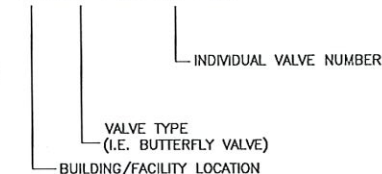
EQUIPMENT TAG

FB- BW-1, 2, 3 OR AB11

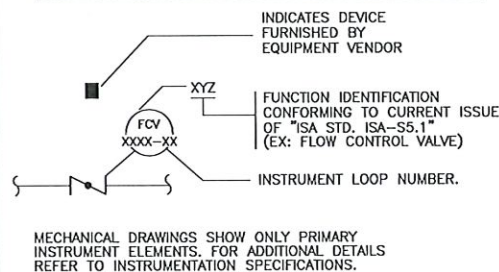


VALVE TAG

FB - BV - 001 OR F102

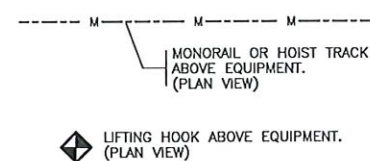


PROCESS VALVE LOOP IDENTIFICATION



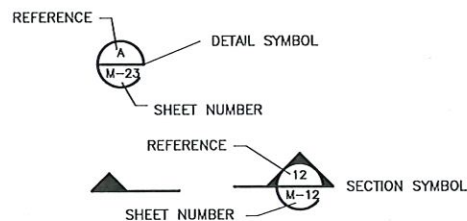
TYPICAL INSTRUMENTATION AND LOOP TAG

MISCELLANEOUS SYMBOLS



GENERAL NOTE

THIS IS A STANDARD LEGEND.
SOME SYMBOLS MAY NOT APPEAR
ON THE DRAWINGS.

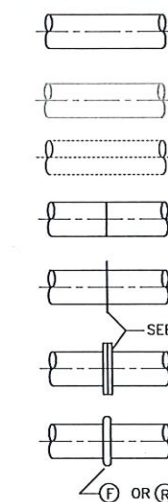


LEGENDS SYMBOLS AND ABBREVIATIONS SHOWN ON SHEETS M-1 INDICATE STANDARD SYMBOLS AND ABBREVIATIONS AND ARE PERTINENT TO THE CONDITIONS ON THIS SET OF DRAWINGS TO THE EXTENT APPLICABLE.

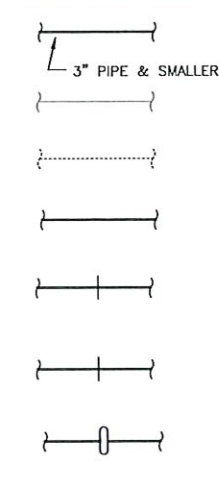
ADDITIONAL LEGENDS AND/OR ABBREVIATIONS MAY APPEAR IN THIS SET OF DRAWINGS TO INDICATE SPECIFIC CONDITIONS.

PIPE AND FITTING SYMBOLS

DOUBLE LINE PIPING



SINGLE LINE PIPING



PROCESS PIPING:

EXISTING PROCESS PIPING

FUTURE PROCESS PIPING

WELDED JOINT

FLANGED JOINT
SIMPLIFIED
REPRESENTATION.

FLANGED JOINT

COUPLING FOR
GROOVED END JOINTS:
(F) FLEXIBLE
(R) RIGID

MECHANICAL JOINT

PUSH ON JOINT OR CAULKED
BELL & SPIGOT JOINT

FLANGE x PLAIN END
PIPE COUPLING
(FLANGE ADAPTOR)

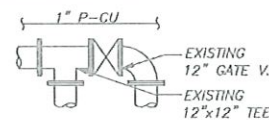
PIPE COUPLING
(SLEEVE-TYPE)

FLEXIBLE COUPLING OR
EXPANSION JOINT
(SLEEVE TYPE)

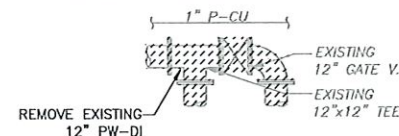
FLEXIBLE COUPLING OR
EXPANSION JOINT
(BELLows TYPE)

FLANGE GUARD

EXISTING FACILITIES SYMBOLS AND ANNOTATION



EXISTING FACILITIES DEMOLITION SYMBOLS AND ANNOTATION



PIPE AND FITTING SYMBOLS NOTES:

1. GENERIC JOINT SYMBOL IS USED FOR ALL SINGLE LINE PIPING SHOWN ON THE INTERIOR AND EXTERIOR PIPING DRAWINGS.
2. BOTH DETAILED AND SIMPLIFIED FLANGE REPRESENTATION SYMBOLS MAY BE SHOWN ON THE DRAWINGS.
3. UNLESS MODIFIED BY THE GENERAL PROJECT NOTES OR DETAILED ON THE LAYOUT AND SCHEMATIC DRAWINGS PIPE AND FITTING JOINT REQUIREMENTS FOR THE VARIOUS PIPE MATERIALS ARE DEFINED IN THE SPECIFICATIONS.

GENERAL NOTES

1. PROCESS EQUIPMENT DIMENSIONS, LOCATIONS AND PIPING SYSTEM LAYOUTS ARE BASED ON EQUIPMENT SELECTED AND SPECIFIED BY THE DESIGN ENGINEER. IF THE CONTRACTOR PROPOSES TO FURNISH EQUIPMENT THAT REQUIRES AN ARRANGEMENT OR SPACE DIFFERING FROM THAT INDICATED ON THE DRAWINGS OR SPECIFIED, THE CONTRACTOR SHALL PREPARE AND SUBMIT TO THE ENGINEER AND OWNER FOR APPROVAL DETAILED STRUCTURAL, MECHANICAL, PLUMBING, INSTRUMENTATION, AND ELECTRICAL DRAWINGS AND EQUIPMENT LISTS SHOWING ALL NECESSARY CHANGES AND EMBODYING ALL FEATURES OF THE EQUIPMENT AND/OR THIS INFORMATION SHALL INCLUDE BUT NOT BE LIMITED TO PROCESS SYSTEM PROPOSED. PLANS, SECTIONS, DETAILS AND SCHEMATICS OF ALL APPURTENANCES REQUIRED.
2. SIZES OF EQUIPMENT FOUNDATIONS AND EQUIPMENT PADS INDICATED ON THE DRAWINGS ARE APPROXIMATE. EXACT DIMENSIONS SHALL BE DETERMINED BY THE CONTRACTOR FOR THE EQUIPMENT FURNISHED. ALL FLOOR MOUNTED EQUIPMENT SHALL BE SET ON CONCRETE PADS CONFORMING TO DETAILS SHOWN ON THE STRUCTURAL AND/OR MECHANICAL DRAWINGS.
3. CONTRACTOR SHALL COORDINATE EXACT LOCATION AND LENGTHS REQUIRED FOR ALL PIPING CONNECTIONS WITH THE EQUIPMENT SUPPLIERS.
4. BURIED PIPING IS SHOWN ON THE CIVIL DRAWINGS.
5. DIELECTRIC COUPLINGS, FLANGES OR UNIONS SHALL BE INSTALLED AT ALL CONNECTIONS OF PIPING INVOLVING DISSIMILAR METALS.
6. MECHANICAL PLANS AND SECTIONS DO NOT SHOW ALL VALVES, GAUGES, SWITCHES, OPERATORS, DRAINS, VENTS, etc. REQUIRED FOR THE COMPLETE SYSTEM. CERTAIN SMALL DIAMETER PROCESS PIPING RUNS MAY NOT BE SHOWN IN THEIR ENTIRETY. GENERALLY SMALL PIPING IS SHOWN DIAGMATICALLY. IN THE INSTRUMENTATION DRAWINGS, FIELD ROUTE TO AVOID INTERFERENCES, SUBJECT TO THE APPROVAL OF THE ENGINEER AND OWNER THE CONTRACTOR SHALL FURNISH, INSTALL AND TEST ALL PIPING SYSTEMS AS INDICATED ON THE INSTRUMENTATION DRAWINGS TO PROVIDE THE COMPLETE SYSTEM.
7. NOT ALL VALVE AND GATE OPERATORS ARE SHOWN (I.E. HANDWHEELS, CRANKS, CHAINWHEELS, MOTORS OR LEVERS). OPERATORS SHALL BE LOCATED TO ALLOW CONVENIENT OPENING AND CLOSING OF VALVES OR GATES.
8. PIPING SHALL BE INSTALLED SO THAT ANY PIPE, LAYER OF PIPING OR EQUIPMENT CAN BE REMOVED WITHOUT DISTURBING REMAINING PIPES AND SUPPORTS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD LOCATING AND TAGGING ALL PROCESS PIPING VALVES AND EQUIPMENT.

REV.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY:	I. HOLOWELL
DRAWN BY:	A. EDWARDS
SHEET CHK'D BY:	M. STONEHOUSE
CROSS CHK'D BY:	M. SUNYAK
APPROVED BY:	I. HOLOWELL
DATE:	APRIL 2025

CDM Smith
9160 FORUM CORPORATE PARKWAY, Suite 230
Fort Myers, FL 33905
Tel: (239) 538-8900
FL COA No. EB-0000020

COLLIER COUNTY, FLORIDA

NRO WELLS 118N AND 120N
IMPROVEMENTS

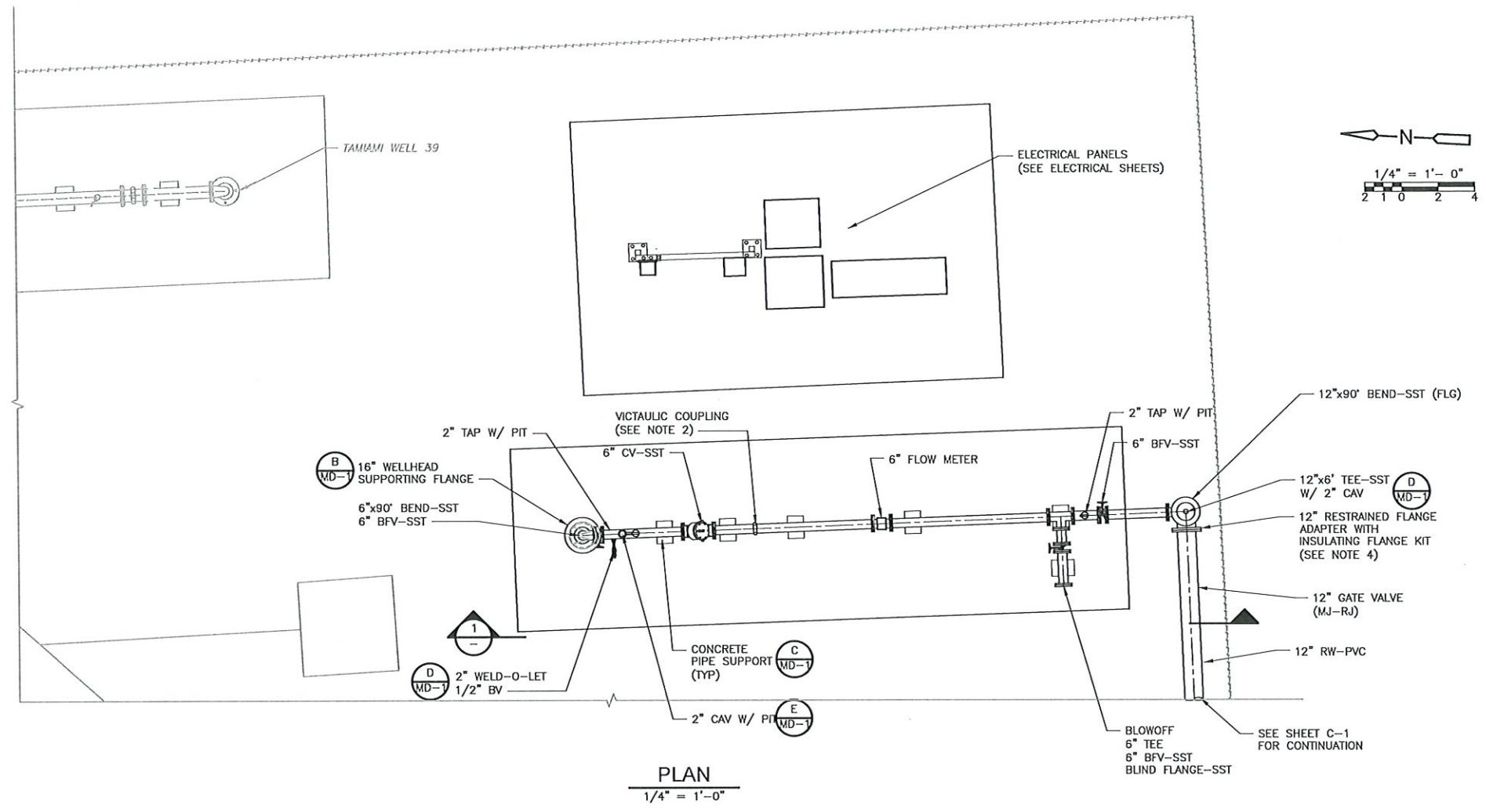
GENERAL NOTES, SYMBOLS & ABBREVIATIONS

DATE:
ISAAC DAVID HOLOWELL
PE NO. 83413

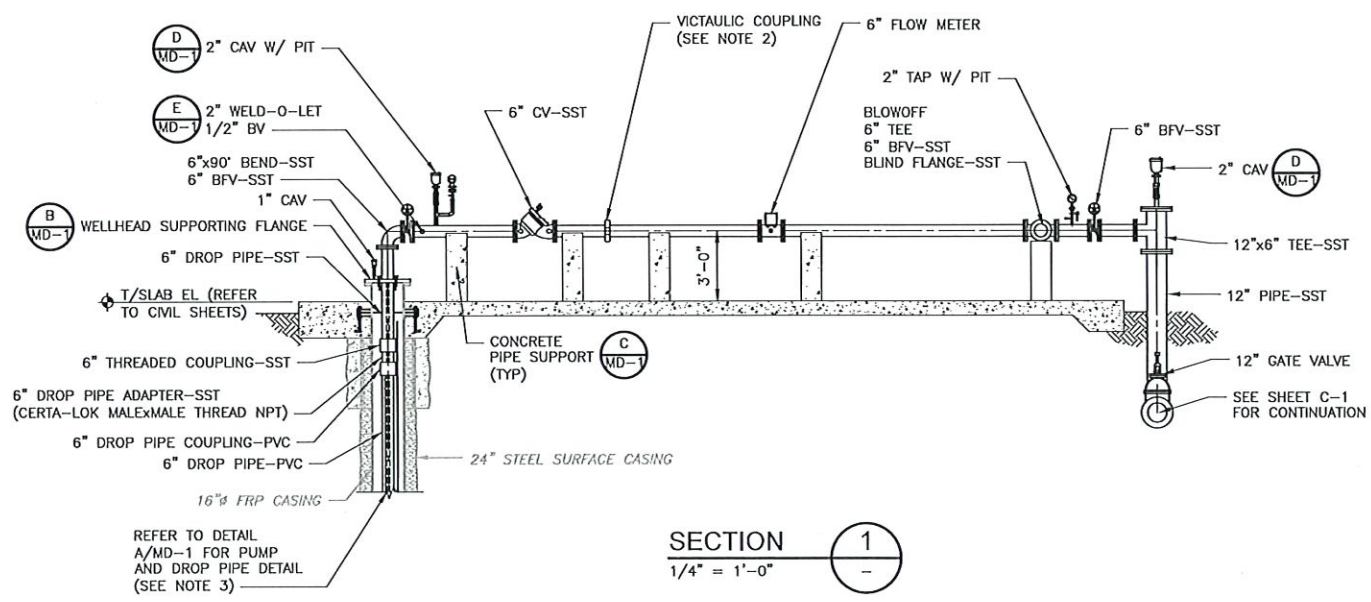
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FILE NAME: M001NFG.DWG

SHEET NO.
M-1

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- NOTES:
1. ALL PIPE JOINTS, VALVES, AND FITTINGS SHALL BE RESTRAINED. RESTRAINED JOINT CALCULATIONS WILL NOT BE ACCEPTED.
 2. PROVIDE VICTAULIC STYLE 489 STAINLESS STEEL TYPE 316 COUPLINGS.
 3. INSTALL SUBMERSIBLE PUMP INTAKE AT A DETPH OF 135-FT BELOW LAND SURFACE. FINAL INSTALLED DEPTH TO BE CONFIRMED PENDING THE RESULTS OF WELL TESTING.
 4. PROVIDE FACTORY WELDED STAINLESS STEEL WELDED NECK FLANGE ON STAINLESS STEEL BEND FITTING. MATE WELDED NECK FLANGE WITH RESTRAINED FLANGE ADAPTER. PROVIDE DIELECTRIC INSULATING FLANGE GASKET KITS AS MANUFACTURED BY PIPELINE SEAL AND INSULATOR (LINEBACKER); BY ADVANCE PRODUCTS AND SYSTEMS (TROJAN QUAD SEAL); OR BY CENTRAL PLASTICS (JOCK O-RING GASKETS).



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: I. HOLOWELL
DRAWN BY: A. EDWARDS
SHEET CHK'D BY: M. STONEHOUSE
CROSS CHK'D BY: M. SUNYAK
APPROVED BY: I. HOLOWELL
DATE: APRIL 2025

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9160 FORUM CORPORATE PARKWAY, Suite 230
Fort Myers, FL 33905
Tel. (239) 938-6900
FL CCA No. EB-0000020

