

LEGEND

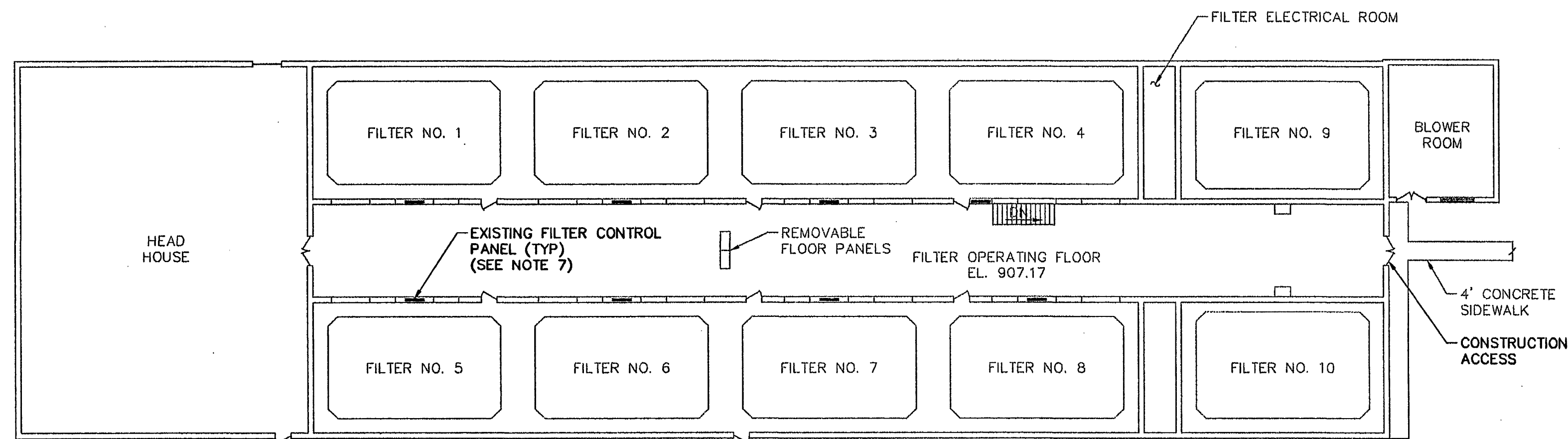
	CENTERLINE
	DEMOLITION
	BUTTERFLY VALVE
	GATE VALVE
	CHECK VALVE
	PRESSURE REDUCING VALVE, SELF-CONTAINED
	WELDED JOINT
	FLANGE JOINT (FLG.)
	REDUCER
	PIPING ELBOW, 90° TURNED DOWN
	PIPING ELBOW, 90° TURNED UP
	PIPING TEE, OUTLET TURNED DOWN
	PIPING TEE, OUTLET TURNED UP
	BUTTERFLY VALVE
	VALVE, NOT OTHERWISE SPECIFIED
	PIPING ELBOW, 90° TURNED UP
	PIPING ELBOW, 90° TURNED DOWN
	LIMIT OF WORK
	EXISTING HYDRAULIC ACTUATOR
	ELECTRIC MOTOR ACTUATOR

ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR
BFV	BUTTERFLY VALVE
BLDG	BUILDING
CPLG	COUPLING
CI	CAST IRON
CL	CENTERLINE
CL	CLEAR, CLEARANCE
CMU	CONCRETE MASONRY UNITS
CONC.	CONCRETE
COL.	COLUMN
CON	CONNECTION
CONT	CONTINUE
DEMO	DEMOLITION
DIA	DIAMETER
DI	DUCTILE IRON
EL/ELEV	ELEVATION
EXIST	EXISTING
EXP	EXPANSION
FRP	FIBERGLASS REINFORCED PLASTIC
FLG	FLANGED
FT	FOOT, FEET
HB	HOSE BIBB
IN	INCH
MAX	MAXIMUM
MFR	MANUFACTURER
MIN	MINIMUM
MH	MANHOLE
MISC	MISCELLANEOUS
NOM	NOMINAL
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OPNG	OPENING
PG	PRESSURE GAGE
PLCS	PLACES
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PVC	POLYVINYL CHLORIDE
REINF	REINFORCEMENT
SCH.	SCHEDULE
SQ	SQUARE
SS / S.S.	STAINLESS STEEL
STL	STEEL
T/	TOP
TYP	TYPICAL
W/	WITH
V103	VALVE NUMBER

