

# CITY OF WICHITA, KANSAS

## MICHAEL E. LINDEBAK, P.E., CITY ENGINEER

# POND CONSTRUCTION

## IN FOREST LAKES WEST

PRIVATE PROJECT NO. 75OPPS (607861)

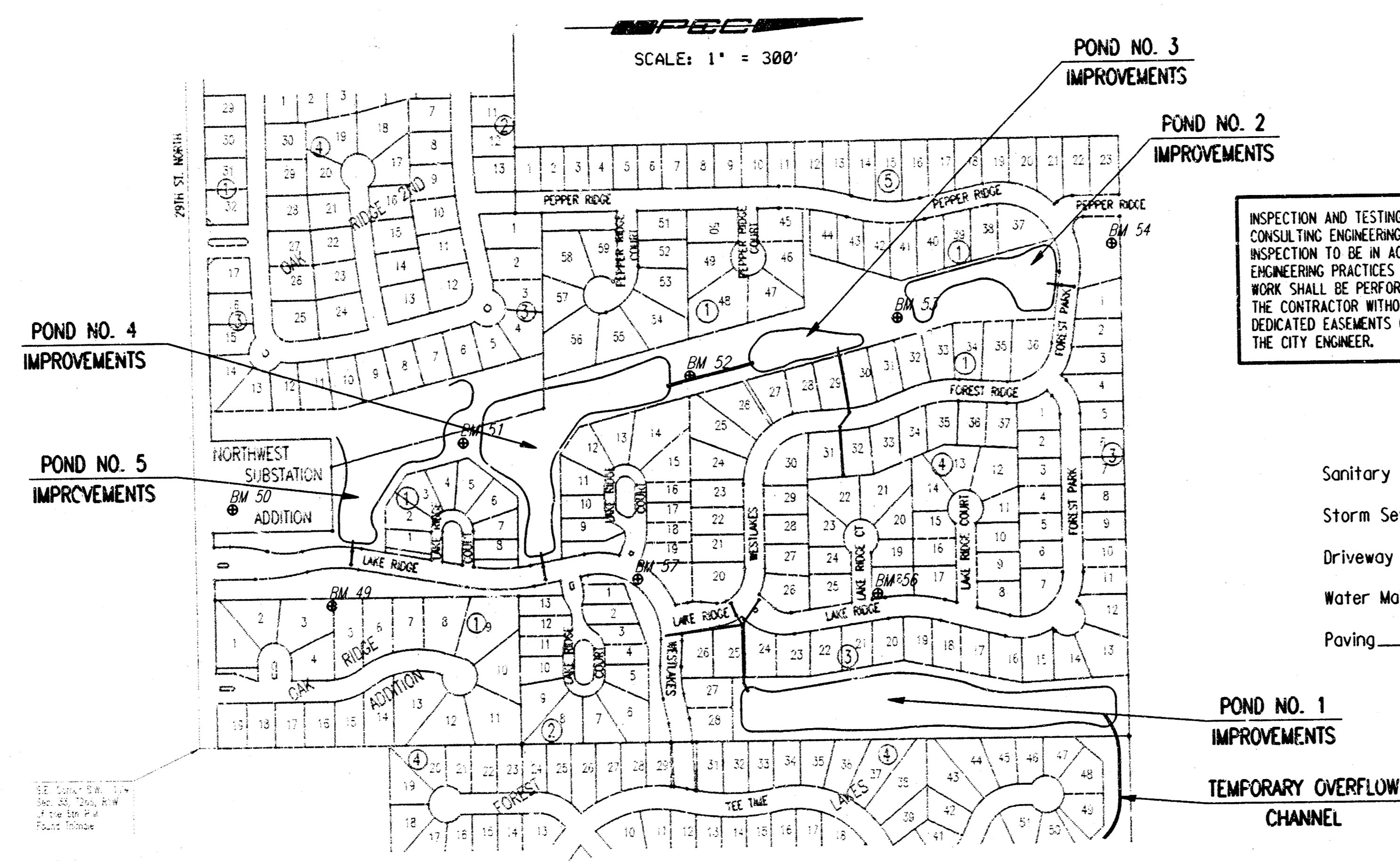
**INDEX OF SHEETS**

1. TITLE SHEET
- 2-3. PLATS
4. POND NO. 1 GRADING PLAN
5. POND NO. 2 & 3 GRADING PLANS
6. POND NO. 4 & 5 GRADING PLAN
7. TEMPORARY OVERFLOW CHANNEL POND NO. 1
- 8-9. TYPICAL POND SECTIONS
- 10-11. WEIR DETAILS
12. RAPRAP DETAILS