COLLIER COUNTY, FLORIDA
NRO WELLS 118N AND 120N
IMPROVEMENTS

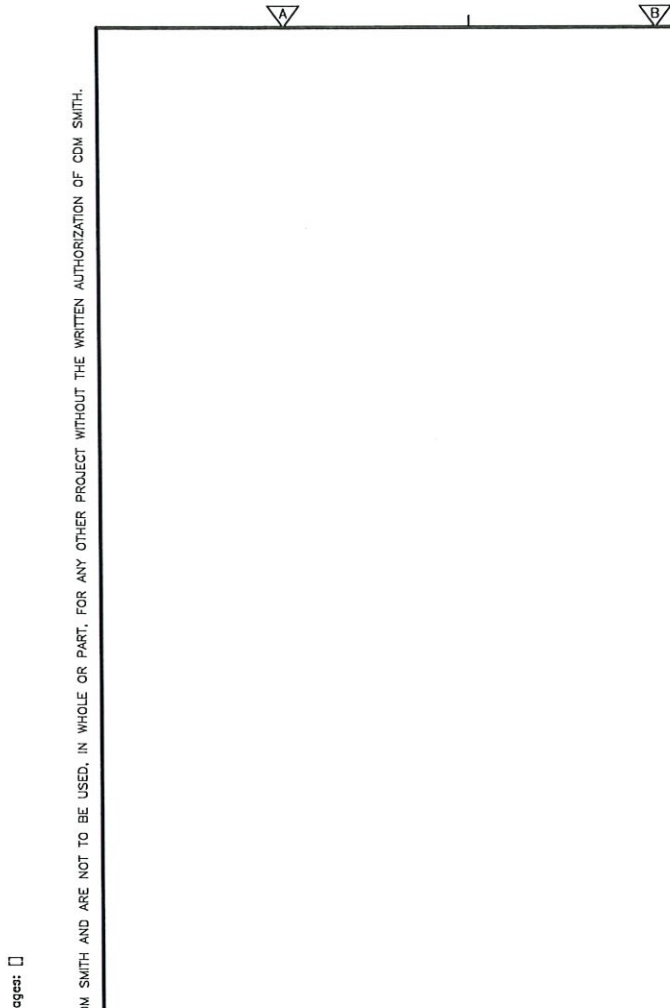
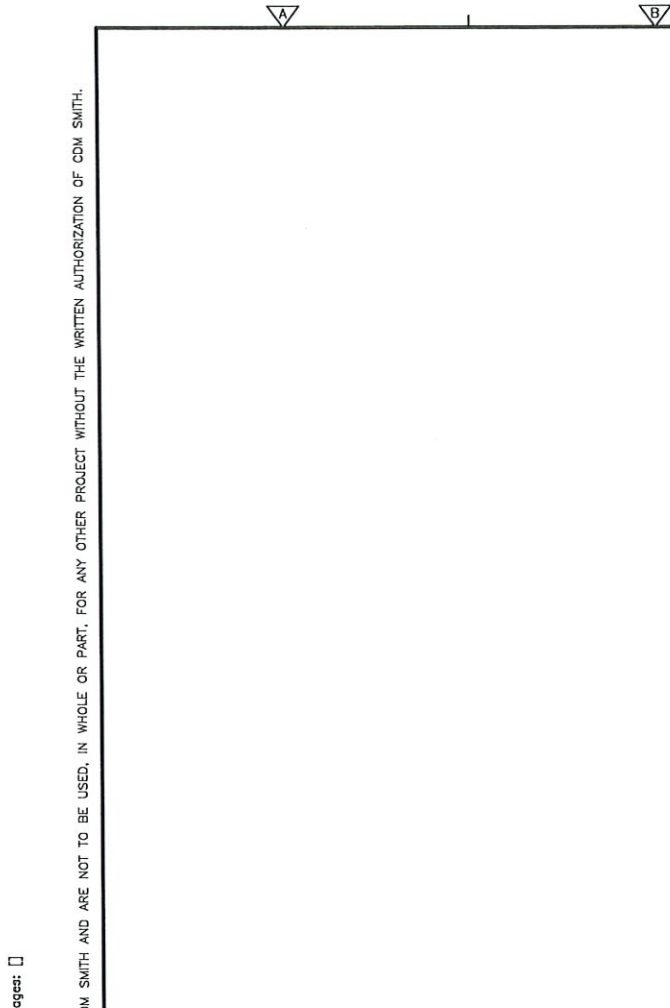
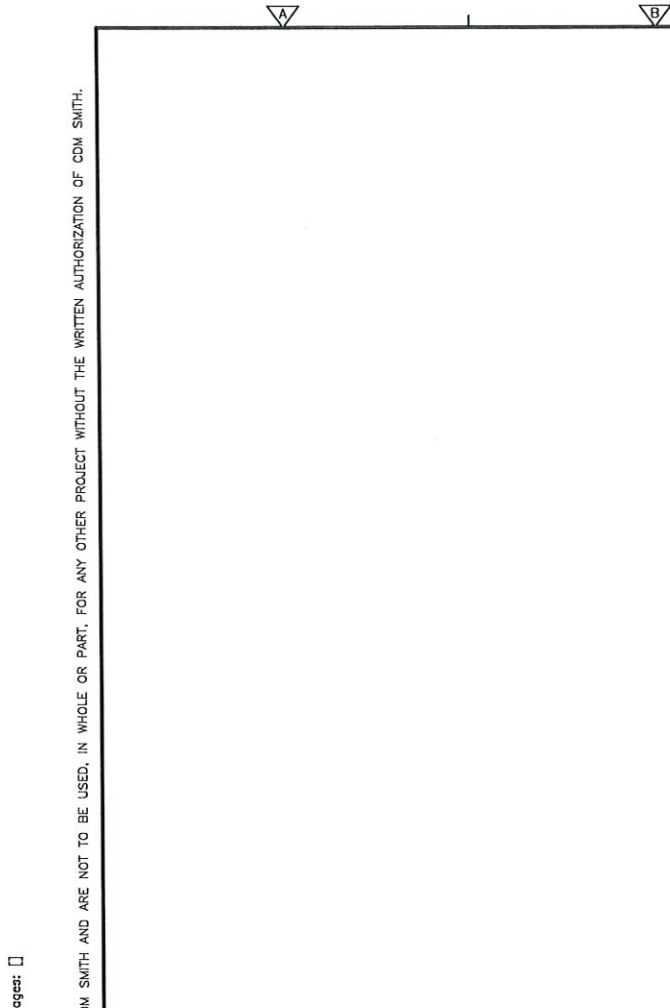
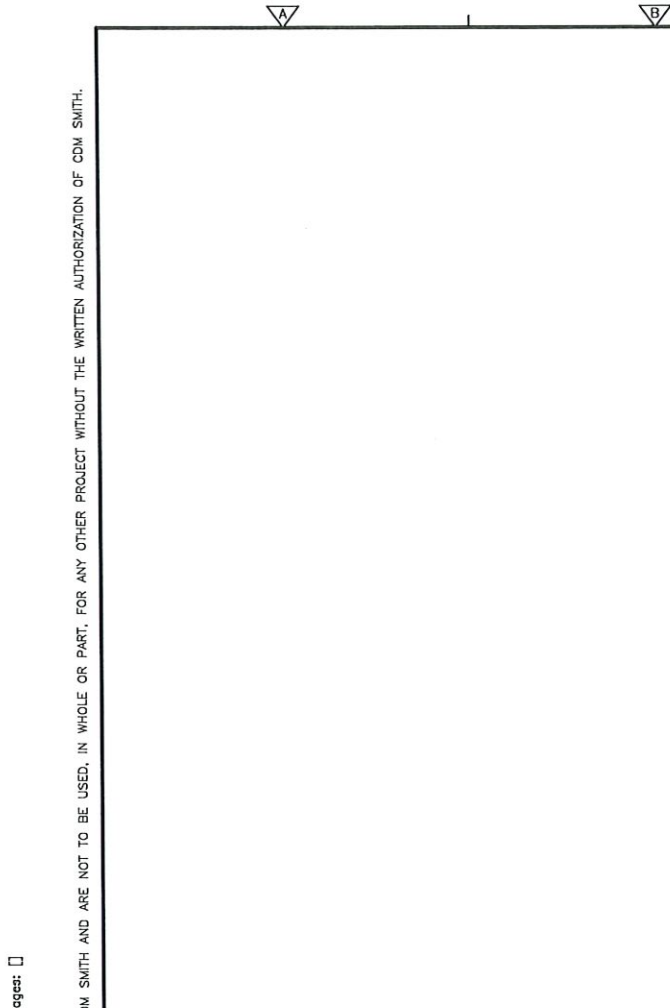
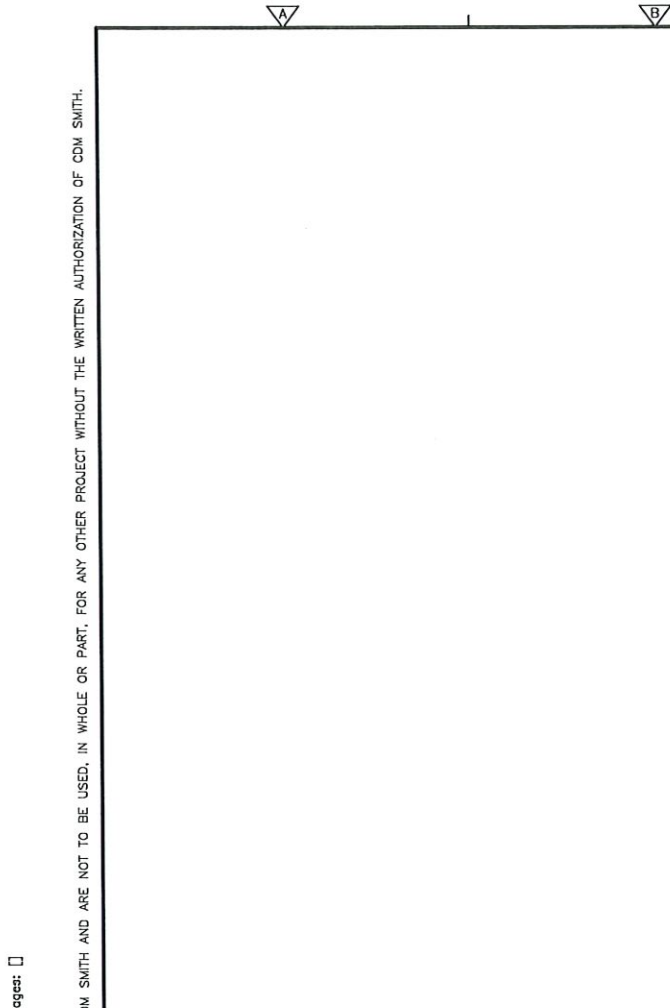
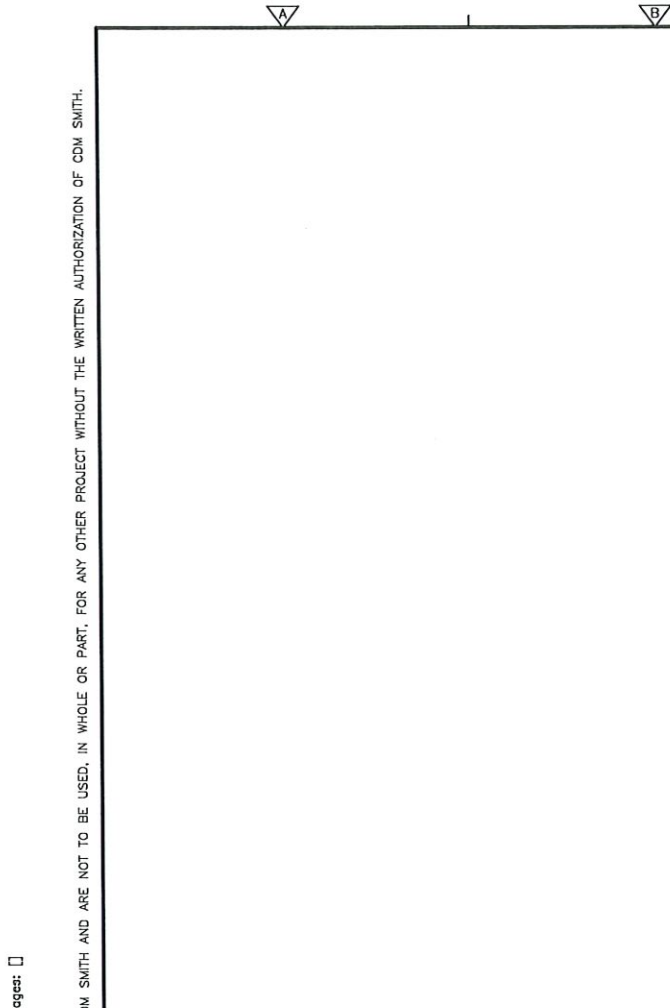
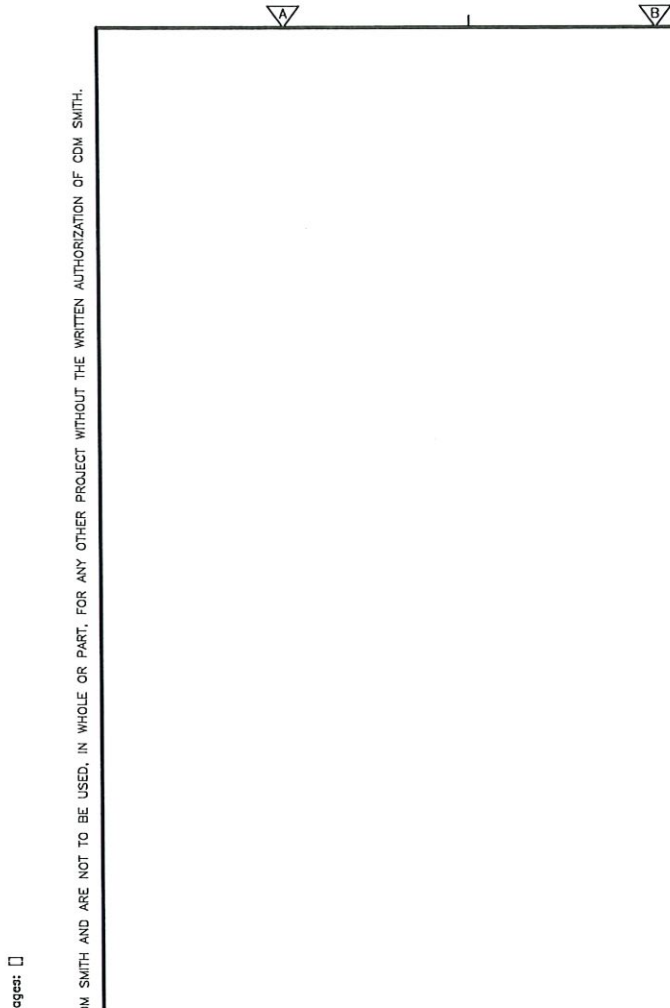
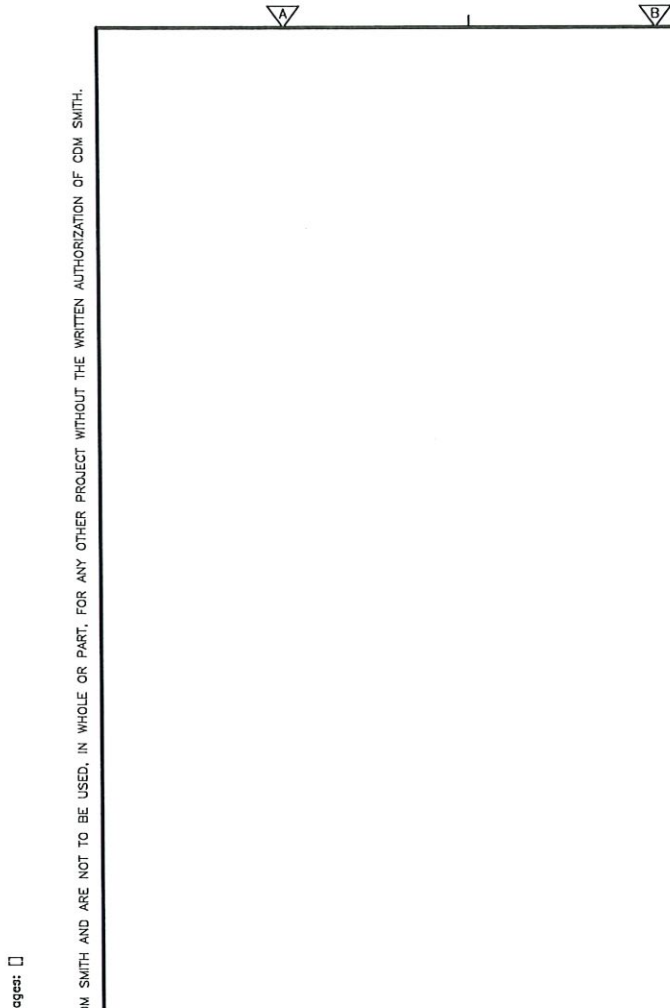
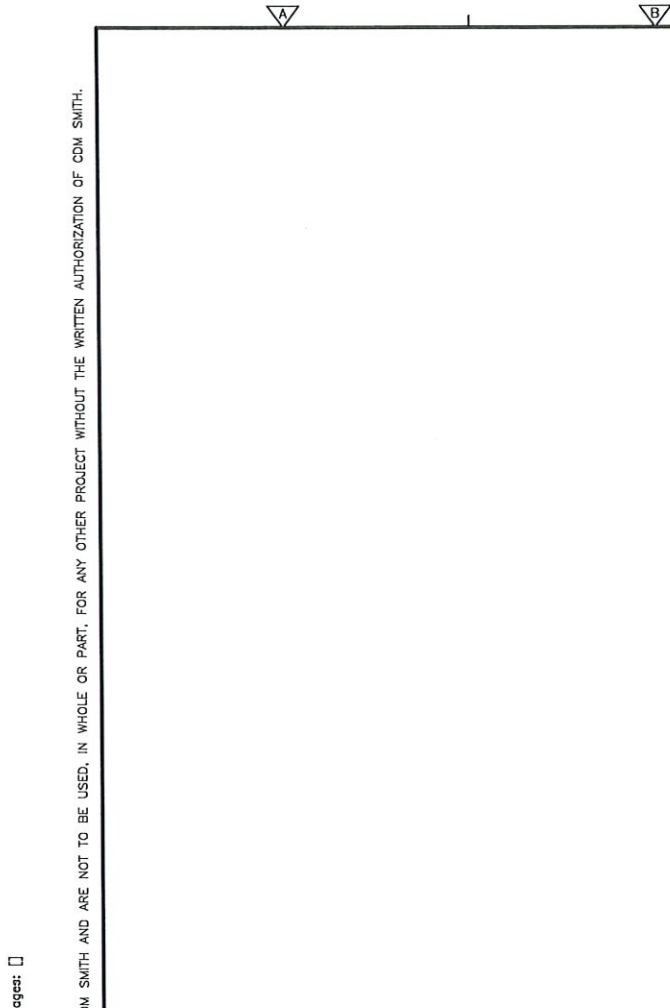
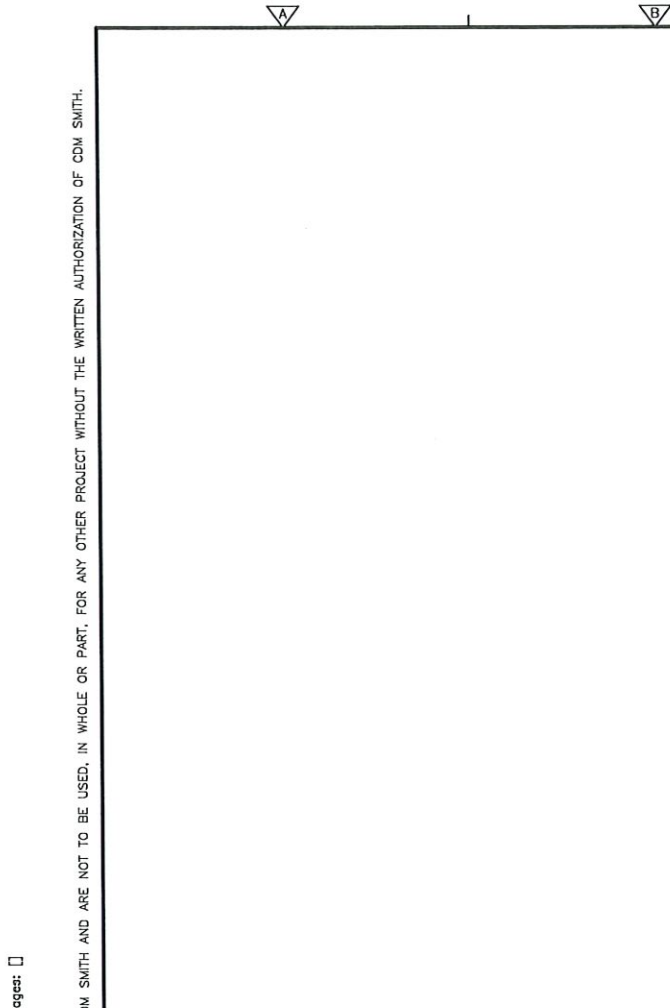
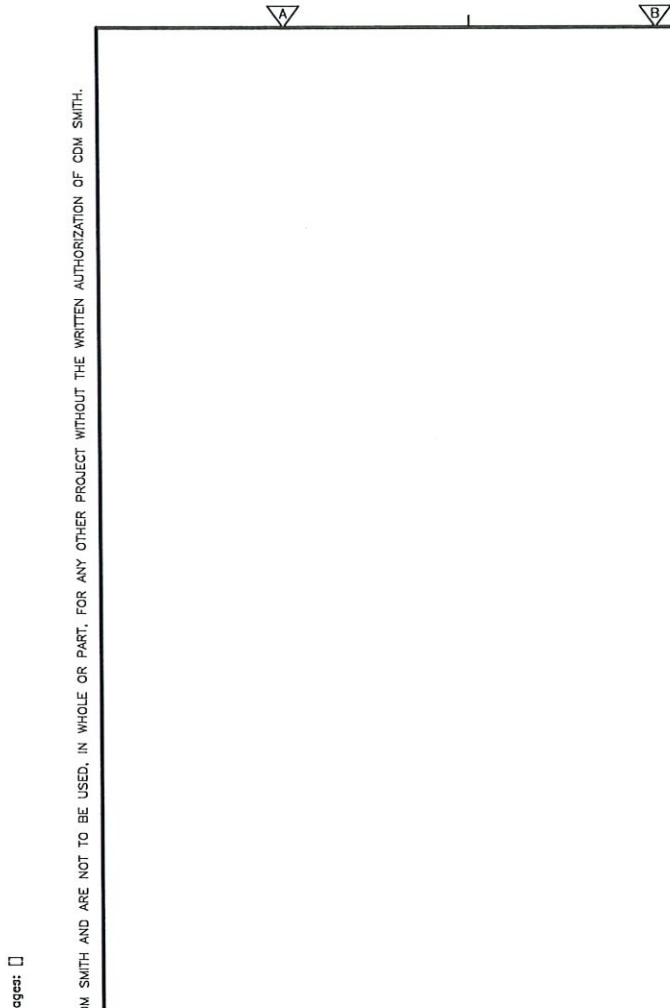
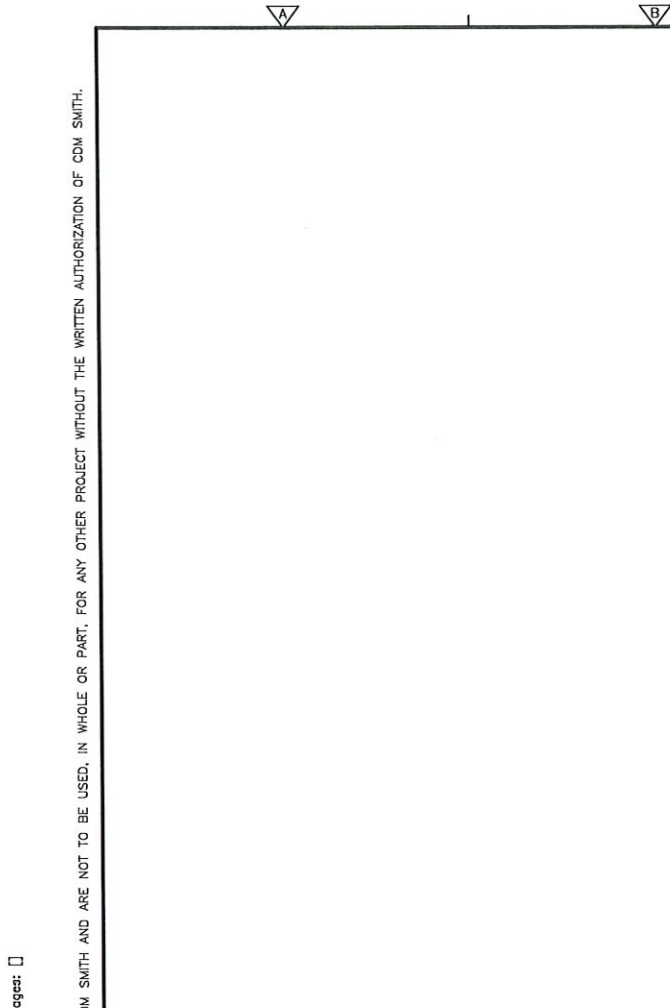
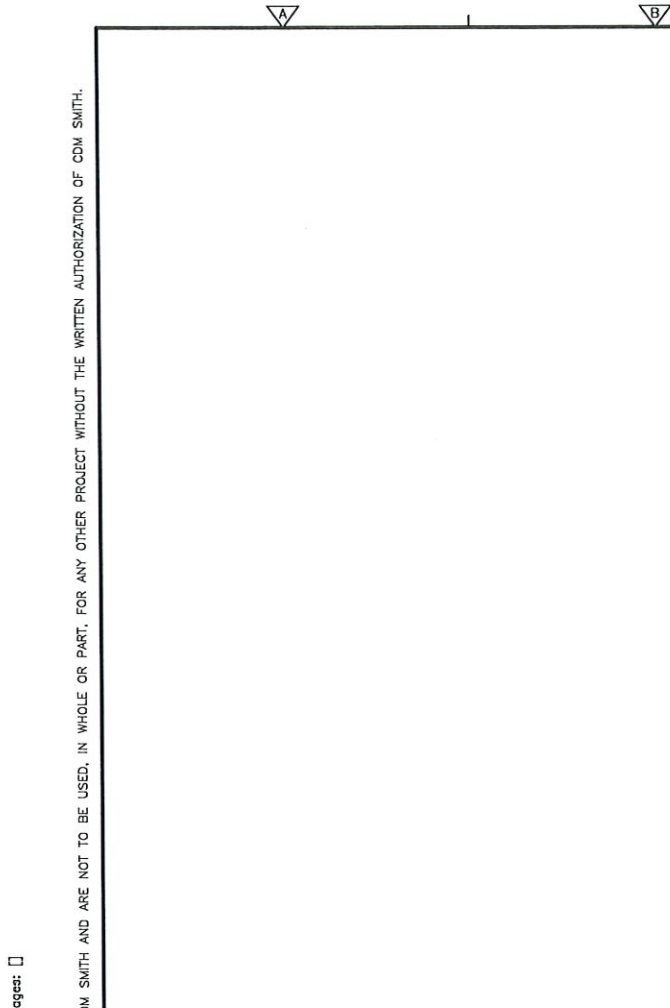