INDEX

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D-1	EFFLUENT FILTERS - DEMOLITION PLAN
D-2	EFFLUENT FILTERS - DEMOLITION FILTER PLAN AND SECTIONS
M-1	EFFLUENT FILTERS - PLAN
M-2	EFFLUENT FILTERS - TYPICAL FILTER PLAN AND SECTIONS
M-3	EFFLUENT FILTERS - DETAILS
E-1	EFFLUENT FILTERS - ELECTRICAL LEGEND AND SCHEDULES
E-2	EFFLUENT FILTERS - PLAN
I-1	EFFLUENT FILTERS - INSTRUMENTATION LEGEND AND ABBREVIATIONS
I-2	EFFLUENT FILTERS - PROCESS AND INSTRUMENTATION DIAGRAM
I-3	EFFLUENT FILTERS - FILTER CONTROL PANEL AND PLC COMMUNICATION

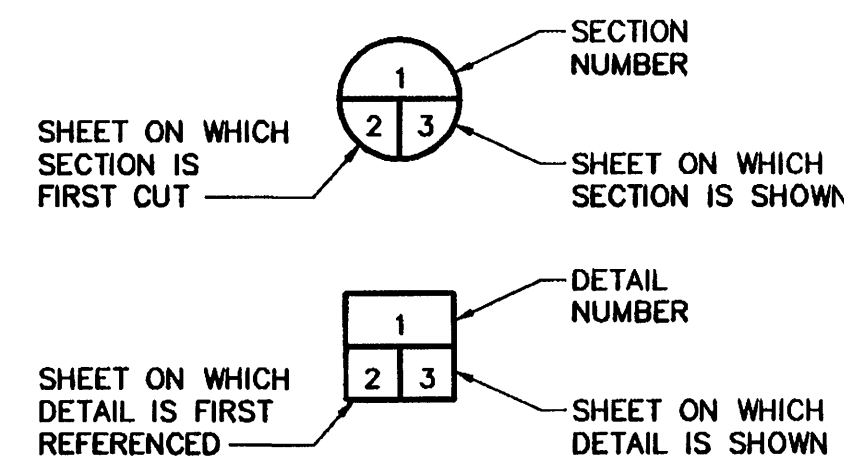


EFFLUENT FILTER BUILDING PLAN

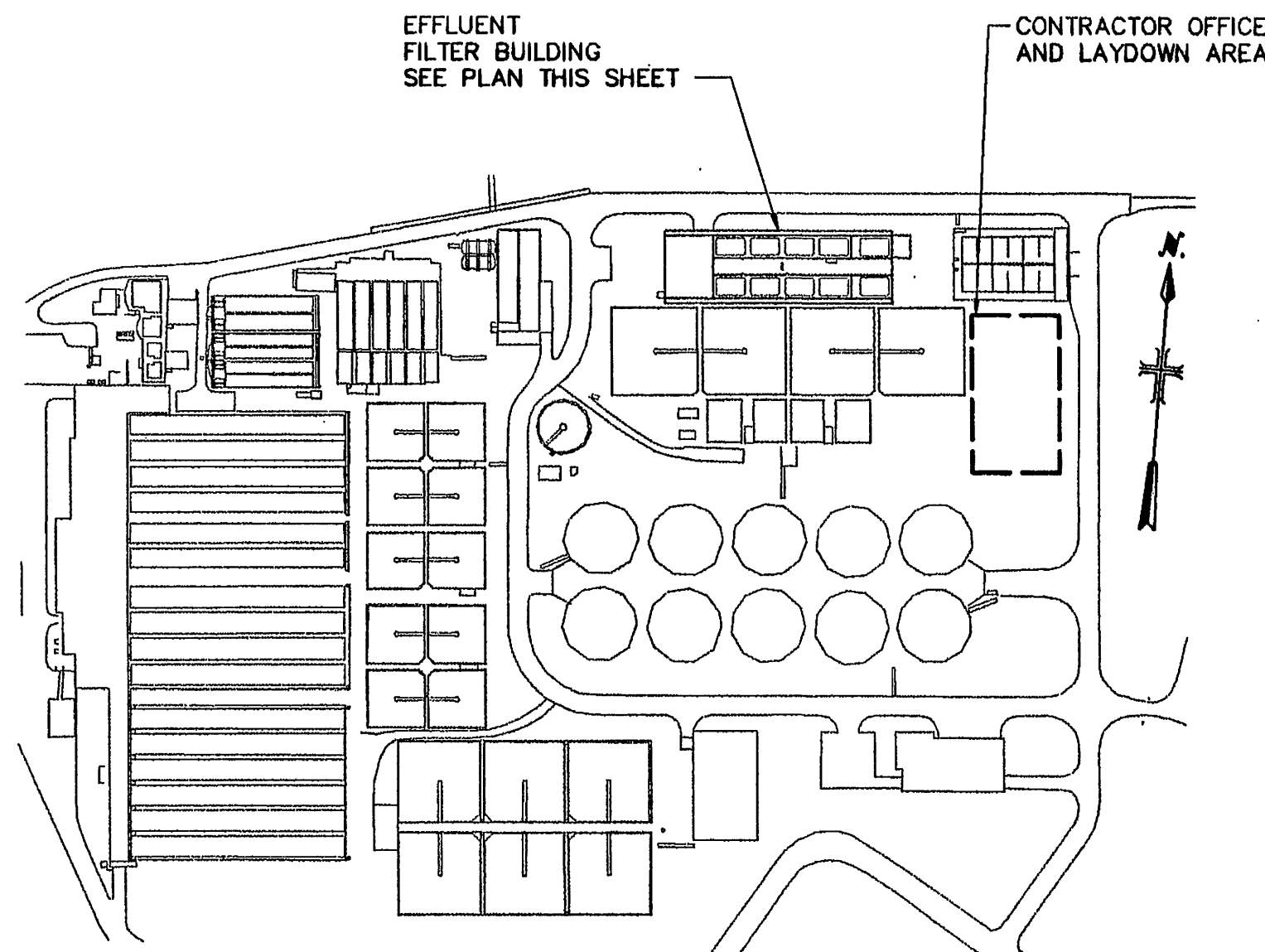
SCALE: 1" = 20'