**PROJECT SURVEY CONTROL**

CITY OF WICHITA VERTICAL DATUM

- BM #49: CHISLED "4" NORTH RIM SANITARY SEWER MANHOLE, 200'± EAST OF NE CORNER OF THE NORTHWEST SUBSTATION ADDITION. ELEV.=154.93
- BM #50: RAILROAD SPIKE IN WEST FACE OF EAST POLE OF FIRST ELECTRIC LINE "H" STRUCTURE NORTH OF 29TH STREET NORTH. ELEV.=159.96
- BM #51: RAILROAD SPIKE IN EAST FACE OF EAST POLE OF SECOND ELECTRIC LINE "H" STRUCTURE NORTH OF 29TH STREET NORTH, NEAR WEST CORNER LOT 5, BLOCK 1. ELEV.=158.61
- BM #52: RAILROAD SPIKE IN WEST FACE OF EAST POLE OF THIRD ELECTRIC LINE "H" STRUCTURE NORTH OF 29TH STREET NORTH, NEAR WEST CORNER LOT 25, BLOCK 1. ELEV.=163.76
- BM #53: RAILROAD SPIKE IN EAST FACE OF EAST POLE OF FOURTH ELECTRIC LINE "H" STRUCTURE NORTH OF 29TH STREET NORTH, WEST OF LOT 32, BLOCK 1. ELEV.=158.19
- BM #54: RAILROAD SPIKE IN SOUTH FACE OF SW POLE OF 3-POLE HIGH LINE STRUCTURE IN RESERVE "E". ELEV.=155.87
- BM #56 "T" POST, 7 FEET NW OF SE CORNER LOT 18, BLOCK 4. ELEV.=148.29
- BM #57 "T" POST, 62 FEET ESE OF SE CORNER LOT 19, BLOCK 1. ELEV.=153.01



INSPECTION AND TESTING FOR THIS PROJECT IS TO BE PROVIDED BY A LICENSED CONSULTING ENGINEERING FIRM CONTRACTED BY THE OWNER/DEVELOPER. SAID INSPECTION TO BE IN ACCORDANCE WITH THE CITY OF WICHITA STANDARD CONSTRUCTION ENGINEERING PRACTICES AND CERTIFIED BY A LICENSED PROFESSIONAL ENGINEER. NO WORK SHALL BE PERFORMED IN DEDICATED EASEMENTS OR THE PUBLIC RIGHT-OF-WAY BY THE CONTRACTOR WITHOUT SUCH INSPECTION NOR SHALL ANY WORK BE COMMENCED IN DEDICATED EASEMENTS OR PUBLIC RIGHT-OF-WAY WITHOUT WRITTEN AUTHORIZATION BY THE CITY ENGINEER.

APPROVED AS NOTED  
By CITY ENGINEER OF WICHITA

- Sanitary Sewers \_\_\_\_\_
- Storm Sewers VRH 10/14/97
- Driveway Approaches \_\_\_\_\_
- Water Mains \_\_\_\_\_
- Paving \_\_\_\_\_

**GENERAL NOTES**

UNDERGROUND UTILITY SERVICE LINES AND OVERHEAD UTILITY POLE LINES ARE TO BE ADJUSTED AS NECESSARY BY OTHERS PRIOR TO CONSTRUCTION UNLESS THE PLANS SPECIFICALLY CALL FOR THEIR ADJUSTMENT BY THE CONTRACTOR. EXISTING UTILITIES AND THEIR LOCATION, AS SHOWN ON THE PLANS, REPRESENT THE BEST INFORMATION OBTAINABLE FOR DESIGN. LOCATION INFORMATION HAS BEEN OBTAINED FROM THE VARIOUS UTILITY COMPANIES AND IS EITHER FROM COMPANY RECORD DRAWINGS OR COMPANY PROVIDED FIELD LOCATIONS. THE CONTRACTOR WILL BE REQUIRED TO WORK AROUND EXISTING UTILITIES WITHIN THE RIGHT-OF-WAY WHICH DO NOT CONFLICT WITH PROPOSED CONSTRUCTION.

TREES AND SHRUBS IN PUBLIC RIGHT-OF-WAY WHICH ARE IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE REMOVED BY THE CONTRACTOR WITH THE ENGINEER'S APPROVAL. TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH PROPOSED NEW CONSTRUCTION SHALL BE SAVED AND PROTECTED FROM DAMAGE.