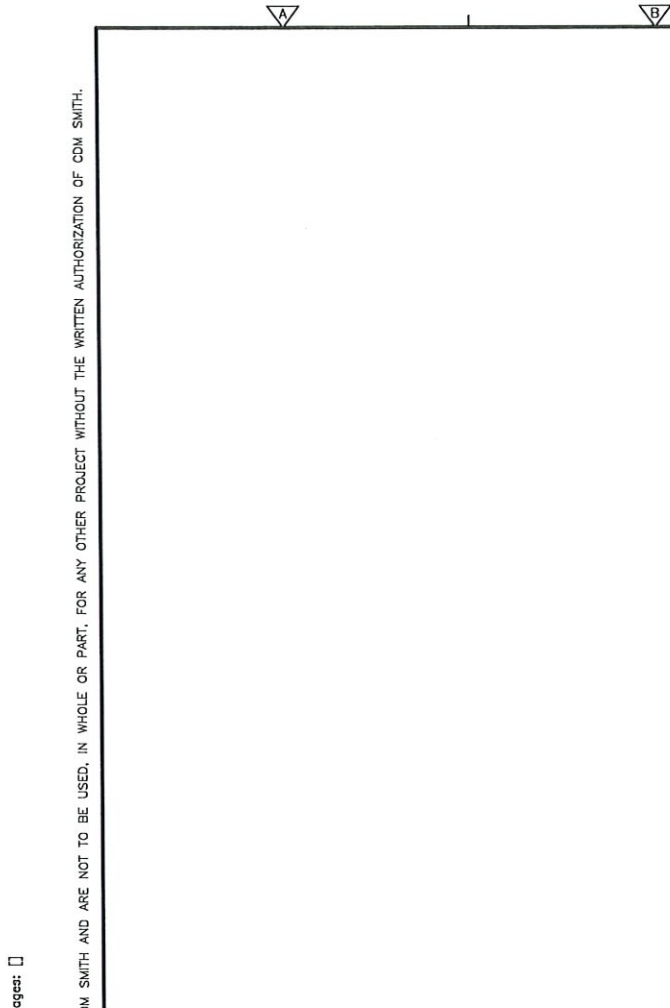
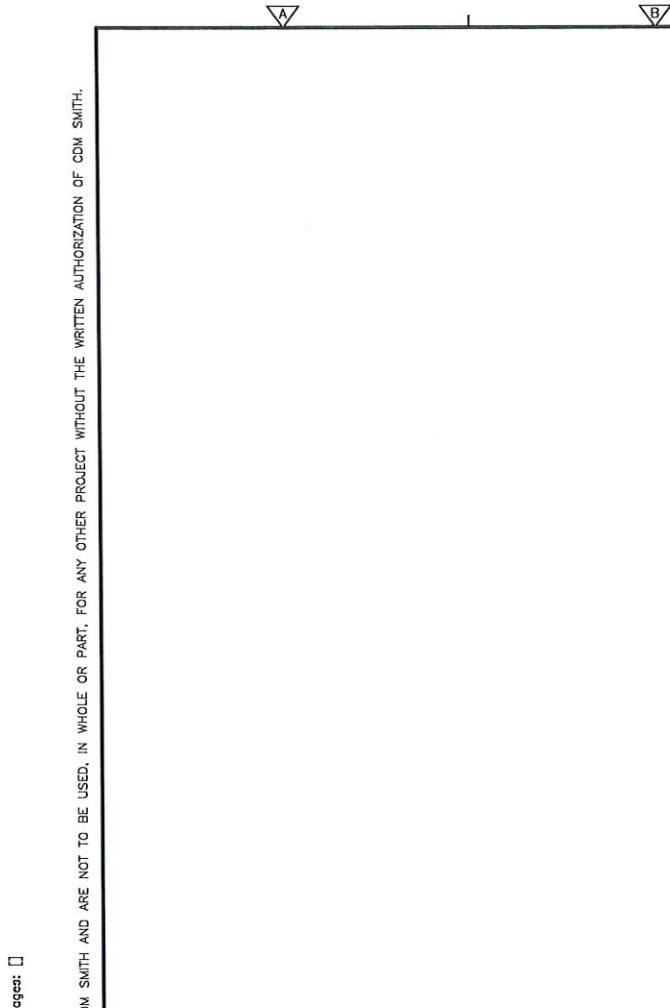
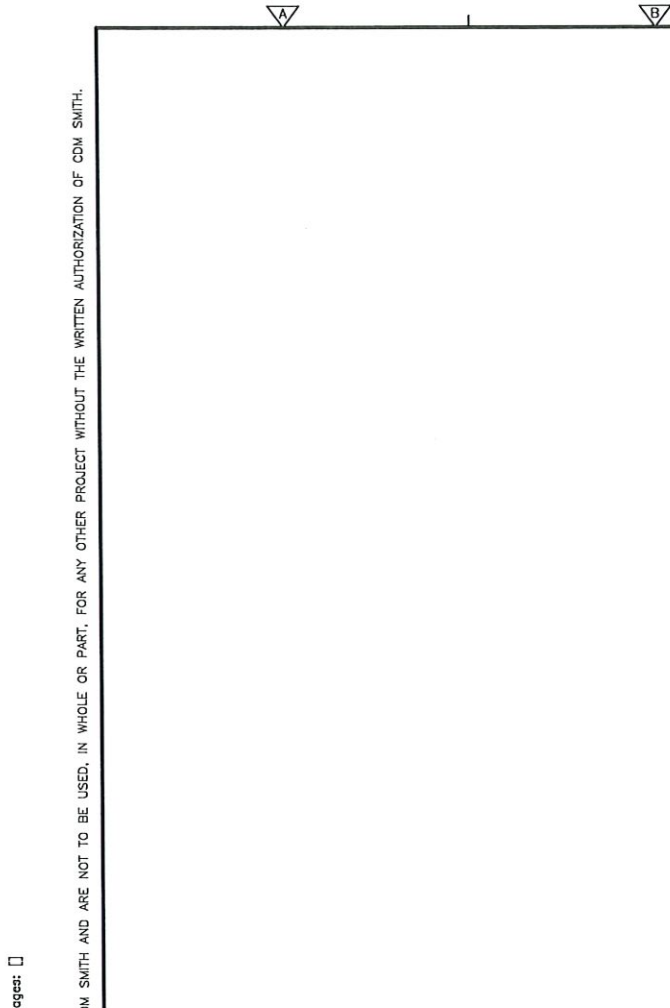
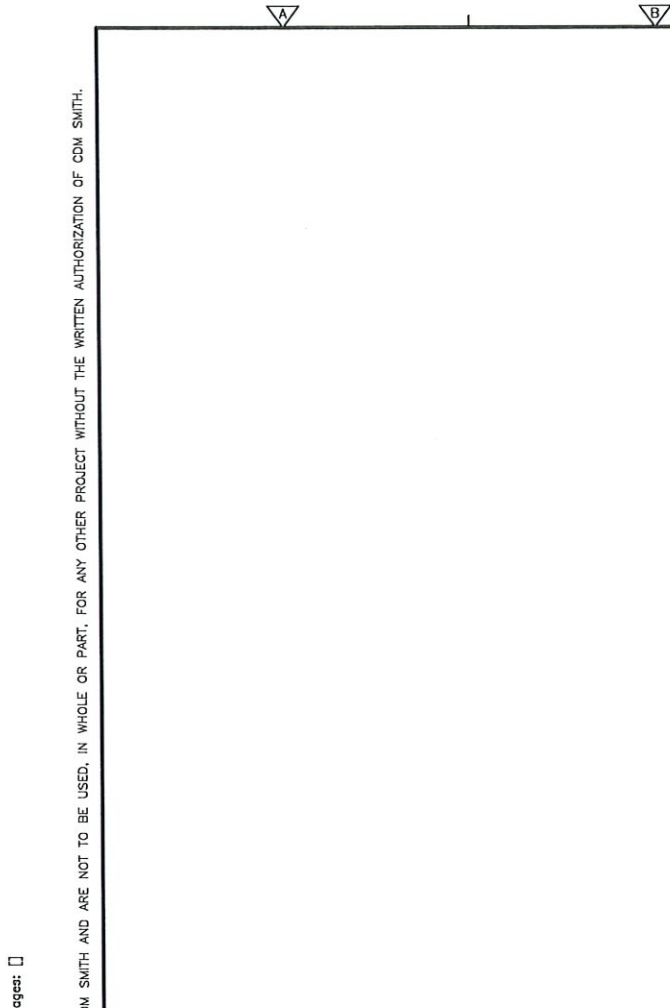
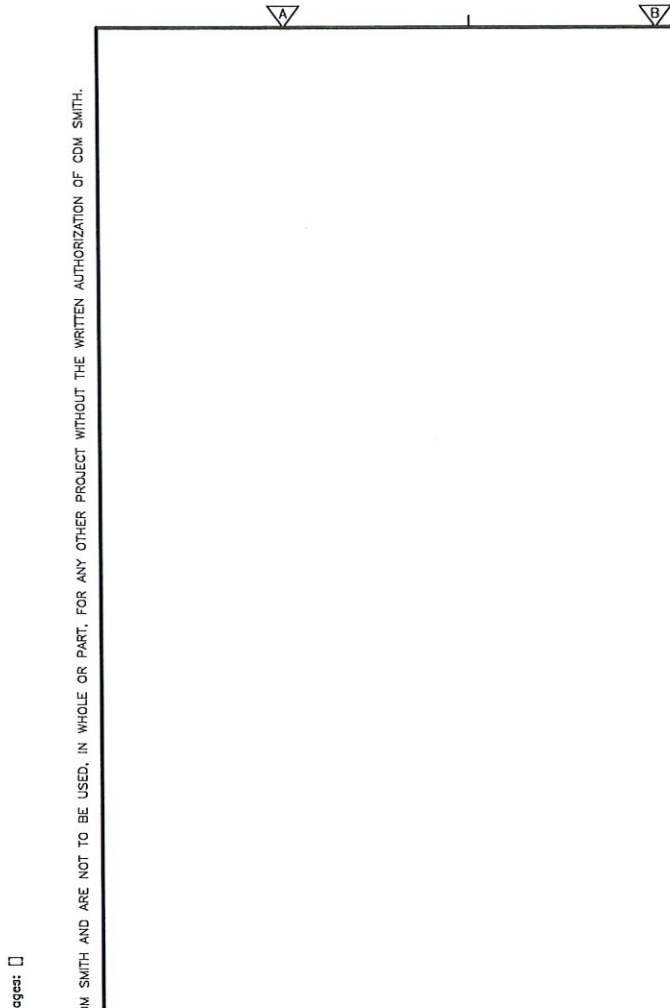
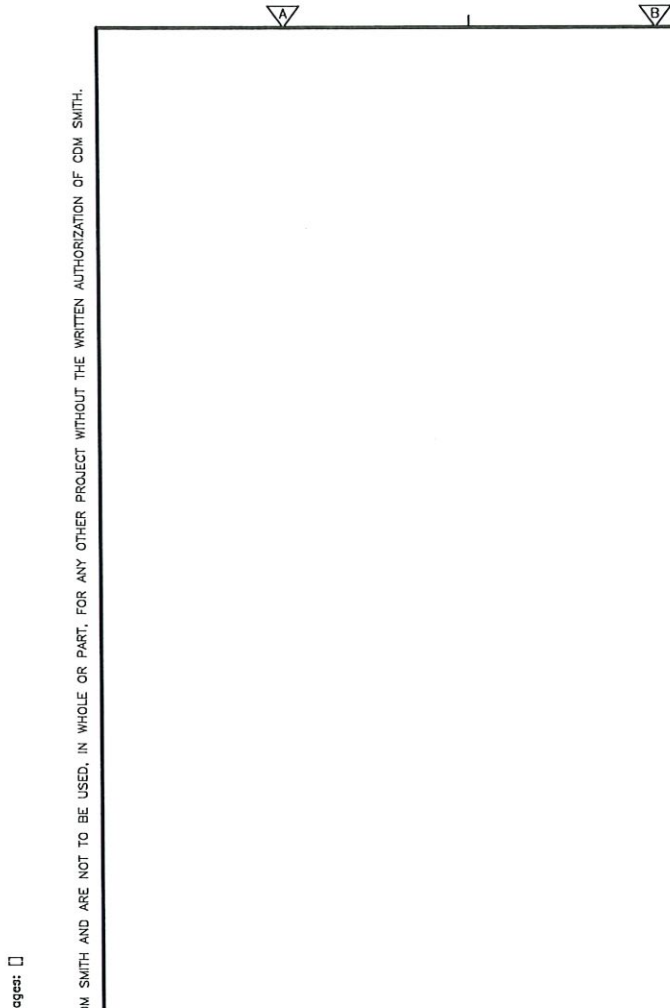
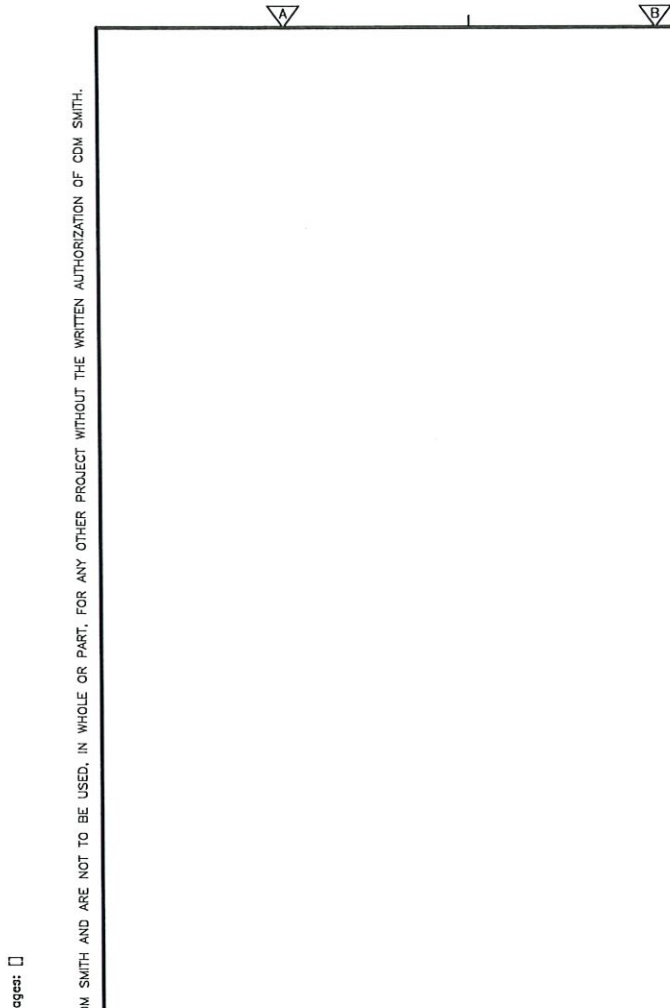
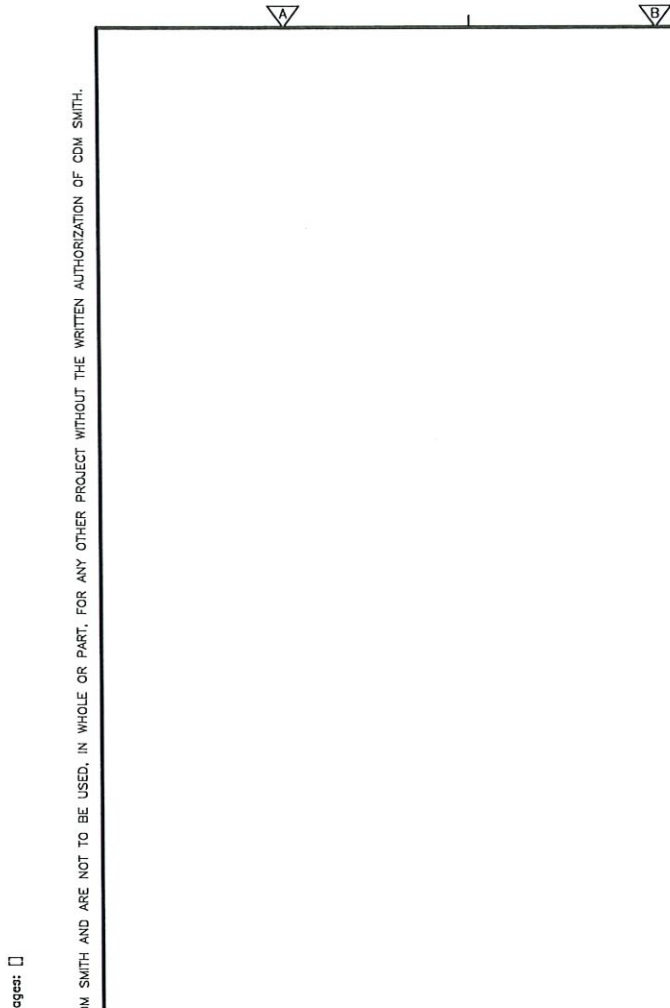
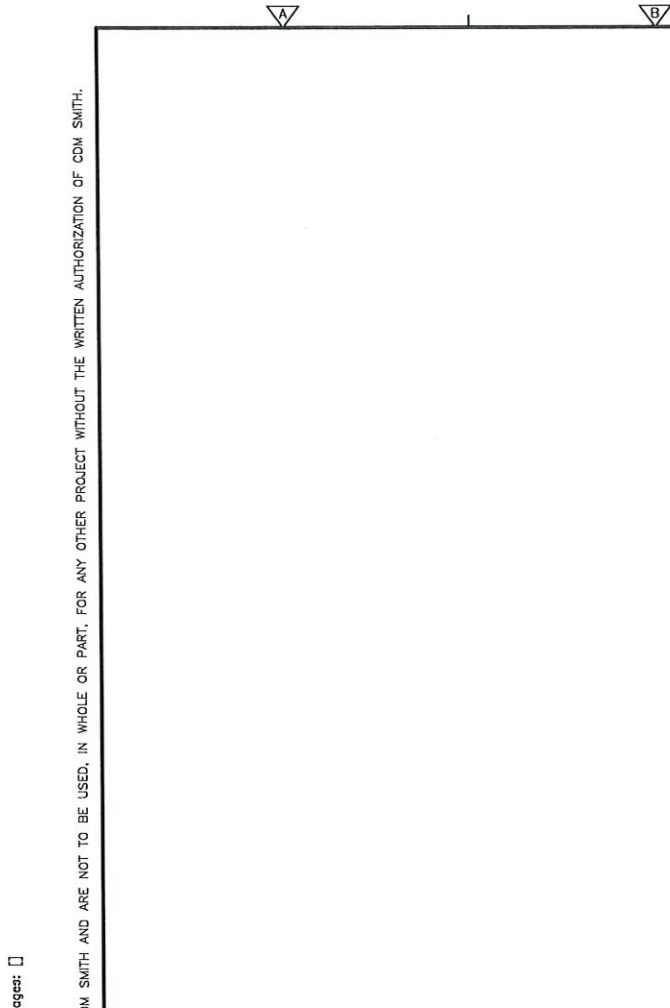
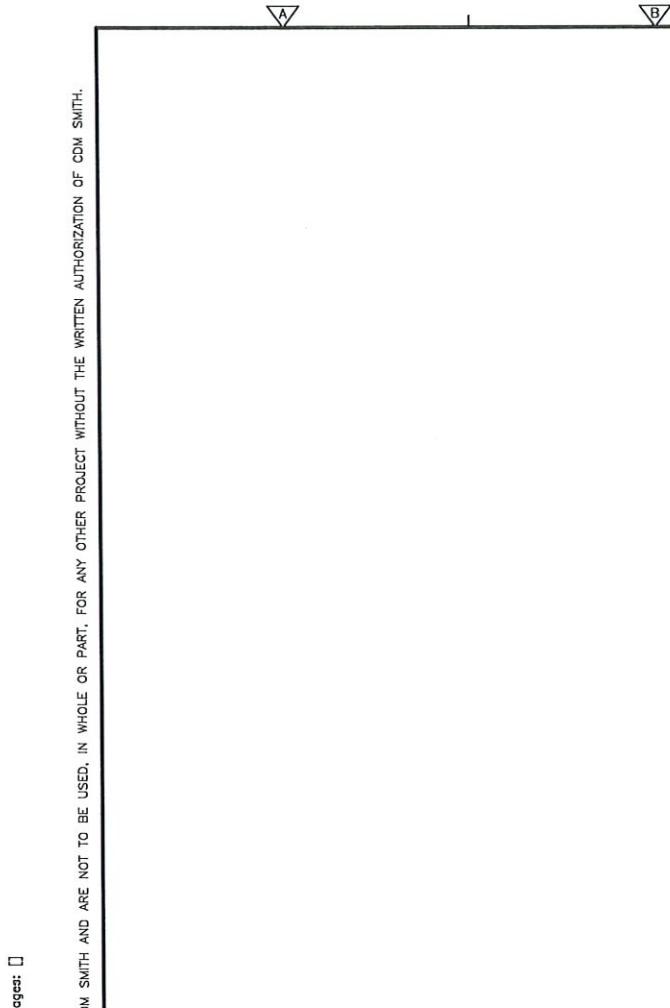
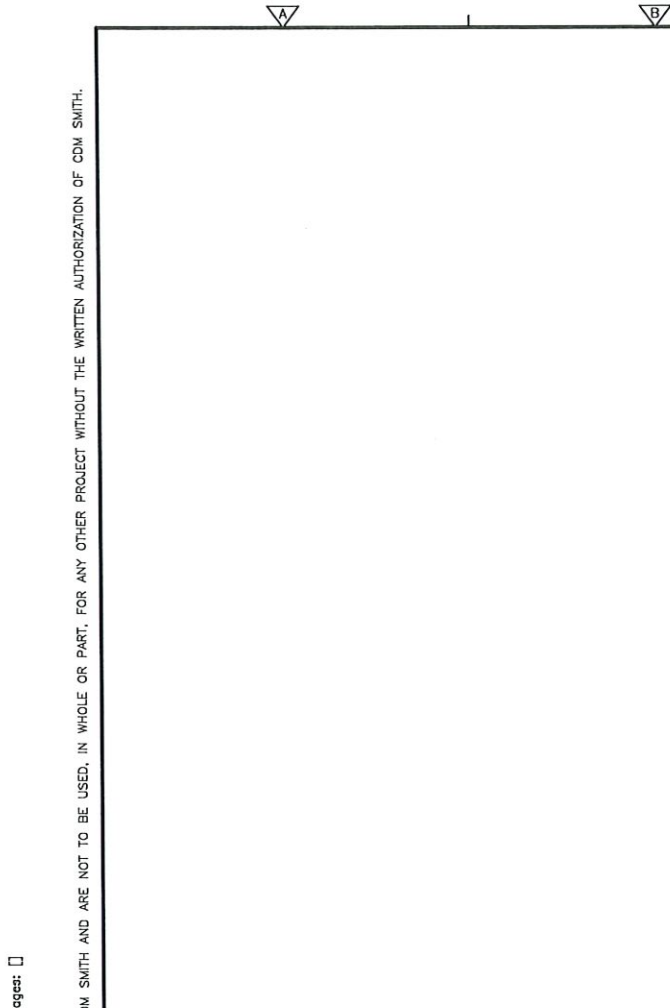
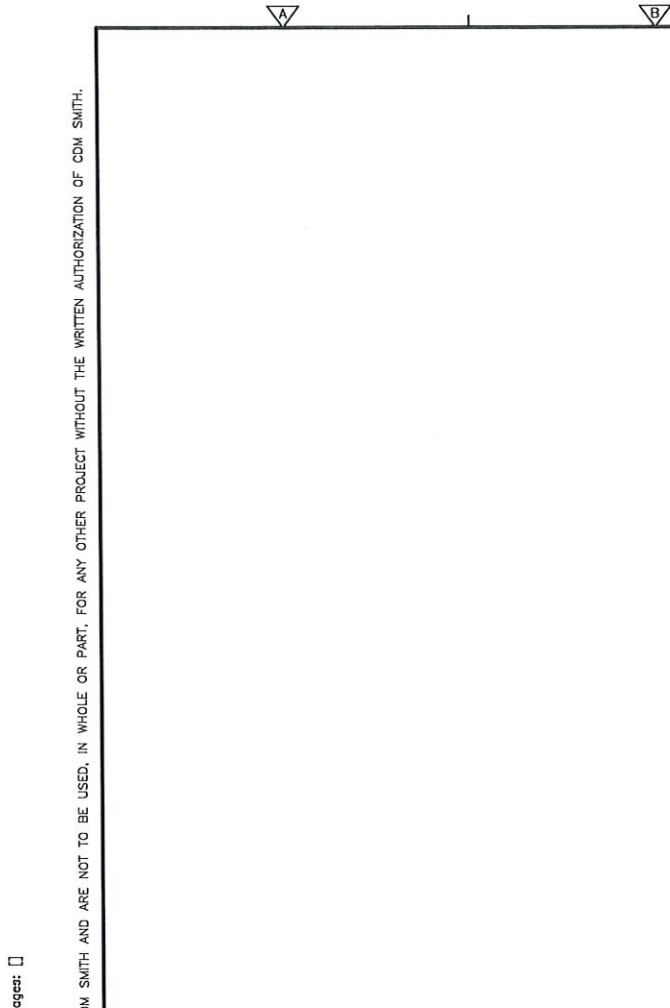
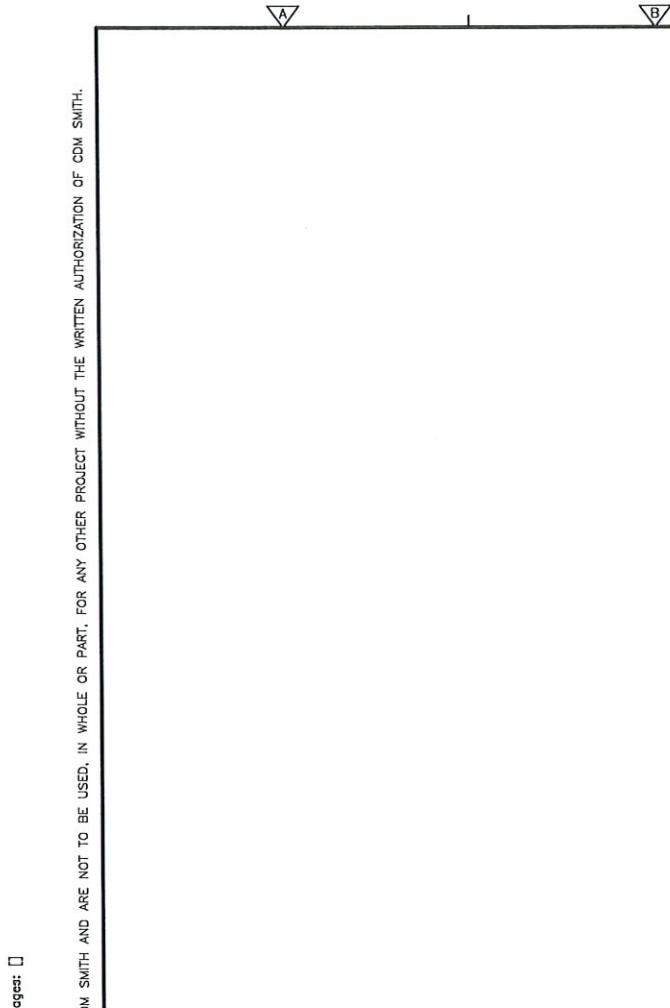
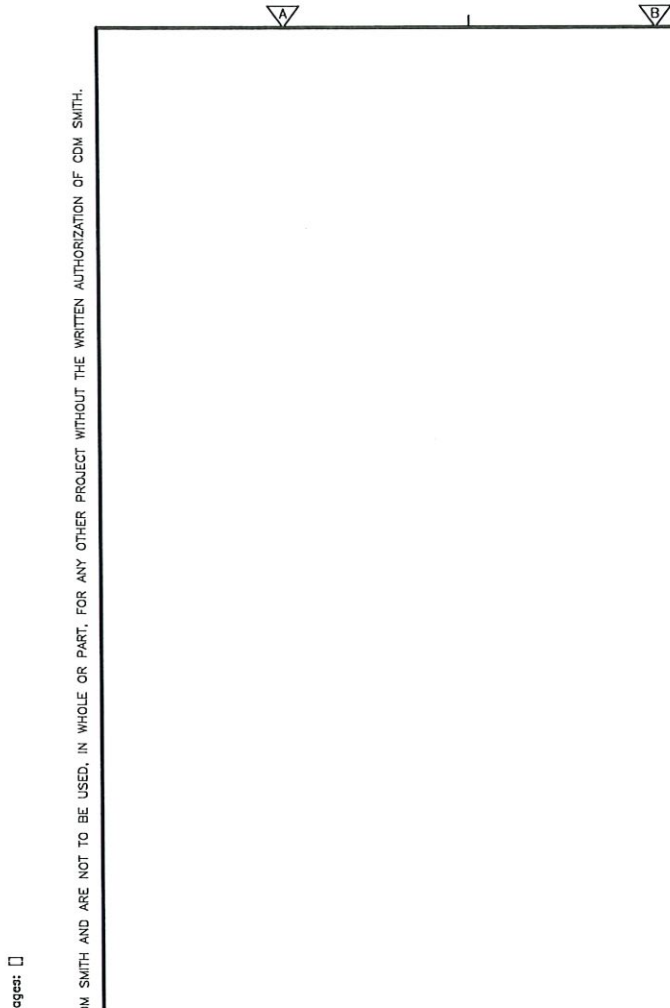