GENERAL NOTES:

- LIMITS OF WORK WILL BE DEFINED BY ALTERNATE BID ITEM CHOSEN BY OWNER, IF ANY. WHERE PIPING, NEW OR EXISTING, IS TO BE TERMINATED AS DEFINED BY THE EXTENT OF CONTRACTED WORK, TERMINATION SHALL BE ACCOMPLISHED BY MEANS OF A BLIND FLANGE FOR PIPING 2-INCHES IN DIAMETER OR GREATER, OR BY A THREADED CAP FOR PIPING LESS THAN 2-INCHES IN DIAMETER. CONTRACTOR SHALL ALSO ENSURE THAT END OF PIPE, WHETHER NEW OR EXISTING, IS PROPERLY SUPPORTED.
- CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS AND LOCATIONS OF EXISTING ITEMS PRIOR TO EQUIPMENT FABRICATION AND INSTALLATION.
- EXISTING DIMENSIONS ARE PER THE FOLLOWING DESIGN DRAWINGS:
"ADDITIONS TO SEWAGE TREATMENT PLANT, ROANOKE, VIRGINIA", ALVORD, BURDICK & HOWSON ENGINEERS, CHICAGO, 1973.
"WATER POLLUTION CONTROL PLANT UPGRADE AND EXPANSION", MALCOLM PIRNIE, INC., NEWPORT NEWS AND MATTERN & CRAIG, ROANOKE, MAY 1997.
- LAY VISQUEENE AND A MINIMUM OF 3/8-INCH PLYWOOD OVER FILTER OPERATING GALLERY TILE FLOORS TO PREVENT DAMAGE DURING CONSTRUCTION ACTIVITIES. CONTRACTOR TO REPAIR ANY DAMAGE RESULTING FROM CONSTRUCTION ACTIVITIES.
- ALL WORK SHOWN "FULL-TONE" IS PROPOSED, UNLESS OTHERWISE NOTED. ALL "HALF-TONE" ITEMS REPRESENT EXISTING FEATURES.
- LIMITS OF CONTRACTOR WORK ARE SHOWN ON SHEETS D-1 AND M-1. ACCESS TO THE FILTER BUILDING FOR CONSTRUCTION ACTIVITIES IS SHOWN ON THIS SHEET.
- NEW FILTER CONTROL CONSOLES TO BE INSTALLED IN THE SAME LOCATION AS EXISTING CONTROLS. SEE SHEET M-1 FOR DETAILS.
- REFER TO SECTION 01014, MAINTENANCE OF PLANT OPERATIONS, FOR SHUTDOWN REQUIREMENTS.

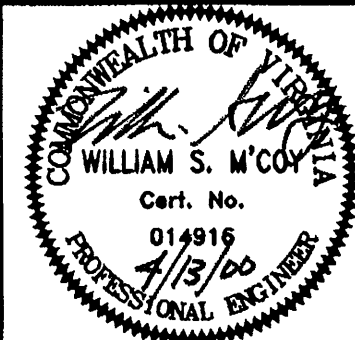


SECTION AND DETAIL KEY



KEY PLAN

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REVISIONS				REMARKS
NO.	BY	DATE		

DES B.J.L./P.B.B.
DWN J.L.C.
CKD



CITY OF ROANOKE, VIRGINIA
**WATER POLLUTION
CONTROL PLANT**
EFFLUENT FILTER REHABILITATION

**INDEX, LEGEND,
ABBREVIATIONS AND PLANS**

SCALE: AS NOTED

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DATE APRIL 2000
G SHEET 1 OF 1
CAD REF. NO. 0060G001