RUBBLE FROM THE REMOVAL OF MISCELLANEOUS STRUCTURES SHALL BE USUALLY OF ON SITES TO BE PROVIDED BY THE CONTRACTOR AND APPROVED AS NOTED BELOW.

ALL DISPOSAL SITES MUST BE APPROVED BY THE KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT. MATERIAL EITHER STOCKPILED OR DISPOSED OF IN A FLOOD PLAIN WOULD REQUIRE A KANSAS STATE BOARD OF AGRICULTURE PERMIT. ANY MATERIAL DUMPED IN WATERS OF THE UNITED STATES OR WETLANDS IS SUBJECT TO U.S. CORPS OF ENGINEERS PERMITTING REGULATIONS. ANY MATERIAL BURIED OR STOCKPILED BEYOND APPROVED CONSTRUCTION LIMITS WOULD REQUIRE ADDITIONAL ARCHEOLOGICAL INVESTIGATIONS UNLESS BURIED IN A PREVIOUSLY APPROVED BORROW LOCATION.

CONTRACTOR SHALL SATISFY HIMSELF OF SURFACE AND SUBSURFACE CONDITIONS PRIOR TO BIDDING.

CONTRACTOR SHALL PROVIDE A MINIMUM FORTY-EIGHT (48) HOUR ADVANCE NOTICE (EXCLUDING WEEKENDS AND HOLIDAYS) PRIOR TO BEGINNING ANY EXCAVATION TO KANSAS ONE-CALL SYSTEM, A UTILITY LOCATION SERVICE, AT (316) 687-2470 TO REQUEST THE FOLLOWING UTILITY COMPANIES TO LOCATE ALL EXISTING LINES WITHIN THE PROJECT AREA: PEOPLES NATURAL GAS, K.G.E. ELECTRIC, SOUTHWESTERN BELL TELEPHONE, MULTIMEDIA CABLEVISION, CITY OF WICHITA SEWER MAINTENANCE AND CITY OF WICHITA WATER DEPARTMENT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PRESERVING PROPERTY IRONS. THE CONTRACTOR WILL BE REQUIRED TO RE-ESTABLISH ANY PROPERTY IRONS WHICH ARE DAMAGED OR DESTROYED BY HIS CONSTRUCTION OPERATIONS. SUCH IRONS SHALL BE RE-ESTABLISHED BY A LICENSED LAND SURVEYOR IN ACCORDANCE WITH STATE LAWS.

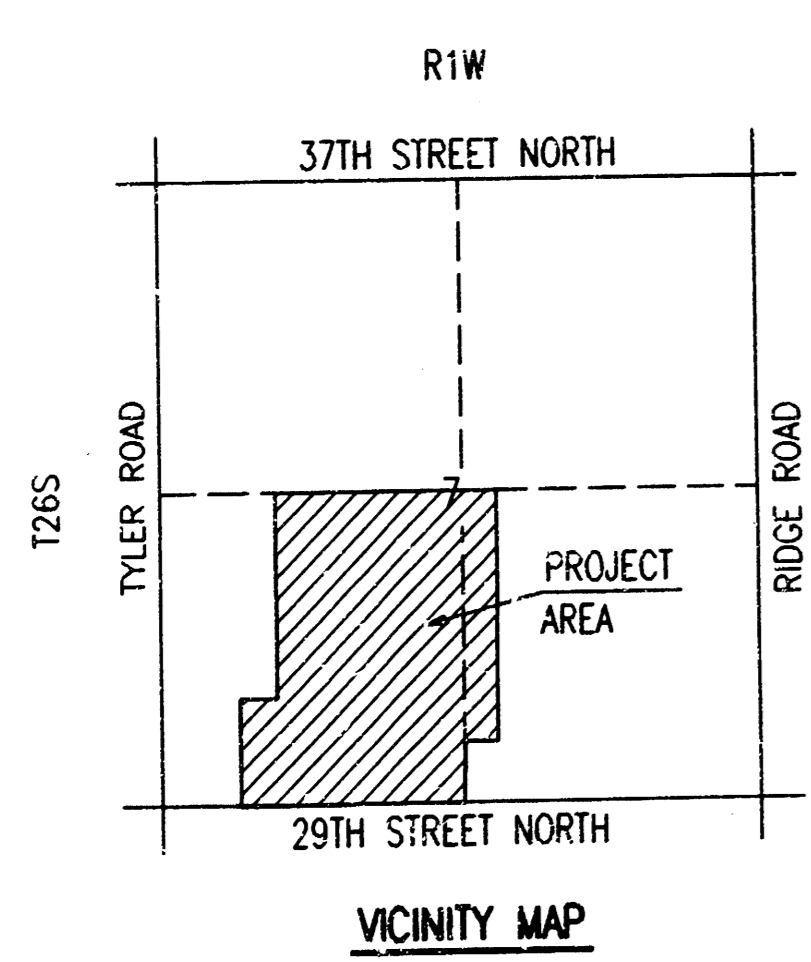
THE WATER DEPARTMENT SHALL FIELD LOCATE WATER VALVES ON-TIME DURING CONSTRUCTION WHEN REQUESTED BY THE CONTRACTOR. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PRESERVE SUCH FIELD LOCATIONS DURING THE CONSTRUCTION PROCESS. WATER VALVES, WATER VALVE BOXES OR FIRE HYDRANTS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED BY THE CONTRACTOR AT HIS OWN EXPENSE.