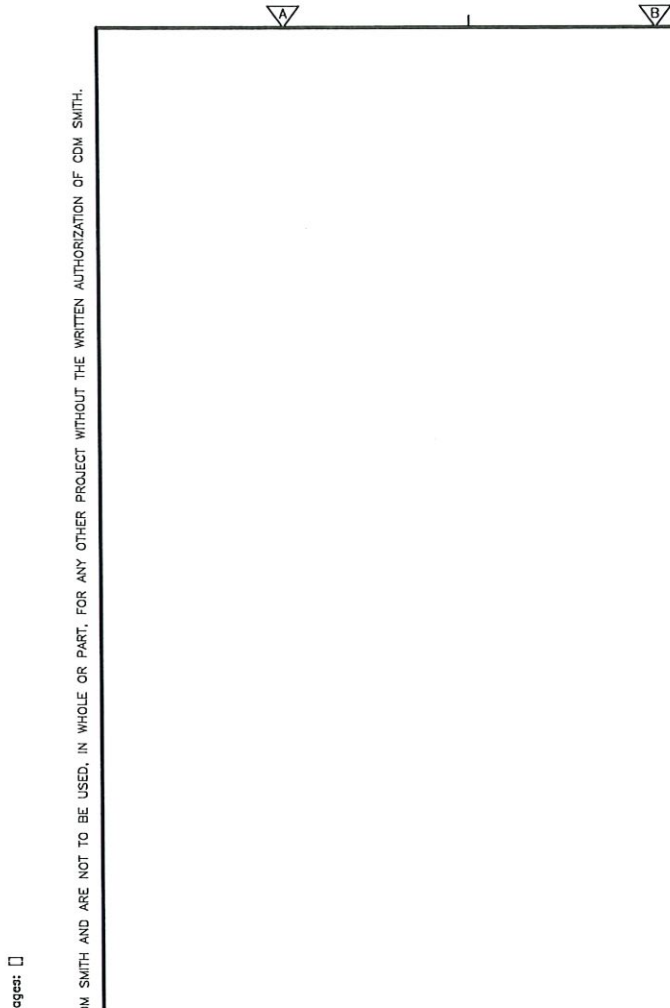
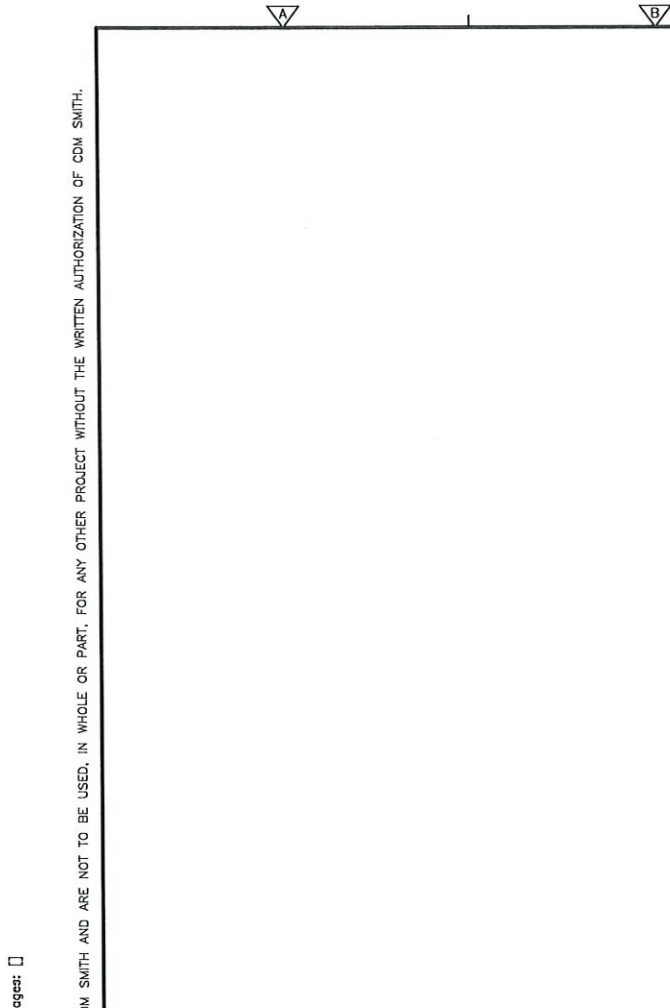
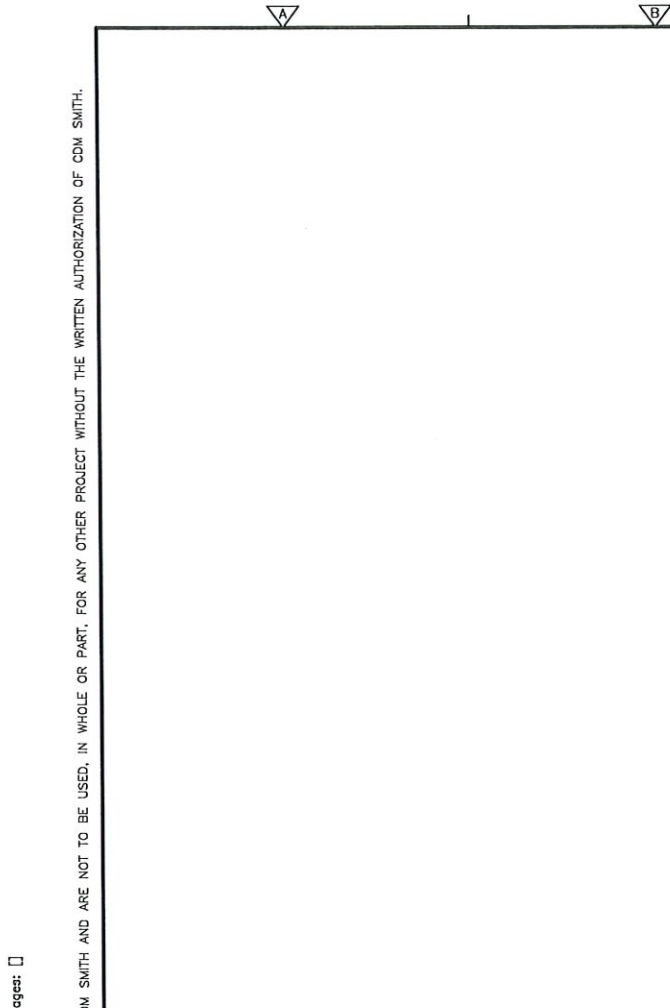
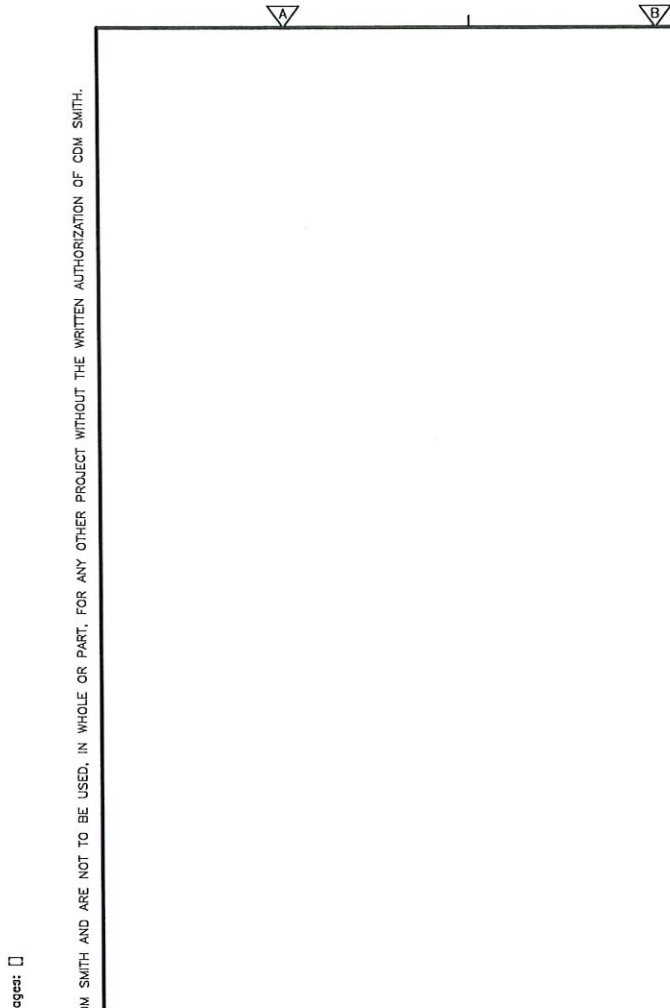
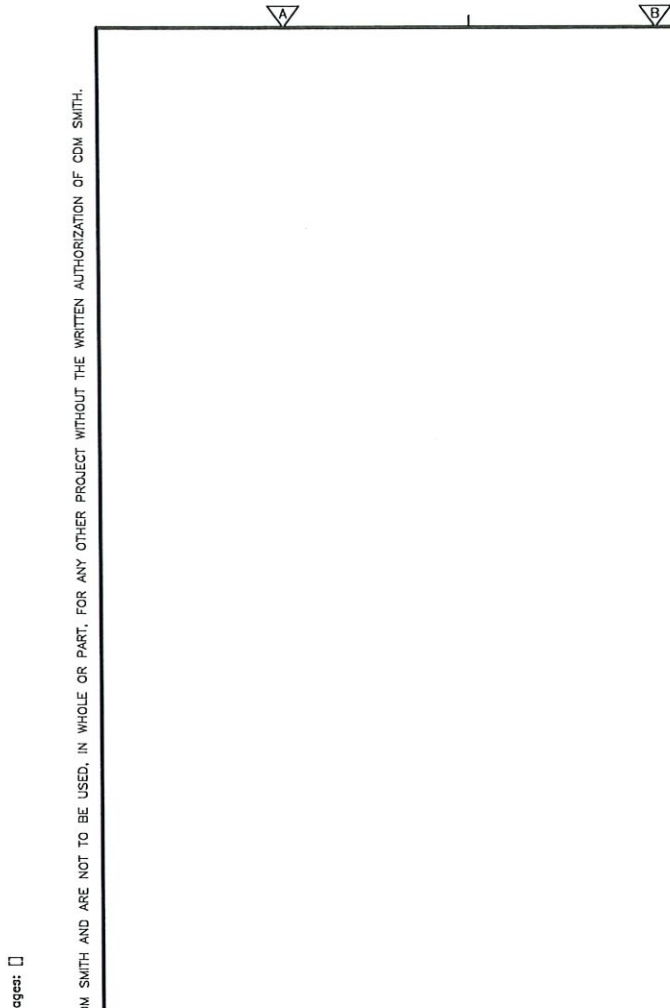
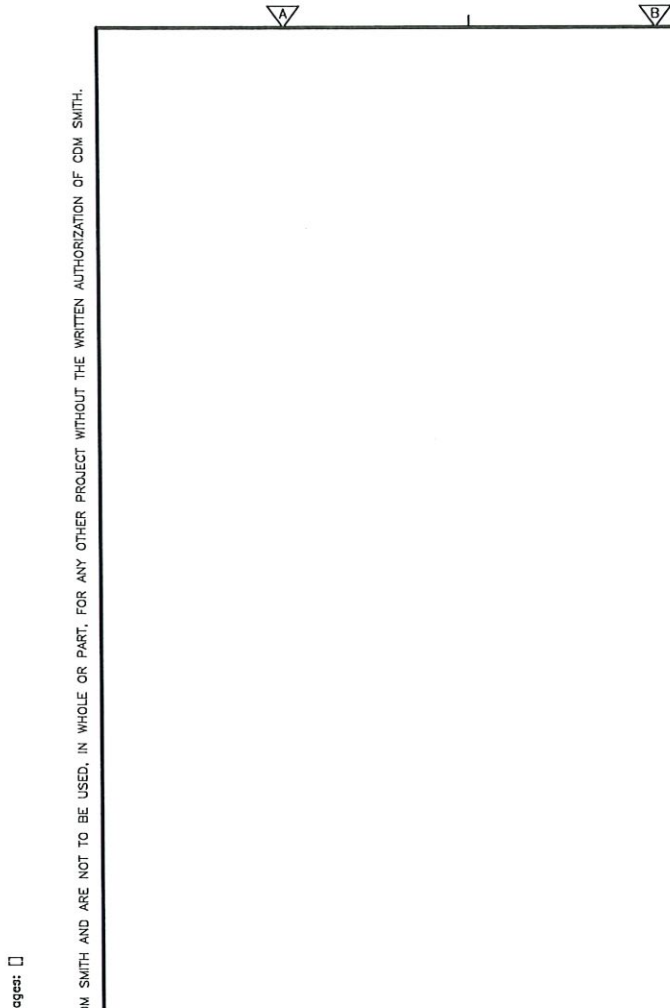
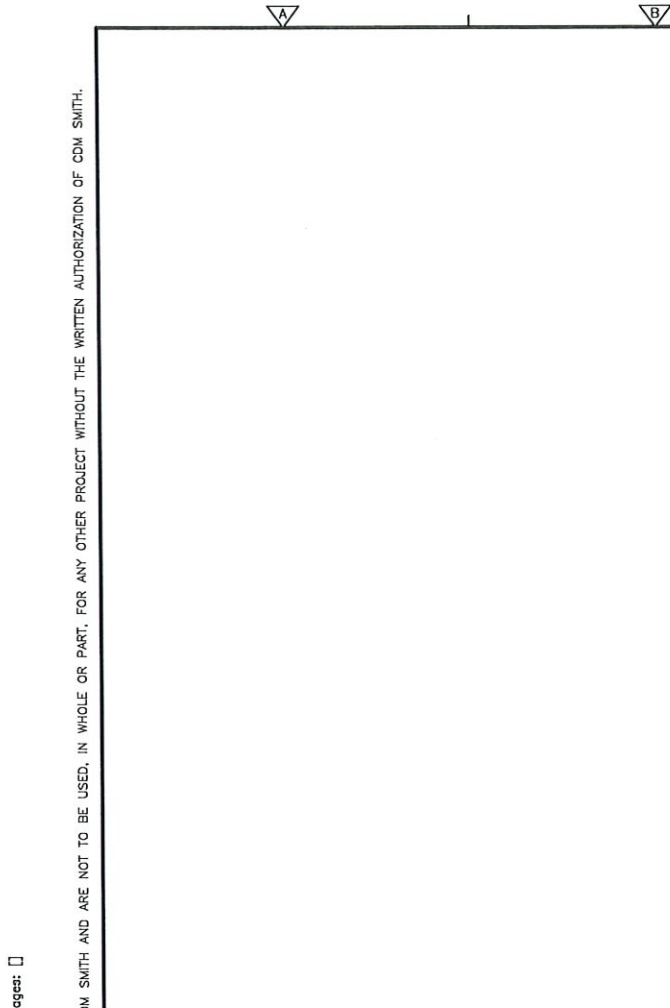
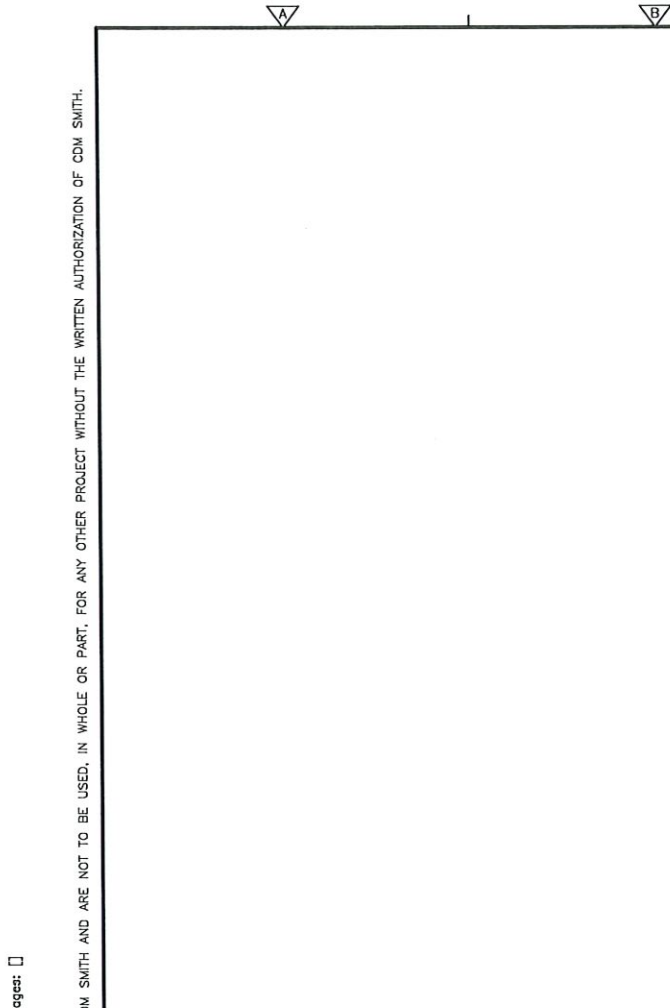
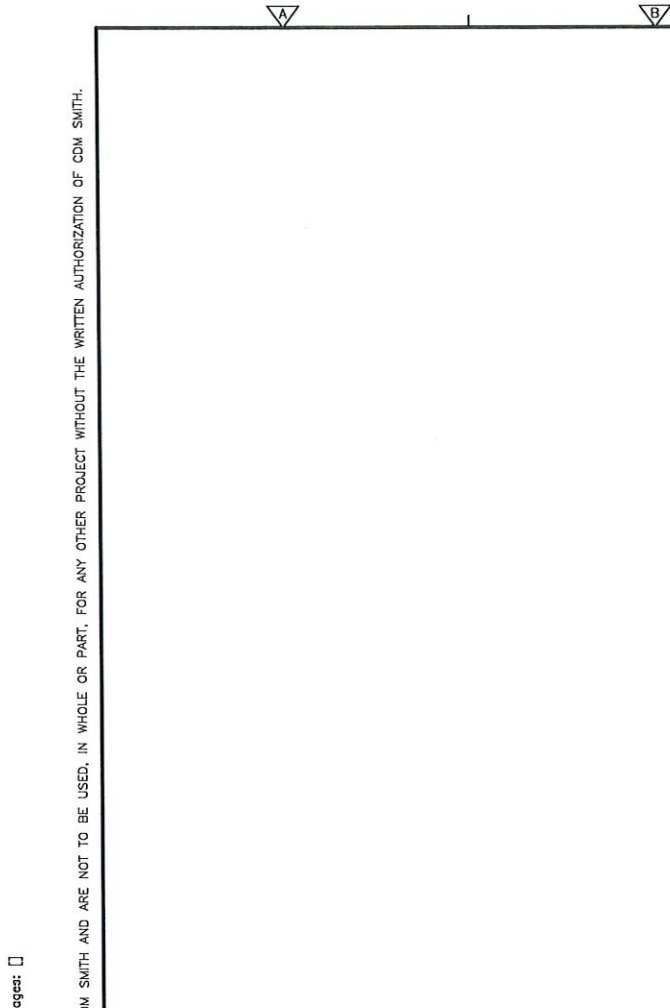
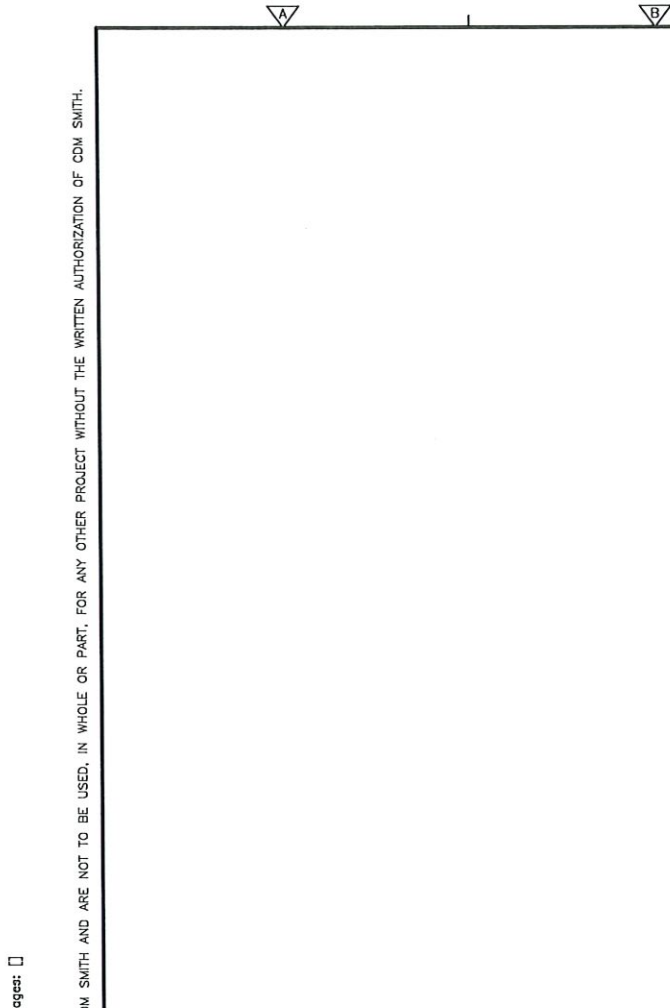
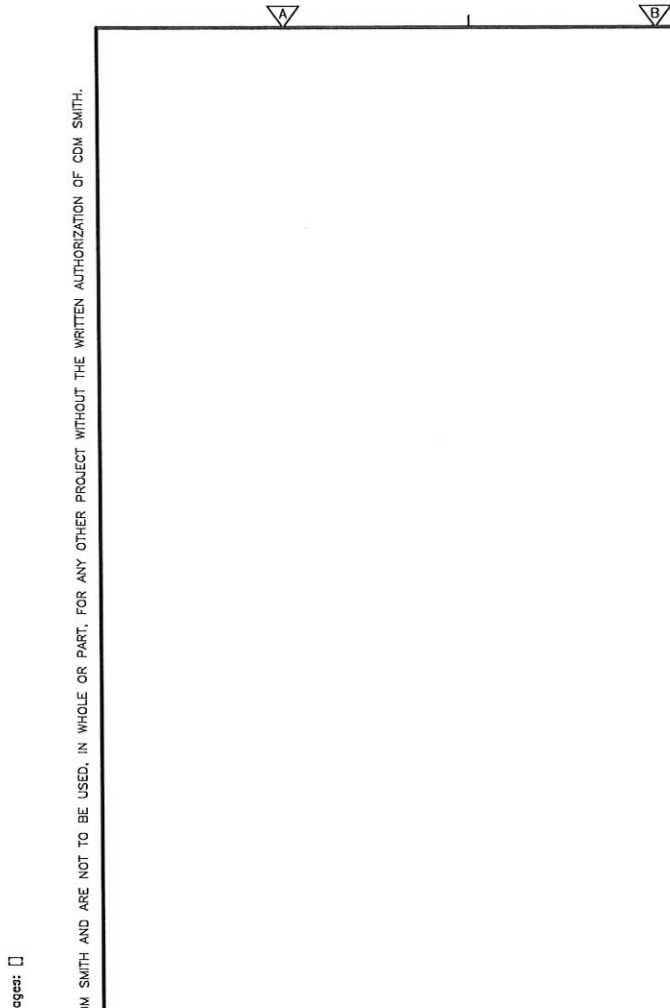
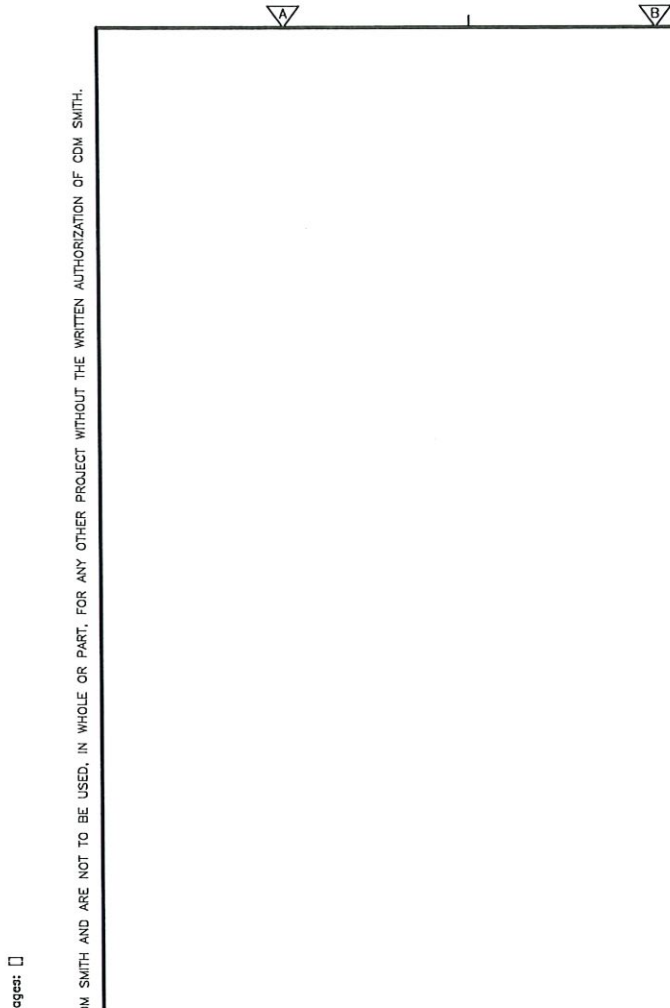
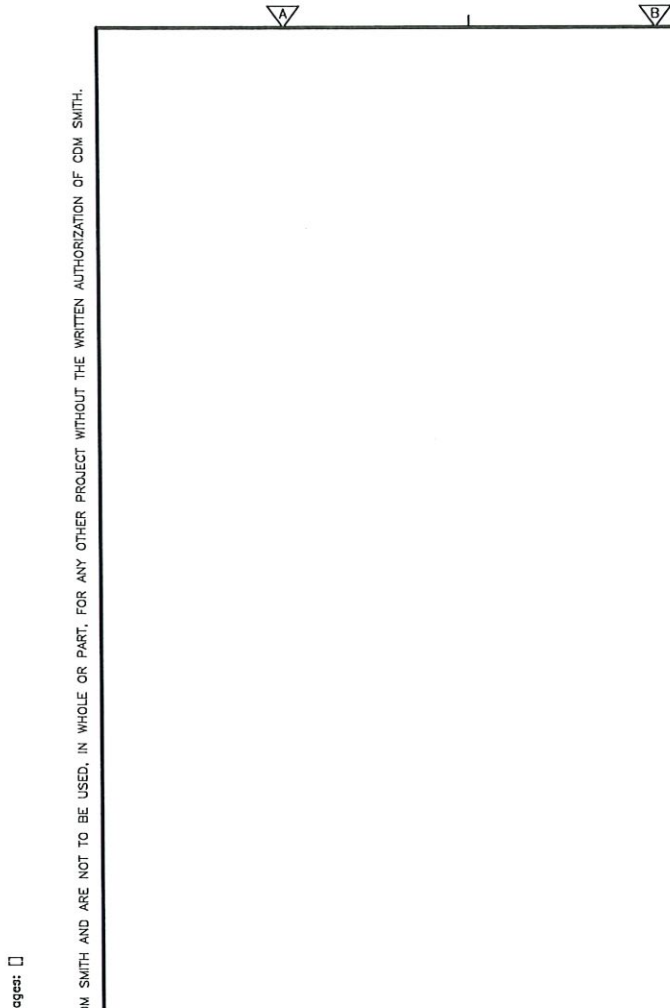
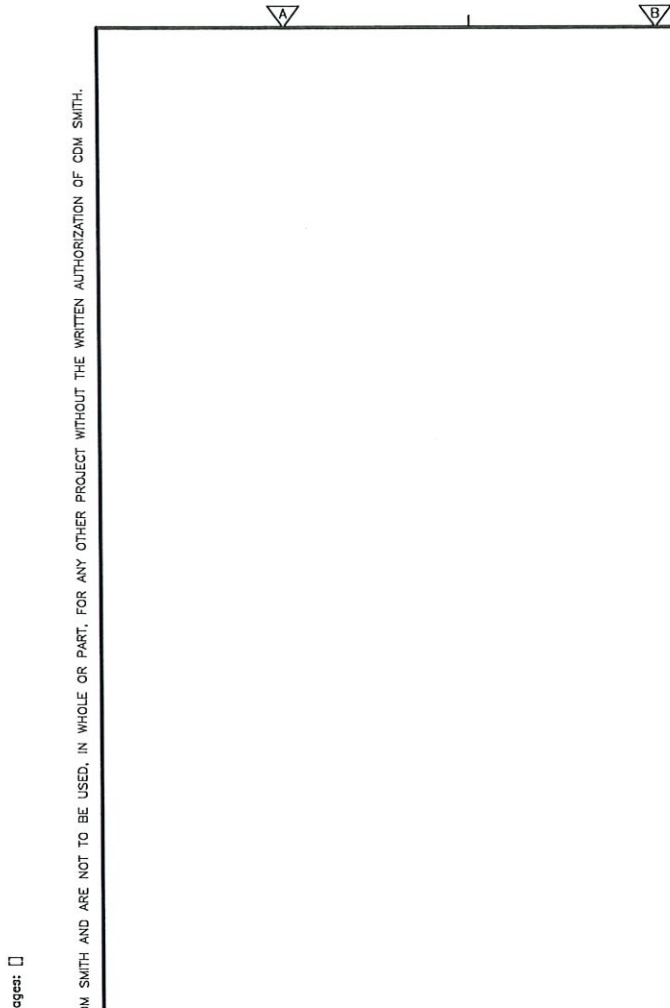
