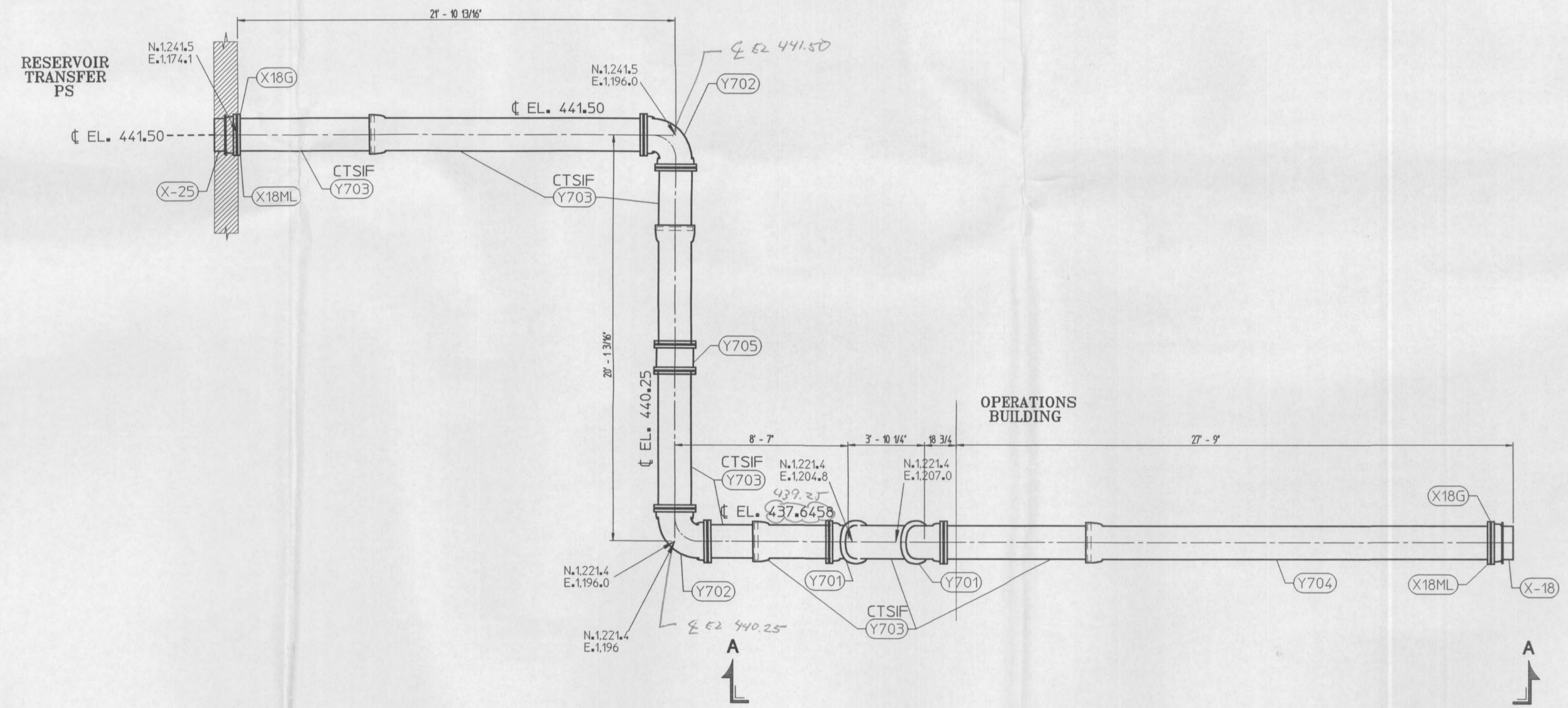
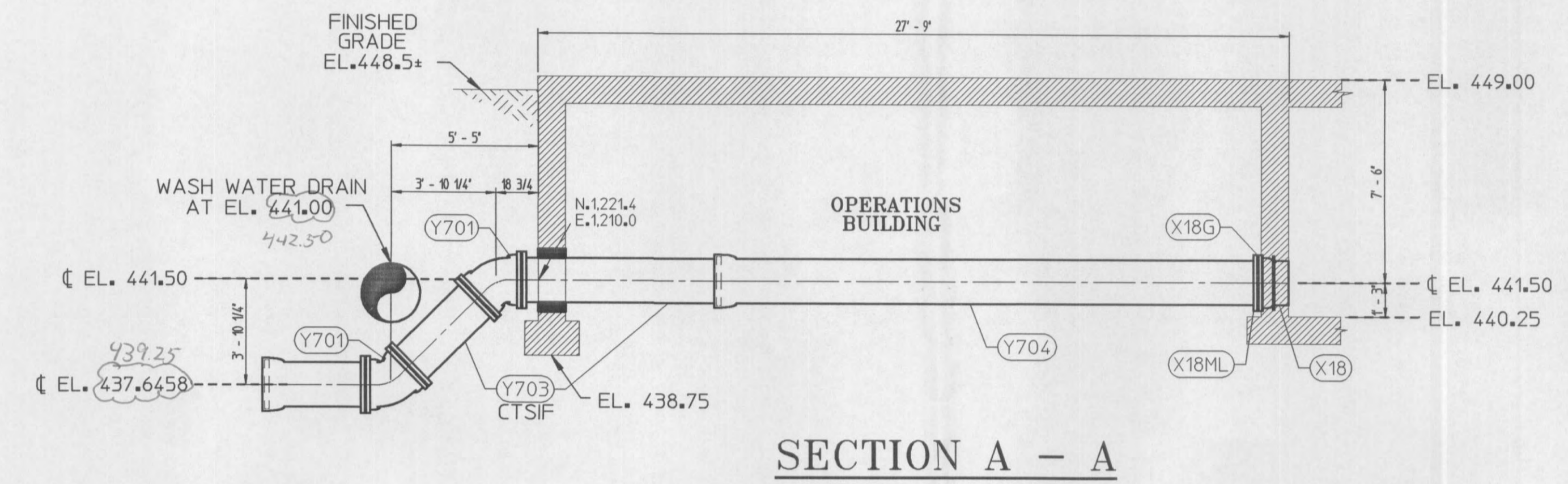