CONTRACTOR SHALL BE REQUIRED TO COORDINATE HIS WORK WITH PAVING CONTRACTOR, CITY OF WICHITA PROJECT NO. 472-76-245-82865-000-000-001, SANITARY SEWER CONTRACTOR, C.O.W. PROJ. NO. 468-76-245-82766-000-1000-001 AND WATER LINE CONTRACTOR, C.O.W. PROJ. NO. 448-76-245-89202-000-000-001.

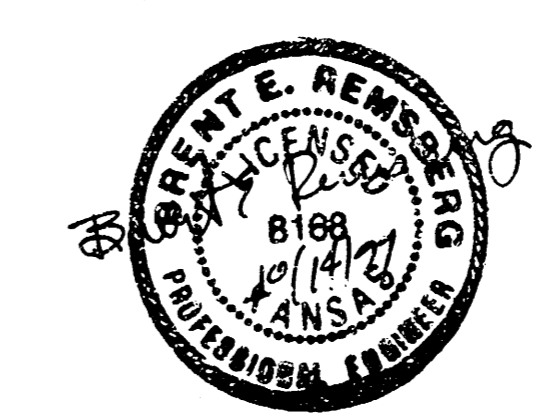
CONTRACTOR SHALL BID "CLEARING R/W AND SITE PREPARATION" AS A LUMP SUM WHICH SHALL BE FULL COMPENSATION FOR REMOVING ALL TREES, FENCE, ETC. DEEMED NECESSARY TO BE REMOVED BY THE ENGINEER AND NOT ALREADY REMOVED BY SANITARY SEWER OR WATER CONTRACTORS, AND ANY OTHER MISCELLANEOUS ITEMS MARKED FOR REMOVAL BUT NOT LISTED AS A BID ITEM.

CONTRACTOR SHALL TEMPORARILY SEED AND MULCH ALL AREAS DISTURBED BY HIS CONSTRUCTION OPERATIONS ABOVE STATIC POOL, INCLUDING WASTE AREAS, AT THE RATE OF 4LBS./1000 S.F. OF ANNUAL RYE SEED AND 90LBS./1000 S.F. OF HAY MULCH. THIS WORK SHALL BE BID AS A LUMP SUM FOR "TEMPORARY SEEDING AND MULCHING".

CONTRACTOR TO WASTE OR STOCKPILE EXCESS EXCAVATION AS DIRECTED BY THE OWNER.