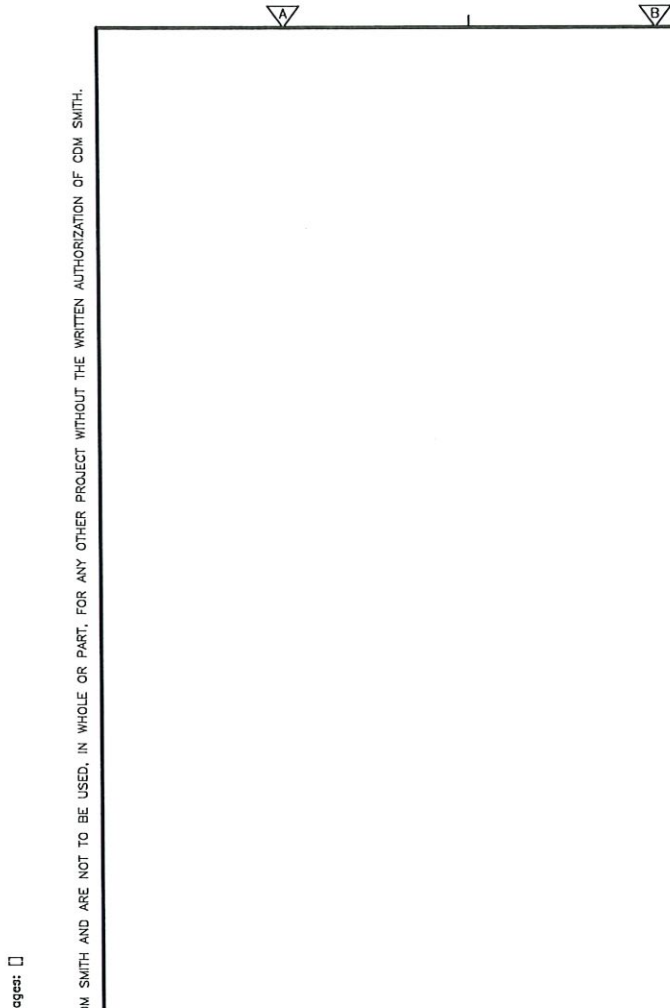
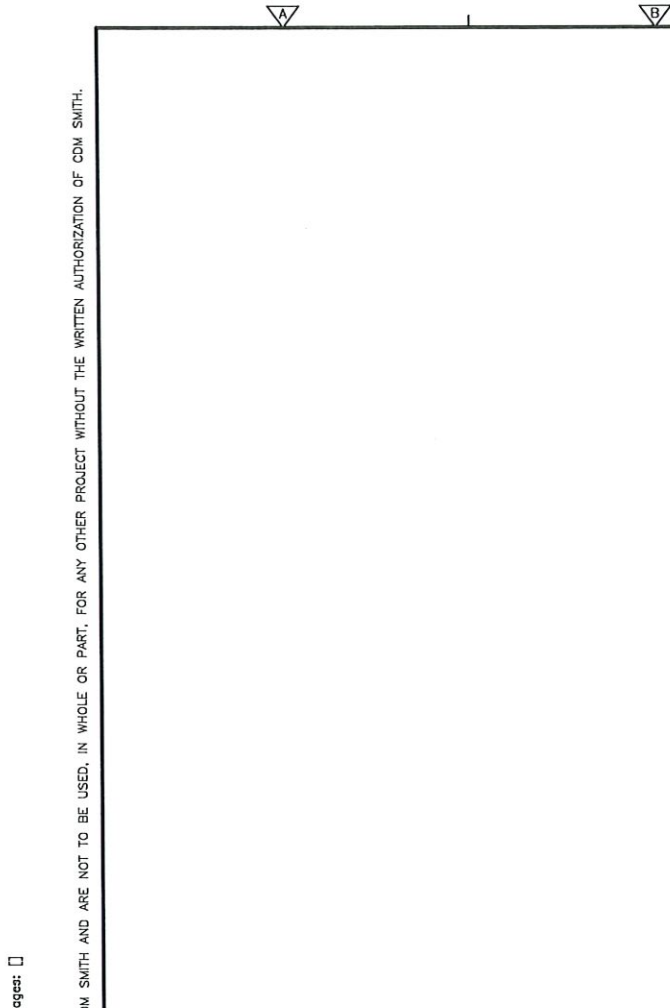
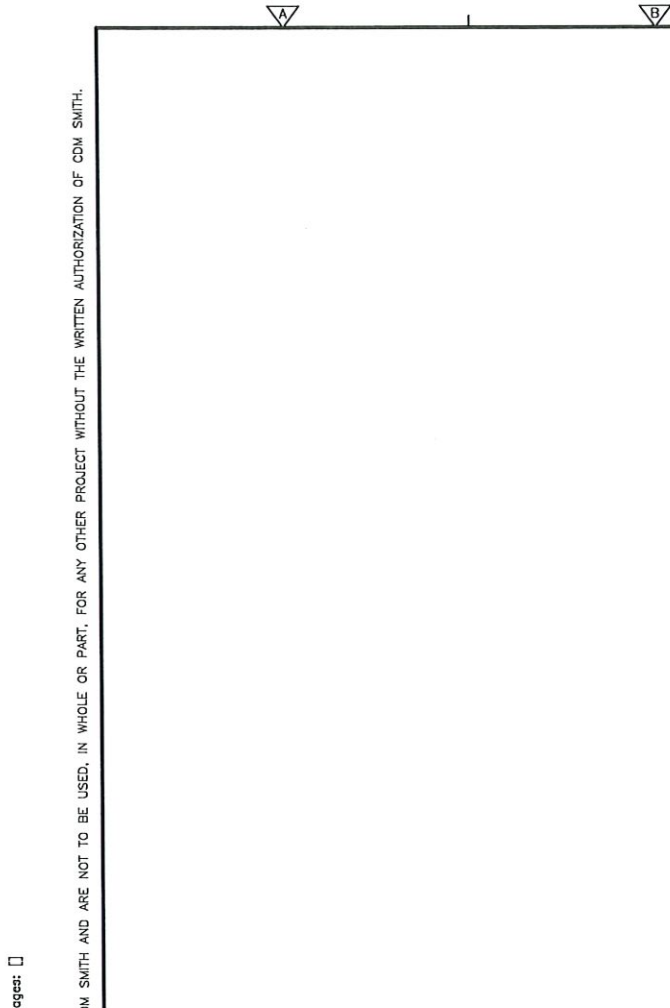
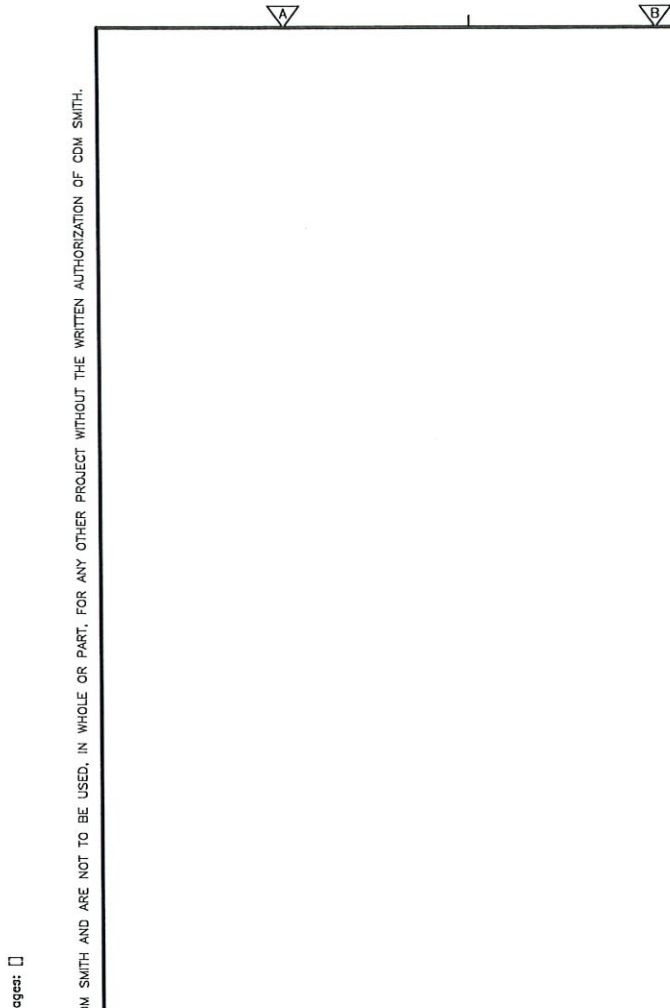
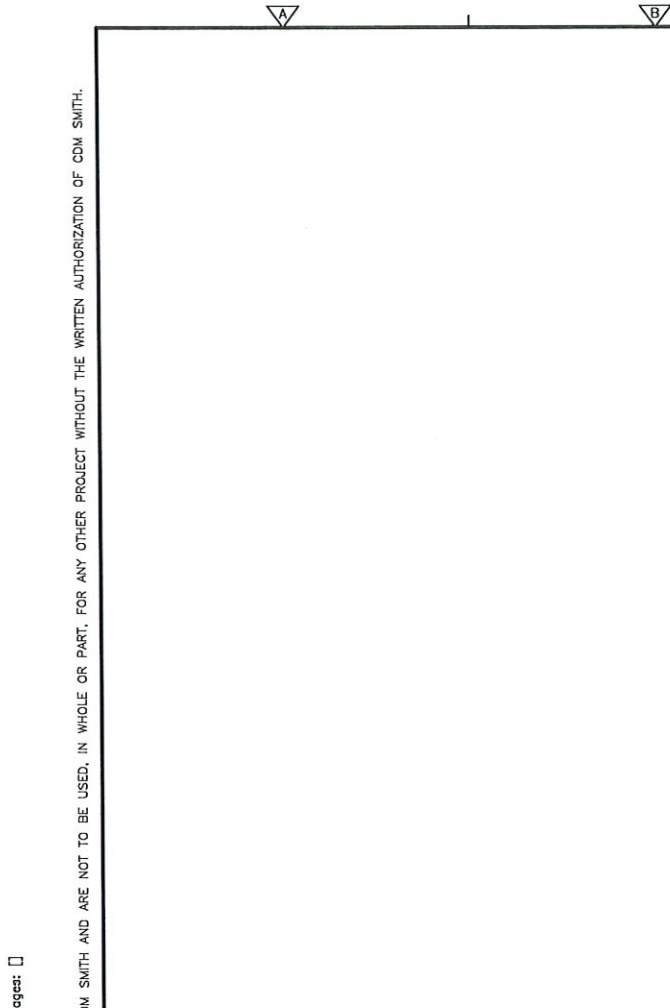
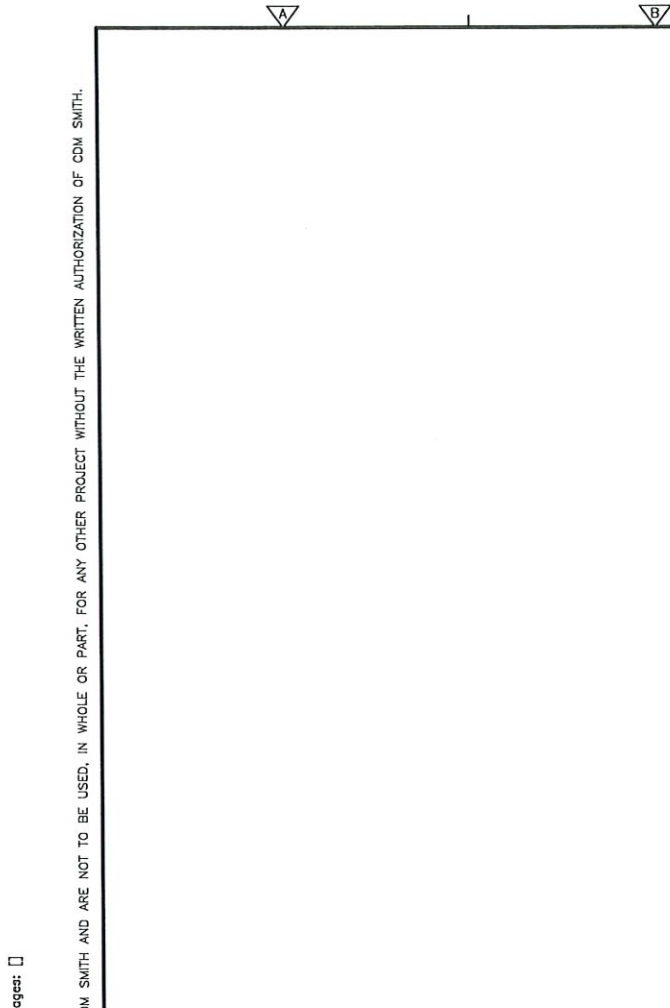
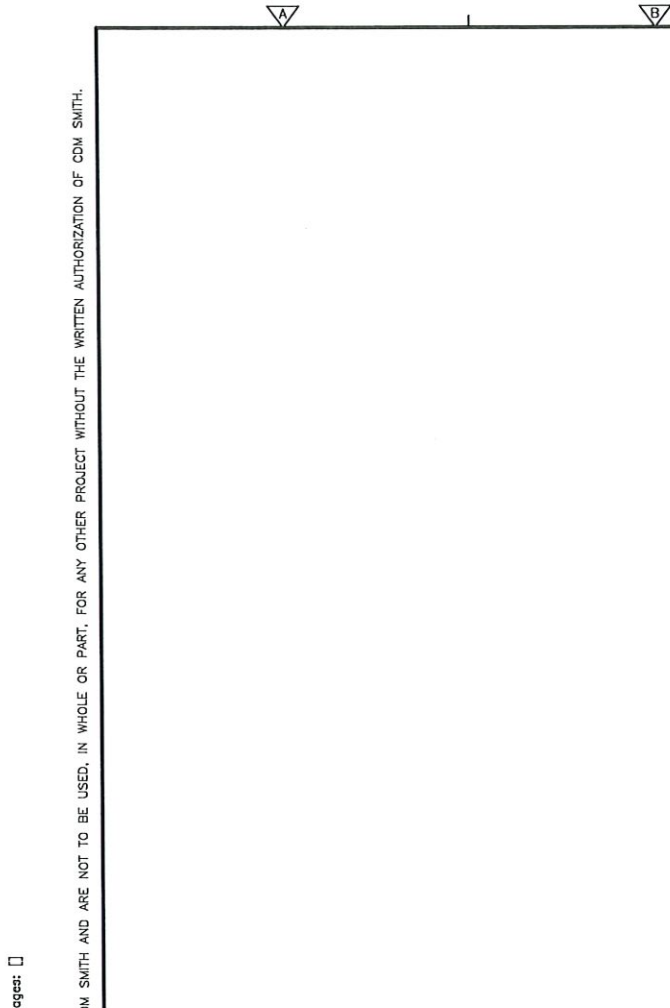
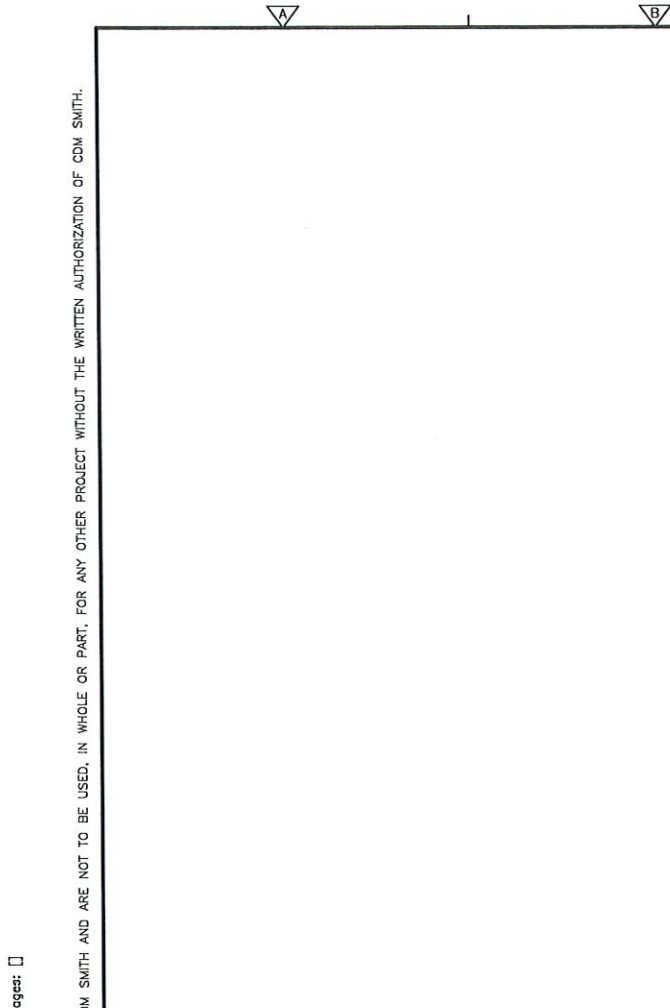
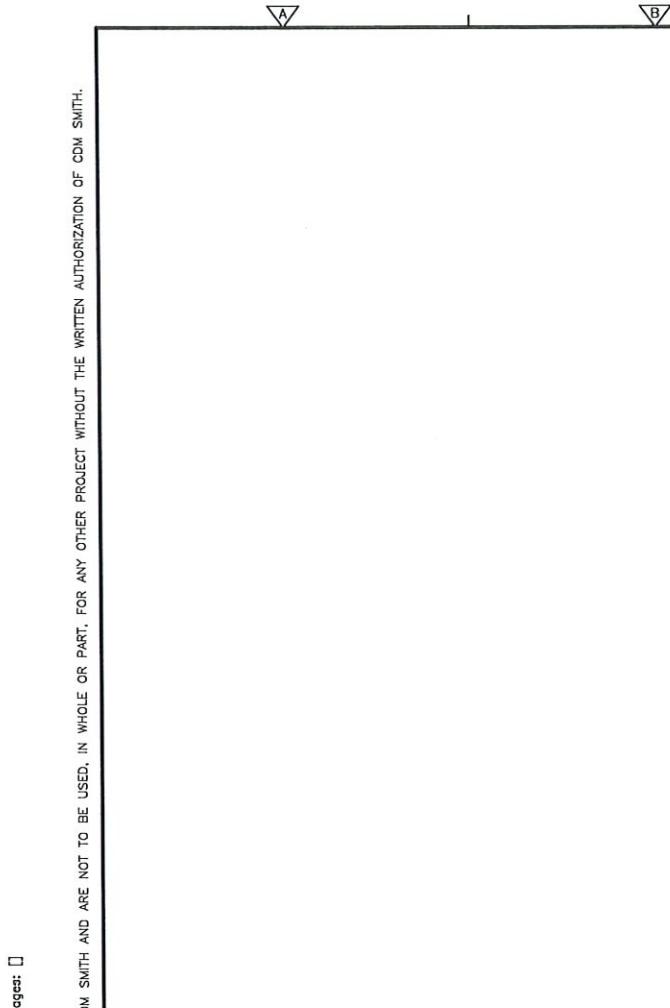
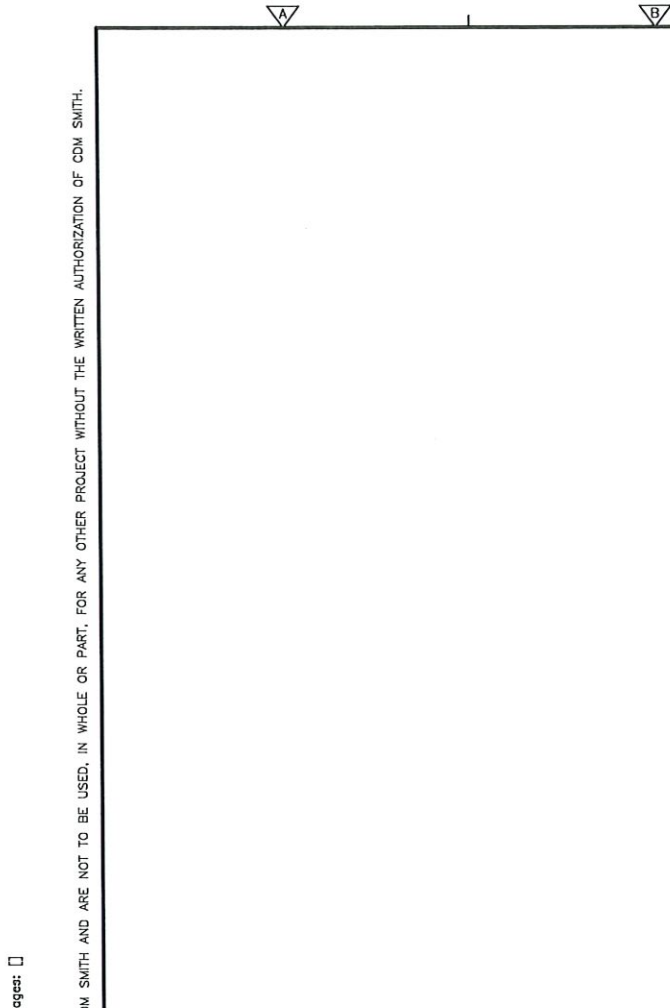
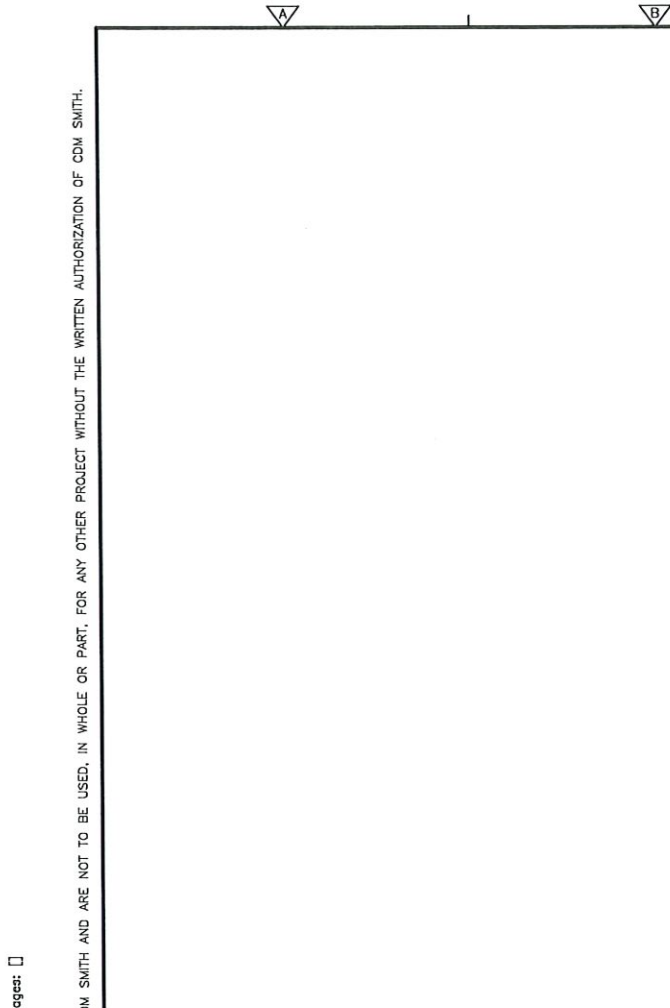
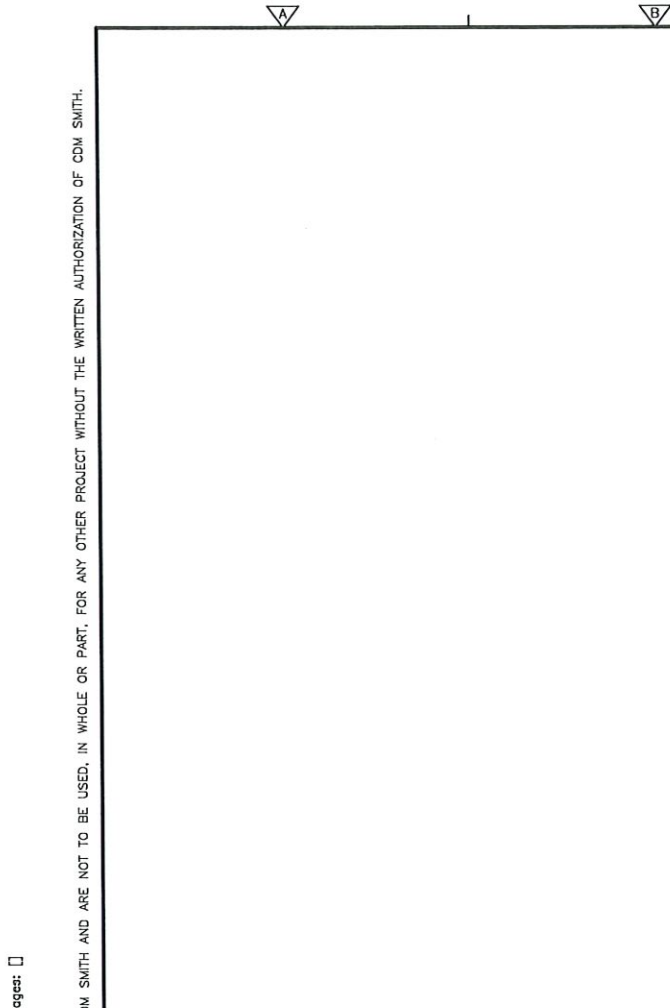
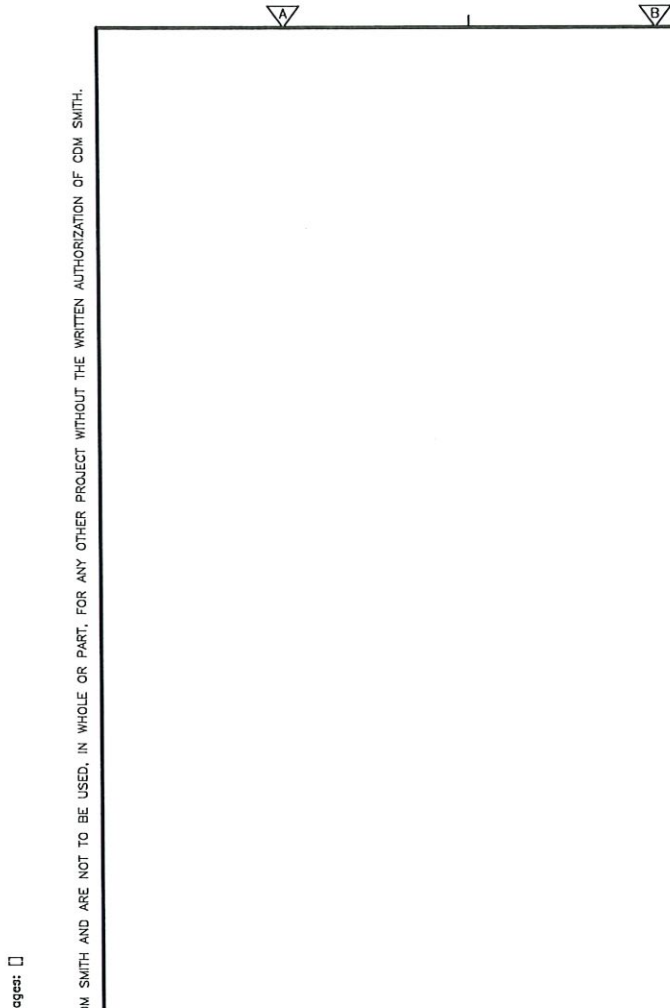
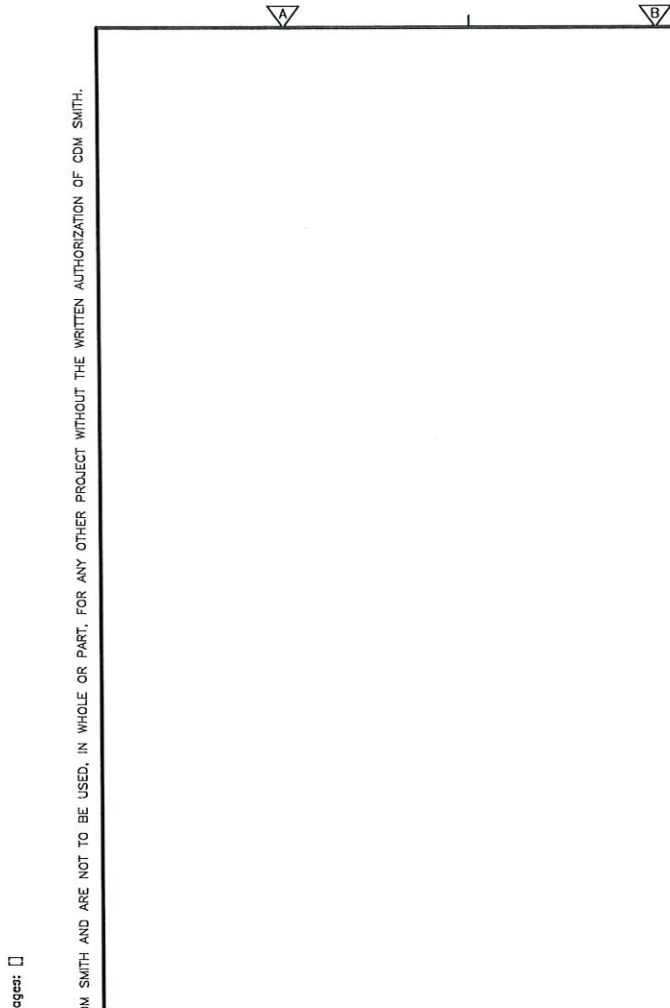