BILL OF MATERIAL			
QTY	SP/ID	MARK	DESCRIPTION
2	CL-ASPHL	Y701	18" MJ C153 45 BEND, ALL CENTERS 7.5', 350 PSI, IR, 4-2-2-2
2	CL-ASPHL	Y702	18" MJ C153 90 BEND, ALL CENTERS 35.5', 350 PSI, IR, 4-2-2-2
4	CL-ASP	Y703	18" FRBELL FPE PIPE CL-50 0.35' 19.9', 2-2-2-2
1	CL-ASP	Y704	18" FRBELL M PIPE CL-50 0.35' 19.9', 2-2-2-2
1	ASP-ASP	Y705	18" MJ SLEEVE C153 SOLID, OA 13', 350 PSI, IR, 1-2-2-2
12	CL-ASPHL	X18G	18" MEGALUG RETAINER GLAND W/COATING 2
12	CL-ASPHL	X18ML	18" MEGALUG ACCESSORY KIT WITH SBR GASKET AND 12 BOLTS (MEGALUG RETAINER GLAND NOT INCLUDED)
1	CL-ASP	**X-18	18" MJ TAPPED FOR STUDS DWG P000097 PE PIPE CL-53 0.44' 11" OVERALL (9-1/2" LL), W/STL COLLAR 6-1/2" FROM PE, 2-2-2-2/N
1	CL-ASP	**X-25	18" MJ TAPPED FOR STUDS DWG P000097 PE PIPE CL-53 0.44' 11" OVERALL (9-1/2" LL), W/STL COLLAR 6-1/2" FROM PE, 2-2-2-2/N

\*\* - Indicates the item has been placed on order.