OCTOBER 1997  
PLANS PREPARED BY  
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
ENGINEERS  
WICHITA, KANSAS



*Boit  
8/12/03  
RPL*

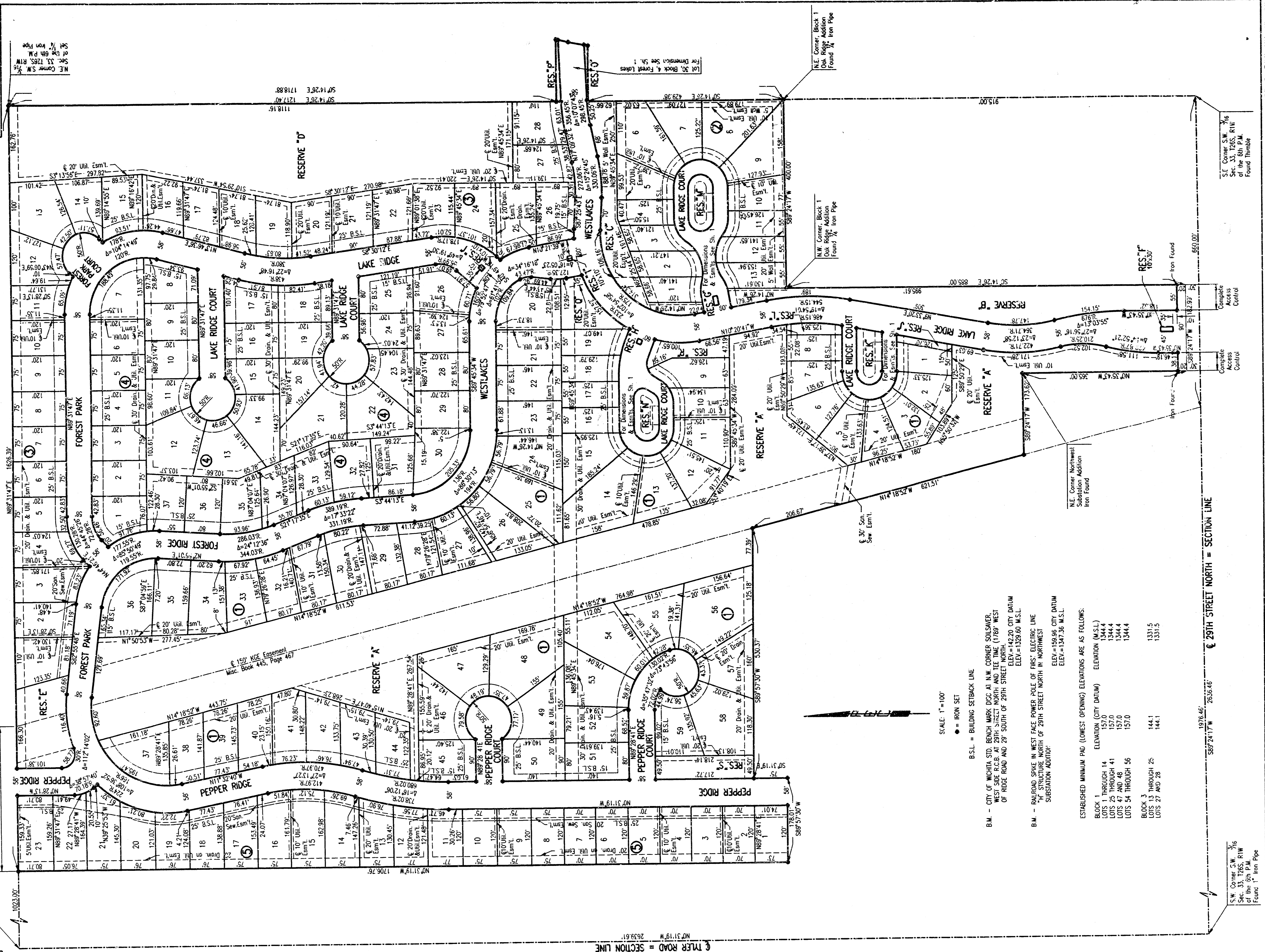
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 dwt/br to: dwaine dunn

# FOREST LAKES WEST

## AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

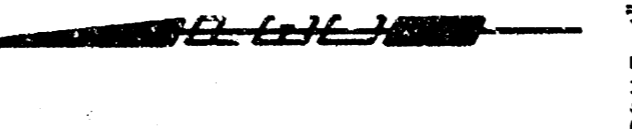
**PLAT**  
 FOREST LAKES WEST  
 Prepared by  
**PROFESSIONAL ENGINEERING CONSULTANTS, P.A.**  
 WICHITA, KANSAS  
 Checked by  
 DEP  
 Date: SEPT. 1997 Job No. 9766-1

PROJECT NO.	1750 PPS (607861)
SHEET NO.	2
TOTAL SHEETS	12



N.W. Corner S.W. 1/4  
 Sec. 33, T25S, R17W  
 of the 6th P.M.  
 Found Limestone w/  
 400 Iron in Center

N.E. Corner S.W. 1/4  
 Sec. 33, T25S, R17W  
 of the 6th P.M.  
 Found Iron Pipe



SCALE: 1"=100'  
 ● = IRON SET  
 B.S.L. = BUILDING SETBACK LINE  
 B.M. - CITY OF WICHITA, STD. BENCH MARK, DOCS. AT N.W. CORNER, CUSHKERS, WEST LAKES WEST, SEC. 33, T25S, R17W, AND 29TH STREET NORTH, (1788) WEST OF RIDGE ROAD AND 29TH STREET SOUTH OF 29TH STREET NORTH, ELEV.=142.20 CITY DATUM ELEV.=1329.60 M.S.L.  
 B.M. - RAILROAD SPIKE IN WEST FACE POWER POLE OF FHS' ELECTRIC LINE "H" STRUCTURE NORTH OF 29TH STREET NORTH IN NORTHWEST SUBSTATION ADJUTY. ELEV.=159.96 CITY DATUM ELEV.=1347.36 M.S.L.