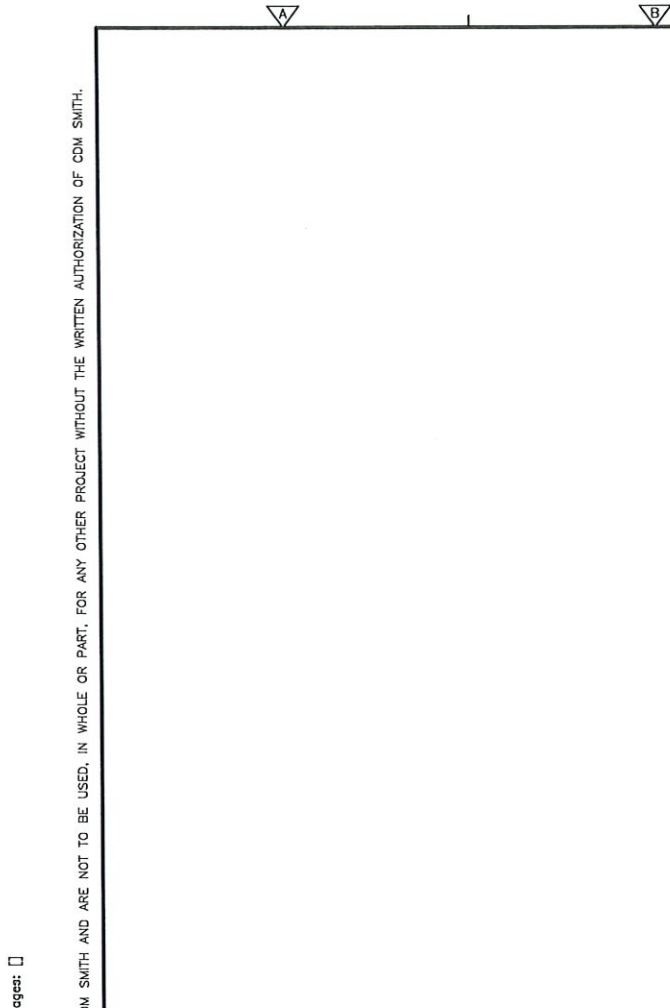
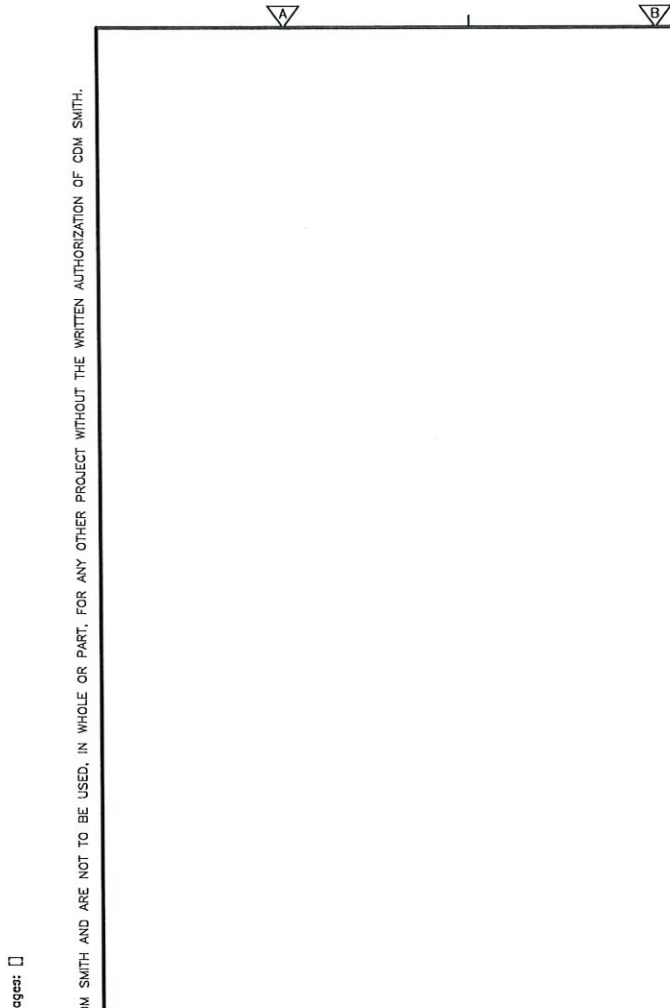
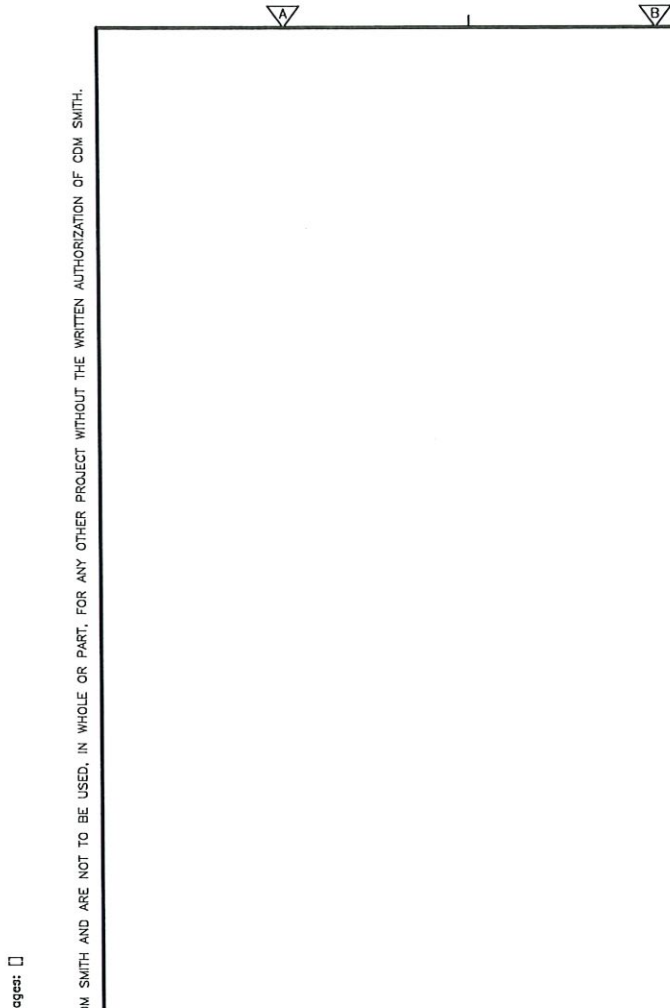
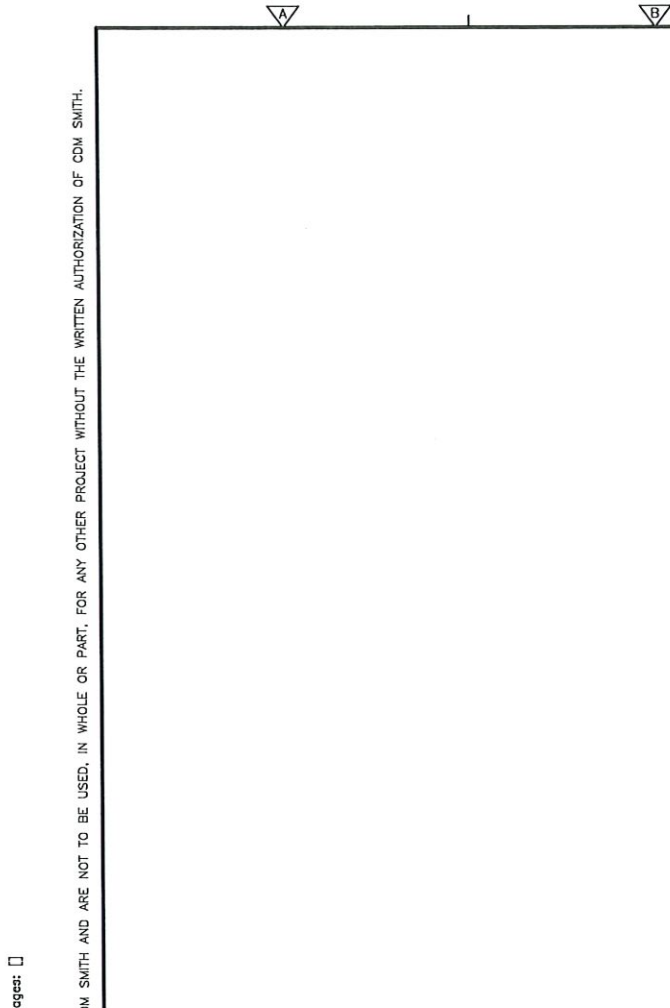
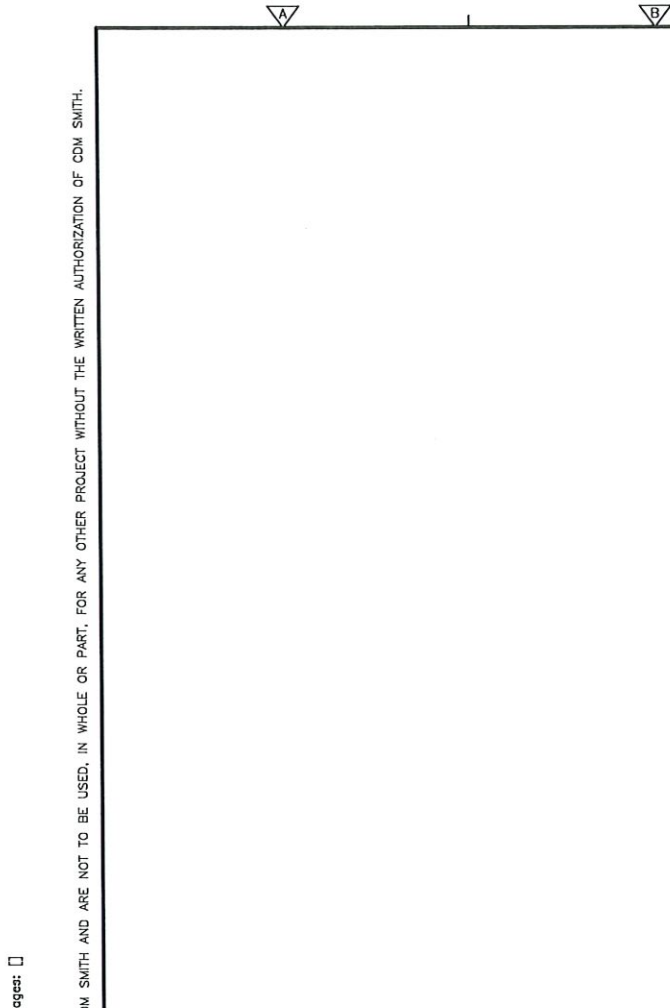
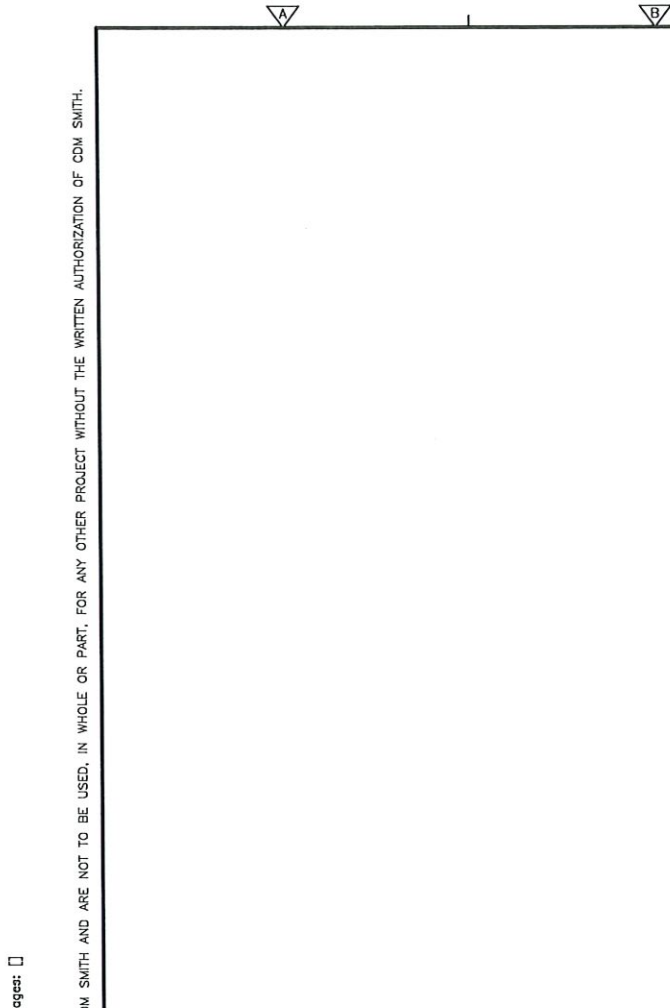
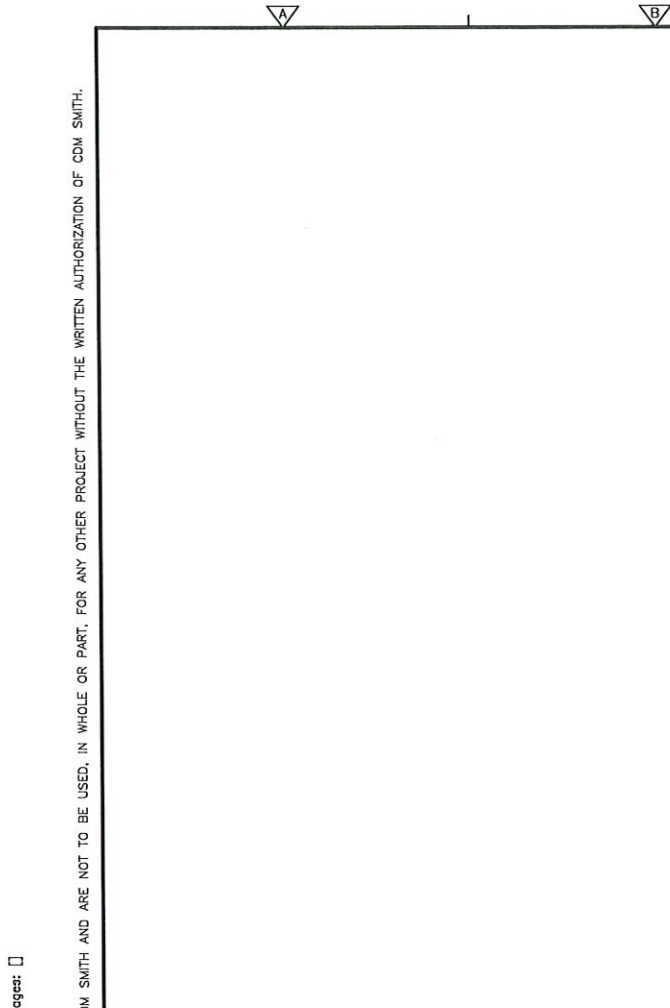
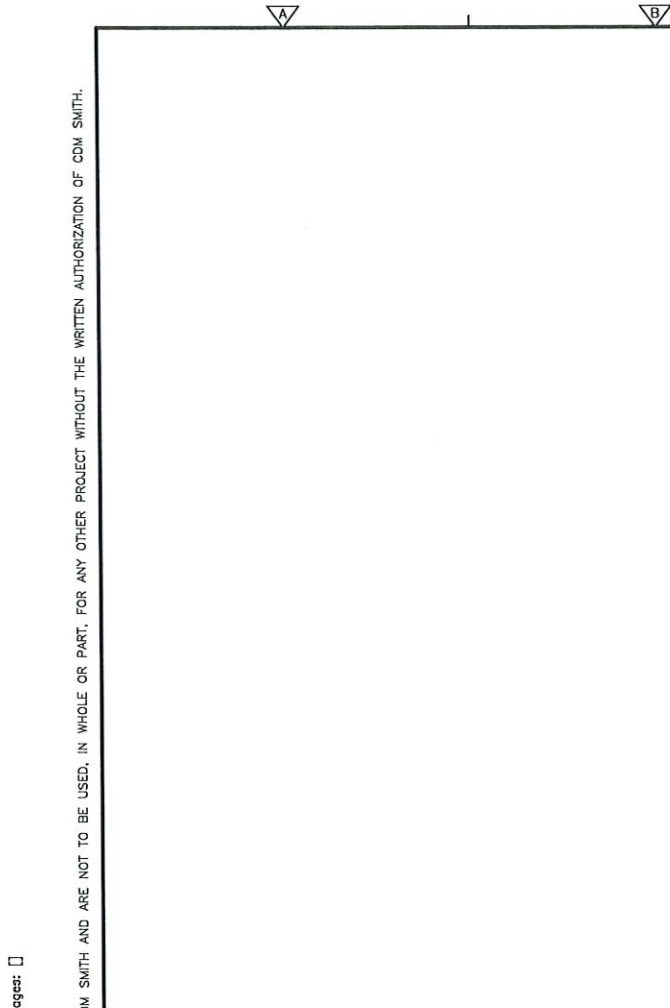
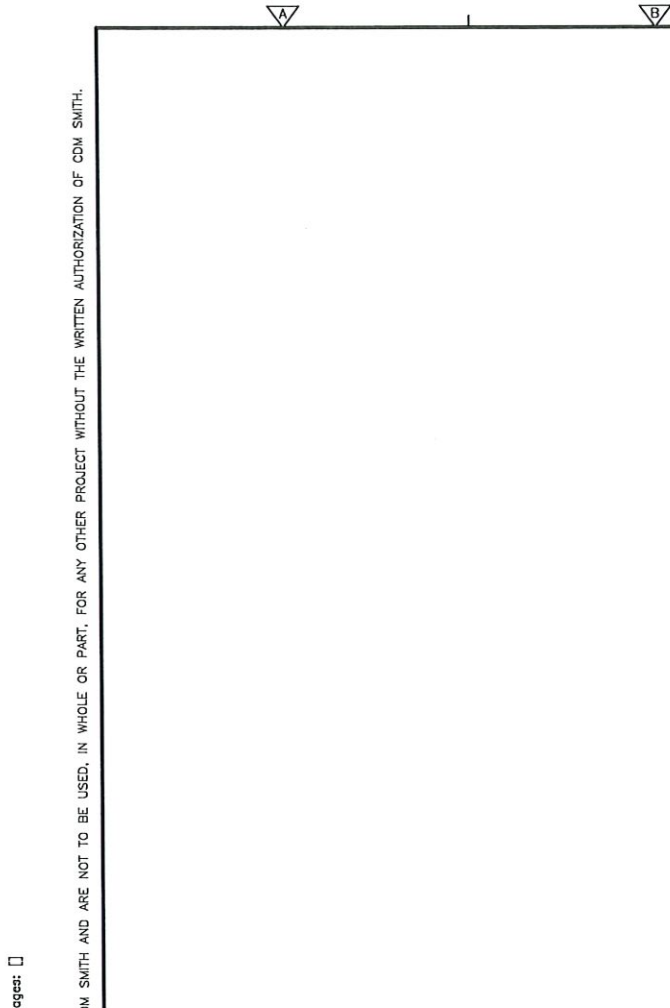
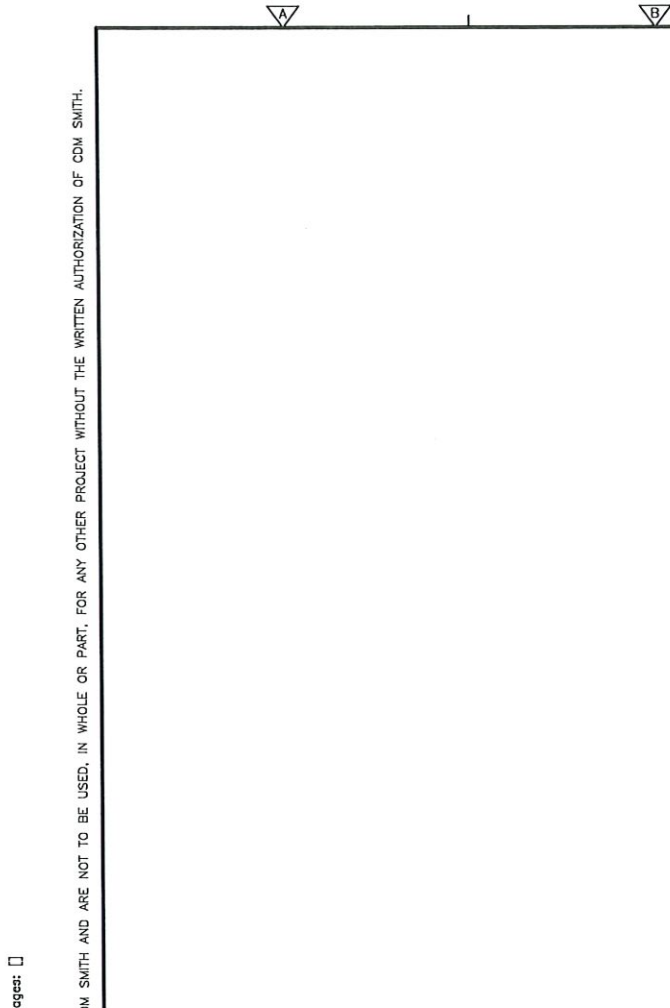
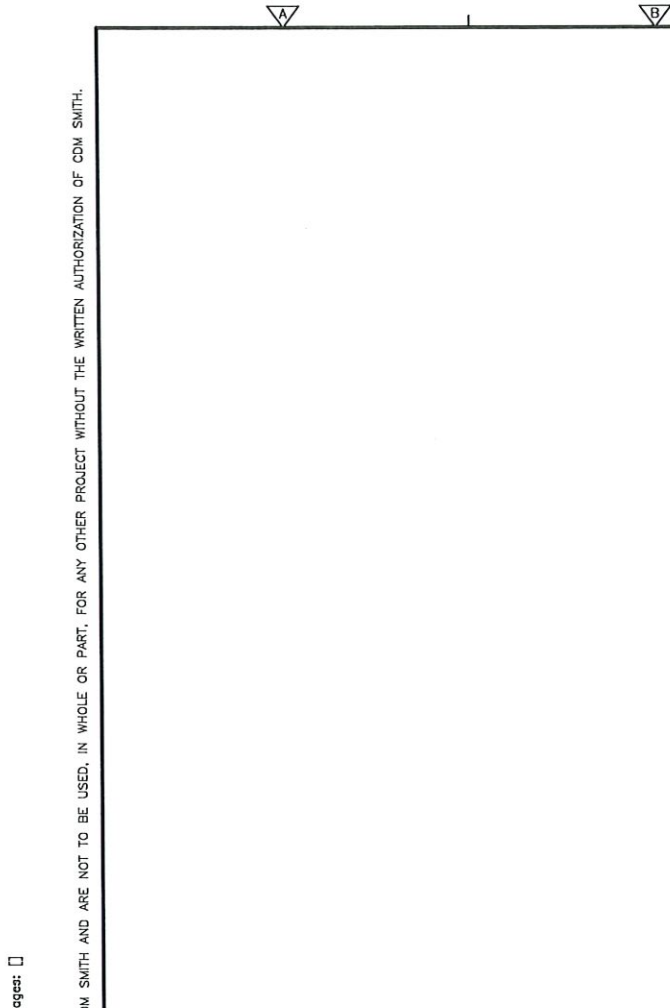
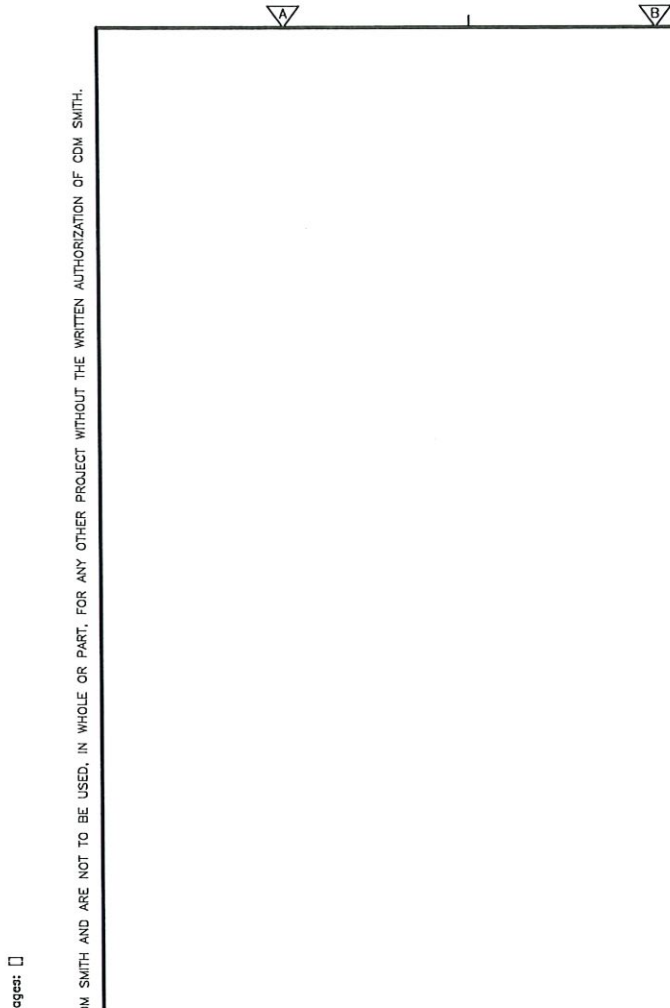
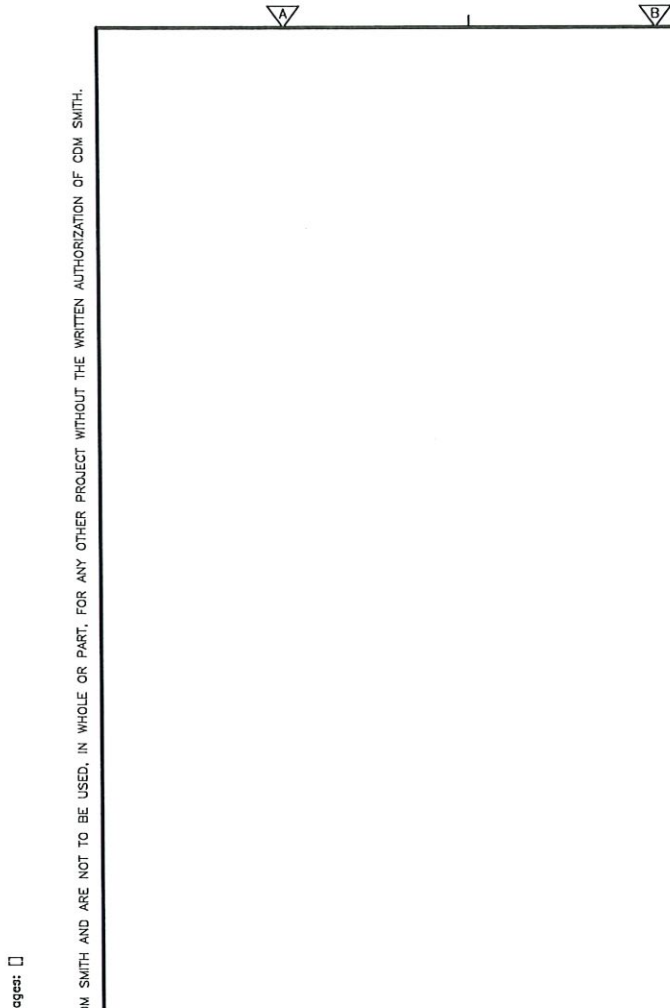
PROPOSED NRO WELL 118N
PLAN AND SECTION