SPECIFICATION BOUNDARY DEFINITIONS	
Boundary ID: CL-ASPHL	Service Type: PROCESS
Boundary name: MEGALUG	Service Temp: 50
Boundary unit: 1	Environment: EXT/BURIED
Pipe Lining: Single Thick C/L with Seal Coat: Black, 1-Coat, AMMA C104	
Pipe coating: Asphaltic Coated: Black, 1-Coat, 3-Avg, 1-Min	
Filling Lining: Double Thick C/L with Seal Coat: Black, 1-Coat, AMMA C104	
Filling coating: Asphaltic Coated: Black, 1-Coat, 3-Avg, 1-Min	
Gasket Types	
FAST GRIP - Fast Grip Gasket, Plain Rubber Styrene-Buladiene	
FRBELL FLEX-RING - Fastite Gasket, Plain Rubber Styrene-Buladiene	
MJ MEGALUG GLAND - Mechanical Joint Gasket, Plain Rubber Styrene-Buladiene	
Boundary ID: CL-ASP	Service Type: PROCESS
Boundary name: CL-ASP	Service Temp: 50
Boundary unit: 1	Environment: EXT/BURIED
Pipe Lining: Single Thick C/L with Seal Coat: Black, 1-Coat, AMMA C104	
Pipe coating: Asphaltic Coated: Black, 1-Coat, 3-Avg, 1-Min	
Filling Lining: Double Thick C/L with Seal Coat: Black, 1-Coat, AMMA C104	
Filling coating: Asphaltic Coated: Black, 1-Coat, 3-Avg, 1-Min	
Gasket Types	
FASTITE - Fastite Gasket, Plain Rubber Styrene-Buladiene	
FLEX-RING 4-12 - Fastite Gasket, Plain Rubber Styrene-Buladiene	
FLG LESS ACCESSORIES - none	
FRBELL FLEX-RING - Fastite Gasket, Plain Rubber Styrene-Buladiene	
GAGE FOR DRESSER - none	
MJ - Mechanical Joint Gasket, Plain Rubber Styrene-Buladiene	
RIGID GROOV LESS ACC - none	
Boundary ID: ASP-ASP	Service Type: PROCESS
Boundary name: ASP-ASP	Service Temp: 50
Boundary unit: 1	Environment: EXT/BURIED
Pipe Lining: Asphaltic Lined: Black, 1-Coat, 3-Avg, 1-Min	
Pipe coating: Asphaltic Coated: Black, 1-Coat, 3-Avg, 1-Min	
Filling Lining: Asphaltic Lined: Black, 1-Coat, 3-Avg, 1-Min	
Filling coating: Asphaltic Coated: Black, 1-Coat, 3-Avg, 1-Min	
Gasket Types	
FASTITE - Fastite Gasket, Plain Rubber Styrene-Buladiene	
FLEX-RING 4-12 - Fastite Gasket, Plain Rubber Styrene-Buladiene	
FLG LESS ACCESSORIES - none	
FRBELL FLEX-RING - Fastite Gasket, Plain Rubber Styrene-Buladiene	
MJ - Mechanical Joint Gasket, Plain Rubber Styrene-Buladiene	
RIGID GROOV LESS ACC - none	



NO EXCEPTIONS NOTED  
 EXCEPTIONS NOTED  
 RETURNED FOR CORRECTION  
 RECORD COPY  NOT ACCEPTABLE  
 RETURNED WITHOUT REVIEW  
 AUG 01 2002  
 REVIEW DOES NOT RELIEVE CONTRACTOR FROM  
 RESPONSIBILITY FOR ERRORS, OMISSIONS, OR  
 DEVIATIONS FROM CONTRACT REQUIREMENTS.  
 BLACK & VEATCH

RESTRAINED JOINT PIPING (NE)  
 (Nominal Extension)  
 Flex-Ring and Lok-Ring joint pipe, designated 'NE', have been detailed on this drawing with a nominal joint extension or creep allowance at each joint of 1/4". This joint extension or creep is anticipated due to normal installation practice and tolerance in the joint itself.

*Approved  
 TM 6/14/02*

**AMERICAN DUCTILE IRON PIPE**  
 A DIVISION OF AMERICAN CAST IRON PIPE COMPANY  
 PHONE: 1-800-442-2347 FAX: 1-800-442-2348  
 P O BOX 2727 BIRMINGHAM, ALABAMA 35202 2916 16th STREET NORTH BIRMINGHAM, ALABAMA 35207  
 4'-6" Diameter Ductile Iron Pipe - Fastite Joint, Mechanical Joint, Flanged Joint  
 Flex-Ring Restrained Joint, Lok-Ring Restrained Joint, Flex-Lok Restrained Joint.  
 ANSI A21.10, A21.53, & AMERICAN Standard Fittings  
 ANSI A21.4 Cement Lining, POLYBOND Lining, plus Special Coatings & Linings  
 American Flow Control - Valves And Hydrants

The drawing is a service to the customer as an aid in developing a detailed bill of material. The purchaser must verify correctness of design and dimensions. It is the responsibility of the purchaser to verify all details on receipt of prints. Changes desired shall be noted on a print and returned to American. Drawings will be revised per these changes. Drawings returned to American without signature or initial will be considered to have been reviewed by the customer with any required change noted.

REVISED BY:	DATE:	REV #:	
Angelia Neelley	04Jun2002	1	

CONDAIRE, INCORPORATED  
 WATER TREATMENT FACILITIES  
 O'FALLON, MO  
 REVERSE OSMOSIS BYPASS  
 REF. DWGS. B2, D3, D5 & E1

**18" REVERSE OSMOSIS BYPASS**