ESTABLISHED MINIMUM PAD (LOWEST OPENING) ELEVATIONS ARE AS FOLLOWS:  
 BLOCK 1 THROUGH 14 ELEVATION (CITY DATUM) ELEVATION (M.S.L.)  
 LOTS 1 THROUGH 41 157.0 1344.4  
 LOTS 47 AND 48 157.0 1344.4  
 LOTS 54 THROUGH 56 157.0 1344.4  
 BLOCK 3 THROUGH 25 144.1 1331.5  
 LOTS 27 AND 28 144.1 1331.5

S.W. Corner S.W. 1/4  
 Sec. 33, T25S, R17W  
 of the 6th P.M.  
 Found Iron Pipe

S.E. Corner S.W. 1/4  
 Sec. 33, T25S, R17W  
 of the 6th P.M.  
 Found Iron Pipe

29TH STREET NORTH = SECTION LINE

TYLER ROAD = SECTION LINE

FOREST LAKES WEST  
 1750 PPS (607861)  
 SHEET NO. 2  
 TOTAL SHEETS 12

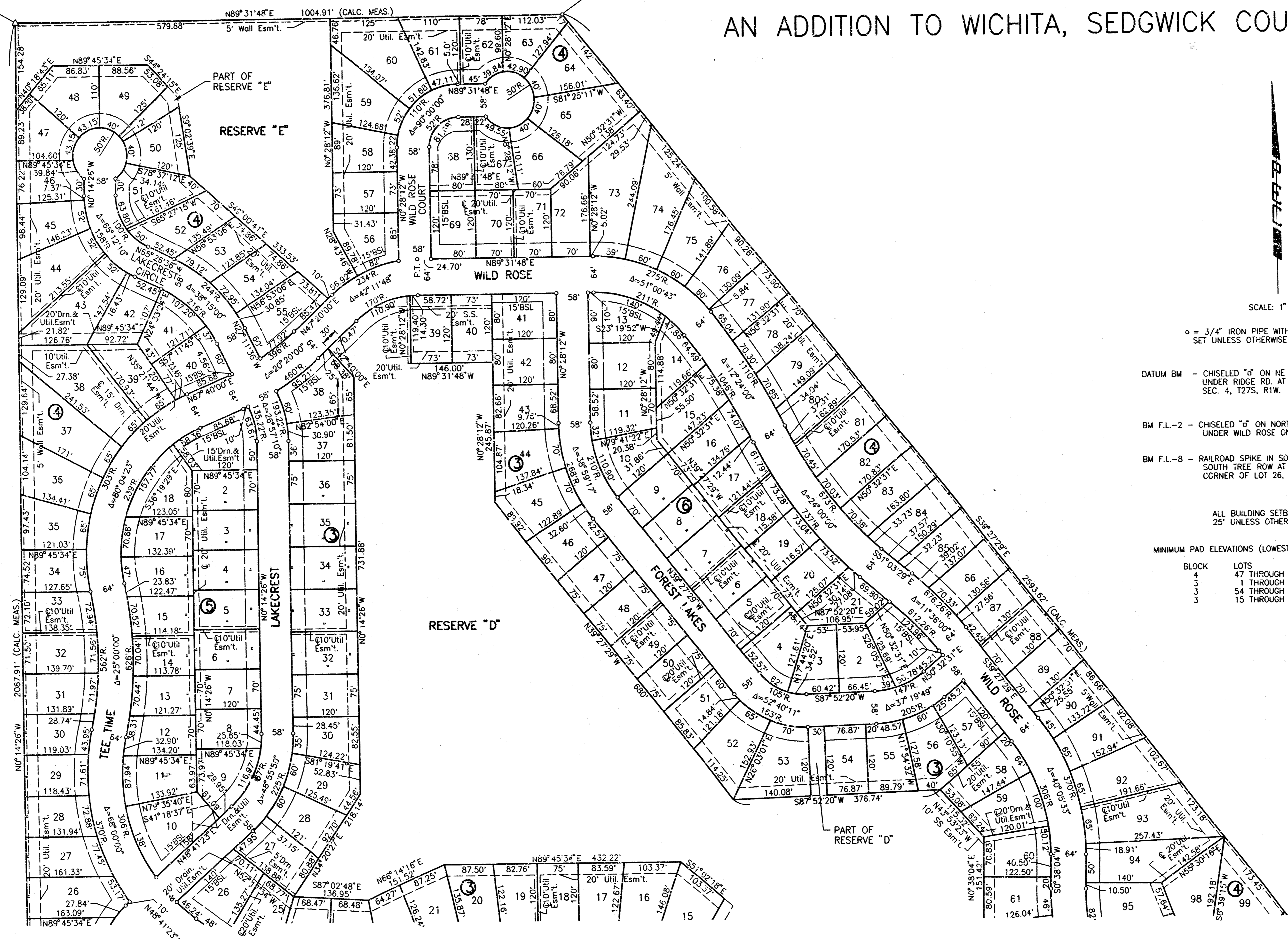
PROJECT NO.	SHEET NO.	TOTAL SHEETS
750PS (807861)	3	12