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PE NO. 83413
PROJECT NO. 6295-296440
FILE NAME: M002WEPL.DWG
SHEET NO. M-2

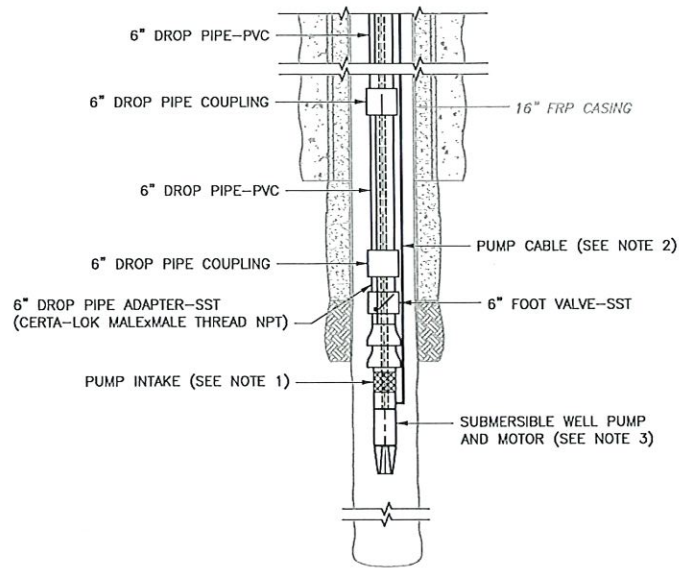
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Images: [

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XREF: [CDUS_2234, MWS000WE] Images: []
Last saved by: EDWARDS\A Time: 11/3/2024 8:37:54 AM
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REUSE OF DOCUMENTS: THESE DOCUMENTS AND DESIGNS PROVIDED BY PROFESSIONAL SERVICE, INCORPORATED HEREIN, ARE THE PROPERTY OF CDM SMITH AND ARE NOT TO BE USED, IN WHOLE OR PART, FOR ANY OTHER PROJECT WITHOUT THE WRITTEN AUTHORIZATION OF CDM SMITH.

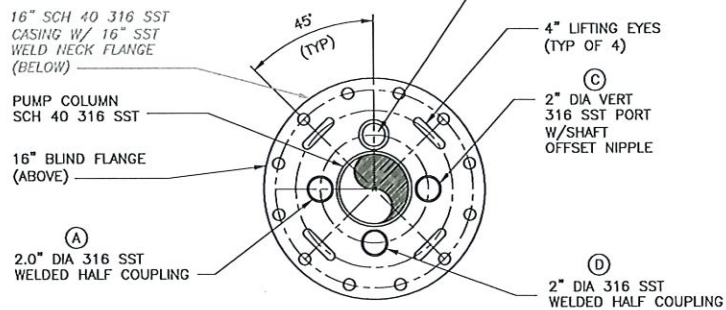


PUMP AND DROP PIPE
DETAIL
NTS



NOTES:

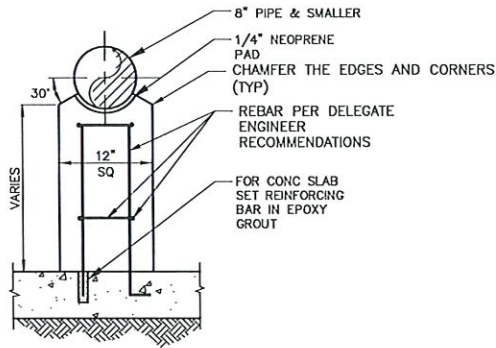
1. PUMP INTAKE TO BE SET WITHIN CASING AT A MINIMUM DEPTH STATED ON DRAWINGS.
2. PUMP SAFETY CABLE SHALL BE INSTALLED WITH LESS SLACK THAN ELECTRICAL CABLE.



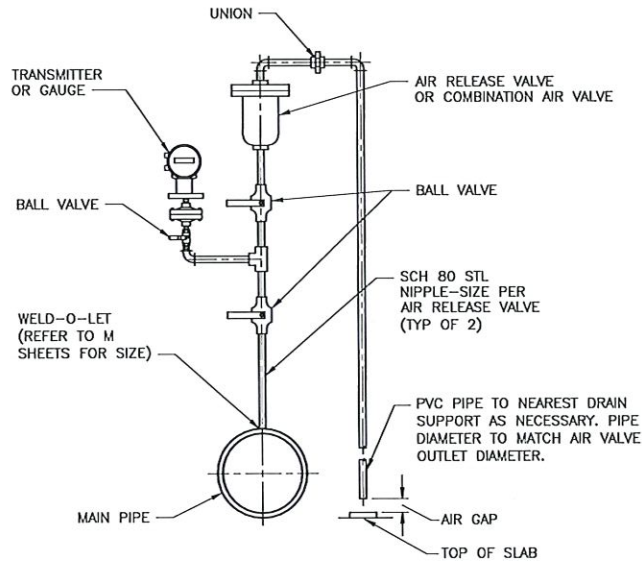
WELLHEAD SUPPORTING FLANGE
DETAIL
NTS



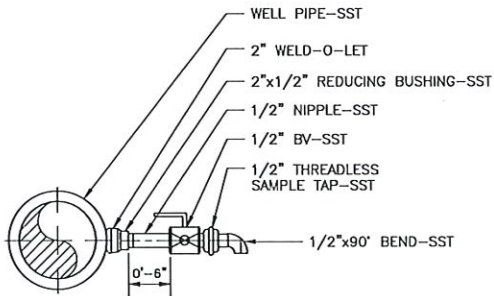
PORT ID	PORT SIZE	PURPOSE
A	2.0"	1" CAV
B	2.5"	ELECTRICAL CONDUIT
C	2.0"	MANUAL LEVEL MONITORING
D	2"	SPARE WITH PLUG



CONCRETE PIPE SUPPORT
8" PIPE OR SMALLER
DETAIL
NTS



TYPE 1
AIR RELEASE VALVE AND COMBINATION AIR VALVE
DETAIL
NTS



SAMPLE TAP CONNECTION
DETAIL
NTS



REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: I. HOLOWELL
DRAWN BY: A. EDWARDS
SHEET CHK'D BY: M. STONEHOUSE
CROSS CHK'D BY: M. SUNYAK
APPROVED BY: I. HOLOWELL
DATE: APRIL 2025

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COLLIER COUNTY, FLORIDA
NRO WELLS 118N AND 120N
IMPROVEMENTS

MECHANICAL DETAILS I

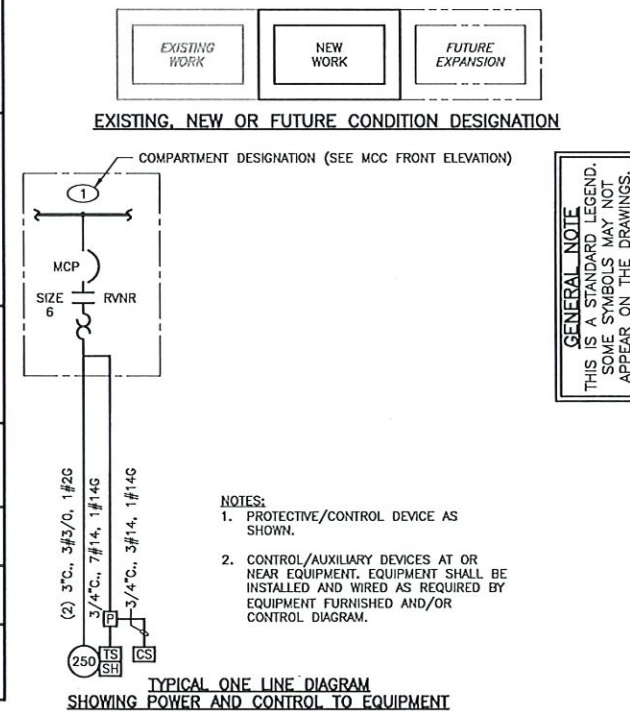
DATE:
ISAAC DAVID HOLOWELL
PE NO. 83413
PROJECT NO. 6295-296440
FILE NAME: MD01MTDT.DWG
SHEET NO.
MD-1

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	—	MEDIUM VOLTAGE DRAWOUT TYPE POWER CIRCUIT BREAKER CS=CONTROL SWITCH
	CB	LOW VOLTAGE AIR OR MOLDED CASE CIRCUIT BREAKER, 3 POLE UNLESS OTHERWISE NOTED.
	⊠	COMBINATION MOTOR CIRCUIT PROTECTOR AND MAGNETIC MOTOR STARTER, FULL VOLTAGE NON-REVERSING UNLESS OTHERWISE NOTED: * FVR — FULL VOLTAGE REVERSING RVNR — REDUCED VOLTAGE NON-REVERSING RVAT — REDUCED VOLTAGE AUTOTRANSFORMER RVSS — REDUCED VOLTAGE SOLID STATE 2S1W — TWO SPEED, ONE WINDING 2S2W — TWO SPEED, TWO WINDING (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
	□	NON-FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE * AMPERE RATING NOTED IF OTHER THAN 30A (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
	F	FUSIBLE DISCONNECT SWITCH, 600 VOLT, 3 POLE, * AMPERE RATING AND FUSE SIZE AS NOTED * AMPERE RATING NOTED IF OTHER THAN 30A FUSE RATING (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
	⊠ ₂	MANUAL MOTOR STARTER WITH THERMAL OVERLOAD HEATER, 1 POLE UNLESS OTHERWISE NOTED "2" INDICATES WITH PILOT LIGHT "2" INDICATES TWO POLE (DIAGRAMMATICALLY SHOWN, CONTRACTOR SHALL FIELD LOCATE)
	—	DRAWOUT TYPE EQUIPMENT OR DEVICE
	—	MEDIUM VOLTAGE CABLE TERMINATION
	—	MEDIUM VOLTAGE AIR INTERRUPTER SWITCH
	—	MEDIUM VOLTAGE FUSED AIR INTERRUPTER SWITCH * FUSE RATING
	—	MEDIUM VOLTAGE FUSED MOTOR CONTROLLER
	T	TRANSFORMER, RATINGS AND CONNECTIONS AS NOTED, UNLESS OTHERWISE NOTED ON THE SINGLE LINE DIAGRAMS, ALL DRY TYPE TRANSFORMERS SERVING ADMINISTRATIVE AND LABORATORY SPACES SHALL HAVE A K FACTOR OF 4. ISOLATION TRANSFORMERS SHALL HAVE A K-20 RATING
	—	CURRENT TRANSFORMER * QUANTITY A = PRIMARY AMPERES
	—	POTENTIAL TRANSFORMER * QUANTITY V = PRIMARY VOLTAGE
	G	GENERATOR, RATINGS AND CONNECTIONS AS NOTED
	—	AUTOMATIC OR MANUAL TRANSFER SWITCH NO.1 (ATS-1), (MTS-1) "N" INDICATES NORMAL OR PREFERRED SOURCE "S" INDICATES STANDBY OR ALTERNATE SOURCE 100A INDICATES CONTINUOUS CURRENT RATING
	*	VARIABLE SPEED DRIVE CONTROLLER * D.C. = D.C. DRIVE CONTROLLER SCR = SILICON CONTROLLED RECTIFIER VFD = VARIABLE FREQUENCY DRIVE
	E	UNIT HEATER — ELECTRIC HEATING COIL AND FAN # — RATING
	U	UNIT HEATER — GAS FIRED, STEAM OR WATER HEATING COIL AND FAN
	M	MOTOR, NUMERAL INDICATES HORSEPOWER
	—	VOLTMETER WITH SWITCH, 3 PHASE
	—	AMMETER WITH SWITCH, 3 PHASE

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION																
	—	METER * WM — WATTMETER WHM — WATTHOUR METER WHDM — WATTHOUR DEMAND METER WHDR — WATTHOUR DEMAND RECORDER PF — POWER FACTOR METER DMU — DIGITAL METERING UNIT																
	—	TRANSDUCER AX — CURRENT TRANSDUCER WX — WATT TRANSDUCER WHX — WATTHOUR TRANSDUCER																
		RELAY, NO. AS INDICATED 25 — SYNCHRONISM CHECK RELAY 27 — UNDERVOLTAGE RELAY 32 — DIRECTIONAL POWER RELAY 38 — BEARING PROTECTIVE DEVICE 40 — LOSS OF EXCITATION RELAY 42 — RUNNING CONTACTOR/PILOT RELAY 46 — REVERSE PHASE/PHASE BALANCE/CURRENT RELAY 47 — PHASE SEQUENCE VOLTAGE RELAY 49 — MACHINE OR TRANSFORMER THERMAL RELAY 50/51 — INSTANTANEOUS/TIME OVERCURRENT RELAY 50S — INSTANTANEOUS GROUND 51 — TIME OVERCURRENT RELAY 51G — TIME OVERCURRENT RELAY, GROUNDING RESISTOR TYPE 51M — TIME OVERCURRENT RELAY, RESIDUAL TYPE 51X — TIME OVERCURRENT RELAY WITH VOLTAGE RESTRAINT 51X — AUXILIARY RELAY (TRIPS CB AND ALARMS) 59 — OVERVOLTAGE RELAY 60 — NEGATIVE SEQUENCE VOLTAGE RELAY 62 — TIME DELAY RELAY 63 — OVERPRESSURE RELAY 64 — GENERATOR FIELD GROUND RELAY 67 — AC DIRECTIONAL OVERCURRENT RELAY 74 — ALARM LATCHING RELAY 83 — AUTOMATIC SELECTIVE CONTROL OR TRANSFER RELAY 86 — LOCKING-OUT RELAY 87 — DIFFERENTIAL PROTECTIVE RELAY B — SUFFIX INDICATES "BUS" G — SUFFIX INDICATES "GENERATOR" GF — GROUND FAULT ST — SHUNT TRIP T — SUFFIX INDICATES "TRANSFORMER" X — SUFFIX INDICATES "AUXILIARY"																
	—	SPECIAL CAPACITOR * SC — SURGE CAPACITOR PF — POWER FACTOR CORRECTION CAPACITOR																
	—	TUNED POWER FACTOR CORRECTION CAPACITOR																
	—	PUSHBUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY CLOSED																
	—	PUSHBUTTON, MOMENTARY CONTACT, SPRING RETURN, NORMALLY OPEN																
		EMERGENCY STOP PUSHBUTTON WITH RED MUSHROOM HEAD OPERATOR (MAINTAINED CONTACT)																
		START-STOP PUSHBUTTON CONTROL STATION (MOMENTARY CONTACT) WITH LOCKOUT DEVICE ON STOP																
		START-STOP PUSHBUTTON CONTROL STATION, MAINTAINED CONTACT WITH LOCKOUT DEVICE ON STOP																
		OFF/ON SELECTOR SWITCH																
		LOCAL/REMOTE SELECTOR SWITCH																
		3 POSITION SELECTOR SWITCH, MAINTAINED CONTACT O-OPEN X-CLOSED <table><tr><th>POSITION</th><th>TOP CONTACT</th><th>MIDDLE CONTACT</th><th>BOTTOM CONTACT</th></tr><tr><td>A</td><td>X</td><td>0</td><td>0</td></tr><tr><td>B</td><td>0</td><td>X</td><td>0</td></tr><tr><td>C</td><td>0</td><td>0</td><td>X</td></tr></table> NAMEPLATE (A/B/C) HOA — HAND/OFF/AUTO HOR — HAND/OFF/REMOTE LOR — LOCAL/OFF/REMOTE RSL — RAISE/STOP/LOWER TOA — TEST/OFF/AUTO	POSITION	TOP CONTACT	MIDDLE CONTACT	BOTTOM CONTACT	A	X	0	0	B	0	X	0	C	0	0	X
POSITION	TOP CONTACT	MIDDLE CONTACT	BOTTOM CONTACT															
A	X	0	0															
B	0	X	0															
C	0	0	X															
		GAS DETECTOR / VENTILATION FAILURE ALARM # INDICATES TYPE OF UNIT 1=MASTER, 2=REMOTE																
	—	MOTOR STARTER COIL, NUMBER AS INDICATED TO DENOTE INTERLOCKING ONLY																
	—	CONTROL RELAY COIL, NUMBER AS INDICATED																

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	—	PILOT LIGHT, COLOR AS NOTED * R — RED G — GREEN B — BLUE W — WHITE A — AMBER
	—	PILOT LIGHT, PUSH-TO-TEST TYPE, COLOR AS NOTED ABOVE.
	—	TIME DELAY RELAY RANGE AS NOTED SETPOINT AS NOTED # NUMBER AS INDICATED * TDE — TIME DELAY AFTER ENERGIZATION ON DELAY TDD — TIME DELAY AFTER DE-ENERGIZATION OFF DELAY NOTC — NORMALLY OPEN, TIMED CLOSING WHEN ENERGIZED NCTO — NORMALLY CLOSED, TIMED OPENING WHEN ENERGIZED NOTO — NORMALLY OPEN, TIMED OPENING WHEN DE-ENERGIZED NCTC — NORMALLY CLOSED, TIMED CLOSING WHEN DE-ENERGIZED
	—	FIELD INSTRUMENT, TAG NO. AS INDICATED * INDICATES INSTRUMENT TYPE DEFINED ON LOOP SHEETS OR P & ID ## INDICATES LOOP NO.
	LS OR ■	LIQUID LEVEL (FLOAT) SWITCH NORMALLY OPEN, CLOSING ON RISING LEVEL NORMALLY CLOSED, OPENING ON RISING LEVEL
	PS OR ■	PRESSURE OR VACUUM SWITCH NORMALLY OPEN, CLOSING ON RISING PRESSURE NORMALLY OPEN, CLOSING ON DROPPING PRESSURE NORMALLY CLOSED, OPENING ON RISING PRESSURE NORMALLY CLOSED, OPENING ON DROPPING PRESSURE
	TS OR ① OR ■	TEMPERATURE SWITCH OR THERMOSTAT NORMALLY OPEN, CLOSING ON RISING TEMPERATURE NORMALLY OPEN, CLOSING ON DROPPING TEMPERATURE NORMALLY CLOSED, OPENING ON RISING TEMPERATURE NORMALLY CLOSED, OPENING ON DROPPING TEMPERATURE
	FS OR ■	FLOW SWITCH (AIR, WATER, ETC.) NORMALLY OPEN, CLOSING ON INCREASED FLOW NORMALLY CLOSED, OPENING ON INCREASED FLOW
	ZS OR ■	POSITION (LIMIT) SWITCH NORMALLY OPEN NORMALLY OPEN — HELD CLOSED NORMALLY CLOSED NORMALLY CLOSED — HELD OPEN
	WS OR ■	TORQUE SWITCH NORMALLY OPEN, CLOSING ON HIGH TORQUE NORMALLY CLOSED, OPENING ON HIGH TORQUE
	—	UTILIZED IN CONJUNCTION WITH OTHER CONTROL SCHEMATIC SYMBOLS TO DEPICT THE PHYSICAL LOCATION OF THE DEVICE # REPRESENTS LOCATION SEE LOCATION LEGEND ON DRAWING
	—	CONDUCTORS OR CONDUITS CROSSING PATHS BUT NOT CONNECTED
	—	CONDUCTORS ELECTRICALLY CONNECTED
	S	SOLENOID VALVE

ONE LINE OR CONTROL DIAGRAM	PLAN	DESCRIPTION
	—	LIGHTNING ARRESTER
	⊙	GROUND OR GROUND ROD
	—	FUSE, AMPERE RATING AS NOTED
	HTR	STRIP HEATER OR HEATING ELEMENT
	—	INDUCTOR
	TG	TACHOMETER GENERATOR
	—	CONTACT, NORMALLY OPEN (NO)
	—	CONTACT, NORMALLY CLOSED (NC)
	—	OVERLOAD RELAY HEATER
	—	TERMINAL OR TEST BLOCK
	—	RESISTANCE TEMPERATURE DETECTOR
	—	VIBRATION DETECTOR
	DM	DAMPER MOTOR
	ETM	ELAPSED TIME METER
	M	MOTOR OPERATED VALVE OR GATE
	—	INDICATES LIMITS OF ELECTRICAL EQUIPMENT OR WIRING ENCLOSURE



- NOTES:**
- IN GENERAL CONDUIT ROUTING FOR EQUIPMENT AND DEVICES IS NOT SHOWN ON THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ROUTING ALL CONDUITS WHICH SHALL INCLUDE CONDUITS SHOWN ON ONE-LINE AND RISER DIAGRAMS AND HOME-RUNS SHOWN ON PLAN DRAWINGS. REFER TO SPECIFICATIONS FOR MATERIALS AND INSTALLATION REQUIREMENTS.
 - THE WIRING DIAGRAMS, QUANTITY AND SIZE OF WIRES AND CONDUITS REPRESENT A SUGGESTED ARRANGEMENT BASED UPON SELECTED STANDARD COMPONENTS OF ELECTRICAL EQUIPMENT. MODIFICATIONS ACCEPTABLE TO THE ENGINEER MAY BE MADE BY THE CONTRACTOR TO ACCOMMODATE EQUIPMENT ACTUALLY PURCHASED. THE BASIC SEQUENCE AND METHOD OF CONTROL MUST BE MAINTAINED AS INDICATED ON THE DRAWINGS AND/OR SPECIFICATIONS.
 - SWITCHGEAR AND MOTOR CONTROL CENTER COMPARTMENT DESIGNATIONS AS INDICATED BELOW:
BLANK: NOT INTENDED FOR USE. PLATE ONLY
SPACE: EQUIPPED WITH REQUIRED BUS AND HARDWARE FOR THE FUTURE ADDITION OF BREAKERS AND/OR STARTERS WITHIN THE SIZE AND RANGE SHOWN
SPARE: CONTAINS A COMPLETELY INSTALLED BREAKER AND/OR STARTER OF SIZE AND TYPE INDICATED FOR FUTURE USE.
 - INTERPRETATION OF ELECTRICAL DRAWINGS: CIRCUIT IDENTIFICATION, ROUTING, AND SIZES OF CONDUITS AND WIRES ARE SHOWN ON THE FOLLOWING DRAWINGS:
A. POWER ONE LINE DIAGRAMS: POWER, CONTROL AND SIGNAL WIRING REQUIREMENTS FOR ELECTRICAL DISTRIBUTION EQUIPMENT AND UTILIZATION EQUIPMENT POWERED FROM SWITCHGEAR, SWITCHBOARDS, MOTOR CONTROL CENTERS AND MAJOR POWER DISTRIBUTION PANELBOARDS ARE TYPICALLY SHOWN ON THE ONE LINE DIAGRAMS. THE PARAMETERS IDENTIFIED ON THE ONE LINE DIAGRAMS ARE: CIRCUIT IDENTIFICATION, CIRCUIT ORIGIN AND DESTINATION, CONDUIT SIZE, WIRE SIZE AND QUANTITY FOR COMPLETE CIRCUIT LENGTH, AND AUXILIARY DEVICES ASSOCIATED WITH THE CONTROL/PROTECTION OF THE POWERED EQUIPMENT, AND SIZE OF THE GROUNDING ELECTRODE CONDUCTORS.
B. INSTRUMENTATION AND CONTROL RISER DIAGRAM: POWER, CONTROL, SIGNAL AND DATA HIGHWAY WIRING REQUIREMENTS FOR INSTRUMENTS AND CONTROL DEVICES CONTROLLED/MONITORED FROM INSTRUMENTATION AND CONTROL PANELS SUCH AS RTUS, PLCs, TERMINAL CABINETS, AND REMOTE I/O PANELS ARE TYPICALLY SHOWN ON THE INSTRUMENTATION AND CONTROL ONE LINE DIAGRAMS. THE PARAMETERS IDENTIFIED ON THE ONE LINE DIAGRAMS ARE: CIRCUIT IDENTIFICATION, CIRCUIT ORIGIN AND DESTINATION, CONDUIT SIZE, WIRE SIZE, QUANTITY AND TYPE FOR COMPLETE CIRCUIT LENGTH, AND AUXILIARY DEVICES ASSOCIATED WITH THE CONTROL/PROTECTION OF THE POWERED EQUIPMENT.
C. FLOOR PLANS: FOR DETERMINING THE LENGTH OF CIRCUITS LOCATED WITHIN STRUCTURES, FLOOR PLANS SHOW THE LOCATION OF ELECTRICAL DISTRIBUTION EQUIPMENT, CONTROL PANELS, UTILIZATION EQUIPMENT, INSTRUMENTS, ANCILLARY EQUIPMENT AND DEVICES AND THE ANTICIPATED PENETRATION LOCATIONS WHERE CONDUITS EXIT/ENTER THE STRUCTURE. HOMERUNS MAY ALSO BE SHOWN FROM MISCELLANEOUS EQUIPMENT NOT SHOWN ON A ONE LINE OR RISER DIAGRAM.
D. SITE PLANS: FOR DETERMINING THE LENGTH OF CIRCUITS EXTERIOR TO STRUCTURES AND TO IDENTIFY THE SPECIFIC REQUIREMENTS OF THE UNDERGROUND CONDUITS OR DUCT BANKS, SITE PLANS SHOW THE GENERAL ROUTING OF UNDERGROUND CONDUITS AND DUCT BANKS WITH SECTIONS INDICATING THE CONDUIT SIZE, ARRANGEMENT AND CIRCUIT ROUTING.
E. NOTE THAT CONDUIT SIZE WITHIN STRUCTURE IS INDICATED ON ONE-LINE DIAGRAM AND UNDERGROUND SIZE IS INDICATED ON DUCT BANK SECTIONS.

REV. NO.	DATE	DRWN	CHKD	REMARKS

DESIGNED BY: L. YANG
DRAWN BY: M. OTTO
SHEET CHK'D BY: L. YANG
CROSS CHK'D BY: C. STELLMACK
APPROVED BY: S. PERRY
DATE: APRIL 2025

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FL COA No. EB-000020

COLLIER COUNTY, FLORIDA
NRO WELLS 118N AND 120N
IMPROVEMENTS

ELECTRICAL LEGEND I

DATE:
SPENCER J. PERRY JR
PE NO. 62587
PROJECT NO. 6295-296440
FILE NAME: E001NFLG.DWG
SHEET NO.
E-1