# FOREST LAKES

## AN ADDITION TO WICHITA, SEDGWICK COUNTY, KANSAS

N.W. CORNER, S.E. 1/4  
SEC. 33, T26S, R1W  
OF THE 6TH P.M.  
FOUND 1/2" BAR.

FOUND 5/8" BAR  
WITH I.D. CAP "MACON"



SCALE: 1"=100'

o = 3/4" IRON PIPE WITH I.D. CAP ("PEC PA")  
SET UNLESS OTHERWISE NOTED.

- DATUM BM - CHISELED "d" ON NE CORNER OF EAST HEADWALL OF RCB UNDER RIDGE RD. AT 200'+ NORTH OF EAST 1/4 CORNER, SEC. 4, T27S, R1W. ELEV. 138.46  
ELEV. 1325.64 M.S.L.
- BM F.L.-2 - CHISELED "d" ON NORTH END OF WEST HEADWALL OF RCB UNDER WILD ROSE ON SOUTH SIDE OF 29TH STREET NORTH. ELEV. 138.90
- BM F.L.-8 - RAILROAD SPIKE IN SOUTH FACE OF 18" ELM IN NORTH TO SOUTH TREE ROW AT 25'± EAST AND 125'± NORTH OF EAST CORNER OF LOT 26, BLOCK 2, FOREST LAKES ADDITION. ELEV. 141.61

ALL BUILDING SETBACK LINES ARE  
25' UNLESS OTHERWISE LABELED.

MINIMUM PAD ELEVATIONS (LOWEST OPENING) SHALL BE AS FOLLOWS:

BLOCK	LOTS	CITY DATUM	M.S.L.
4	47 THROUGH 60	144.82	1332.0
3	1 THROUGH 14	140.32	1327.5
3	54 THROUGH 74	140.32	1327.5
3	15 THROUGH 53	141.82	1329.0

PLAN	SURVEYED	BY	DATE
NOTE BOOK PLOTTED			
RI OF WAY CHECKED			
RI OF WAY CHECKED			

ust:/ustin/dgn: 1/1996/97666/001/forestlakes.dgn  
date plotted: october 14, 1997  
deliver to: dwaine dunn

FOREST LAKES

**PLAT**

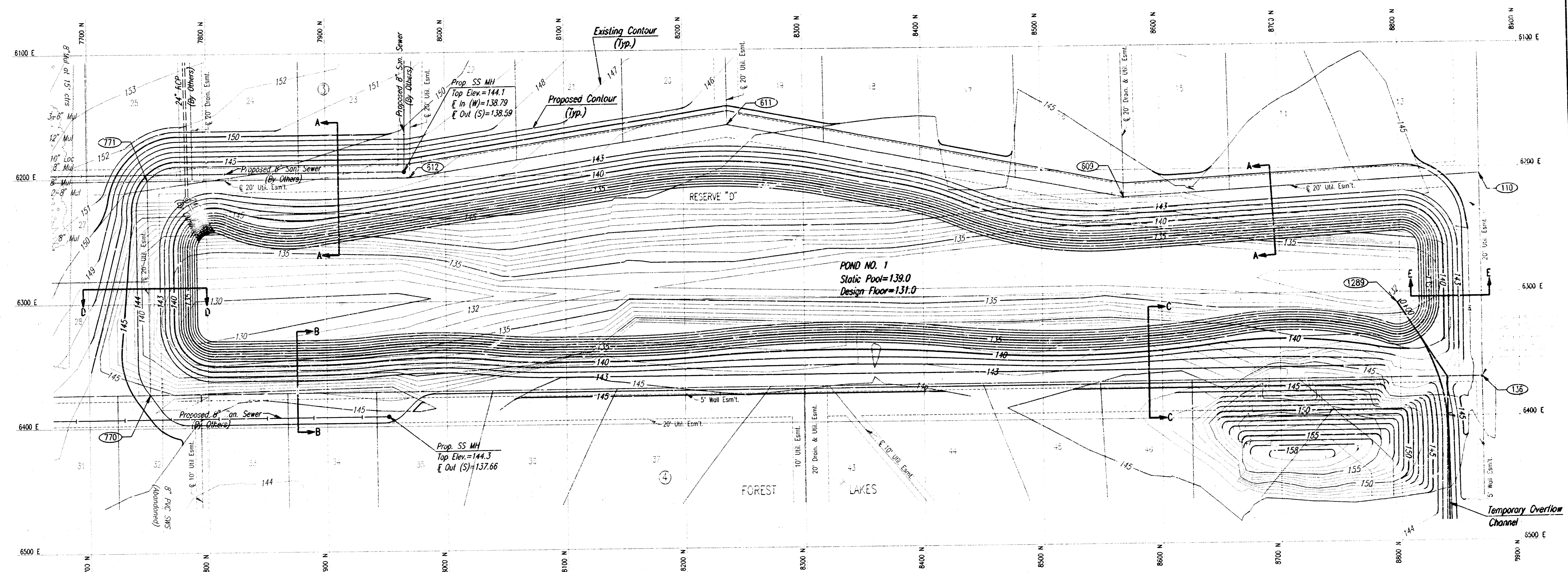
PROFESSIONAL ENGINEERING CONSULTANTS, P.A.

ENGINEERS  
WICHITA, KANSAS

Designed by	Checked by
Drawn by BJS	Date OCT. 1997
Job No. 97666-1	

PROJECT NO.	SHEET NO.	TOTAL SHEETS
750PS (60786.1)	4	12

SCALE: 1"=40'



COORDINATE LIST		
POINT NO.	NORTH	EAST
43	6536.9123	5847.3402
93	8662.2171	5300.0048
110	8866.9176	6205.3951
136	8868.2535	6368.1456
155	7145.4546	5896.3768
156	7145.9888	5703.2935
158	6775.5738	5852.8062
159	7008.6651	5597.3313
161	7020.7275	5797.5607
162	6900.7280	5797.2288
164	7020.4609	5893.9470
165	6900.5161	5873.8390
186	8727.8806	5001.5517
190	8392.9555	5244.1083
191	8670.2594	5235.1612
243	7179.6241	5891.3863
246	7641.1666	5435.9388
262	7273.0046	5874.3411

COORDINATE LIST		
POINT NO.	NORTH	EAST
286	7640.5171	5281.2983
369	8241.8491	5127.8592
370	7964.9028	5198.5263
371	8671.8205	5018.1454
389	7805.0255	5239.3214
390	7800.4005	5395.3078
545	7326.1791	5516.3127
546	6834.7535	5641.8351
547	6775.9195	5727.8067
609	8569.5720	6222.1868
611	8237.7835	6160.7029
612	7969.7859	6200.7712
723	7271.8114	5590.2492
770	7750.1025	6372.8419
771	7749.3837	6201.6969
802	6623.3236	5792.3255
803	6622.3218	5695.9127
805	6621.5198	5618.7143

COORDINATE LIST		
POINT NO.	NORTH	EAST
813	8743.5350	5115.5799
814	8685.9760	5108.4411
838	7223.6730	5387.6625
902	7223.7293	5465.0512
1282	7510.6701	5270.8701
1283	7750.9705	5209.5537
1285	8262.7000	5224.8670
1286	8235.6870	5256.9280
1287	7043.5010	5484.4600
1288	7060.7020	5452.8350
1289	8797.7590	6308.4420
1290	8838.1442	6368.2721
1291	8840.0478	6600.3017
1292	8732.8843	6705.2587
1293	8422.1335	6936.2525
1951	8360.7138	6969.8324

usr / sstn / dgr / 1/1997 / 97666 / 001 / pond1.dgn  
date plotted: october 14, 1997  
drawn by: dwalsh / cunn

NOTE: CONTRACTOR SHALL COORDINATE HIS CONSTRUCTION FOR ALL PONDS (S) WITH STORM WATER SEWER CONTRACTOR (C.O.W. PROJ. NO. 472-76-245-82865-000-030-001) AND WITH SANITARY SEWER CONTRACTOR (C.O.W. PROJ. NO. 468-75-245-82766-000-000-001).  
CONTRACTOR SHALL CONSTRUCT TEMPORARY EROSION CONTROL FOR SLOPE PROTECTION AS DIRECTED BY THE OWNER. SEE SHEET NO. 9 FOR DETAILS.

(723) = COORDINATE POINT NUMBER

FOREST LAKES WEST  
STORM WATER DRAIN

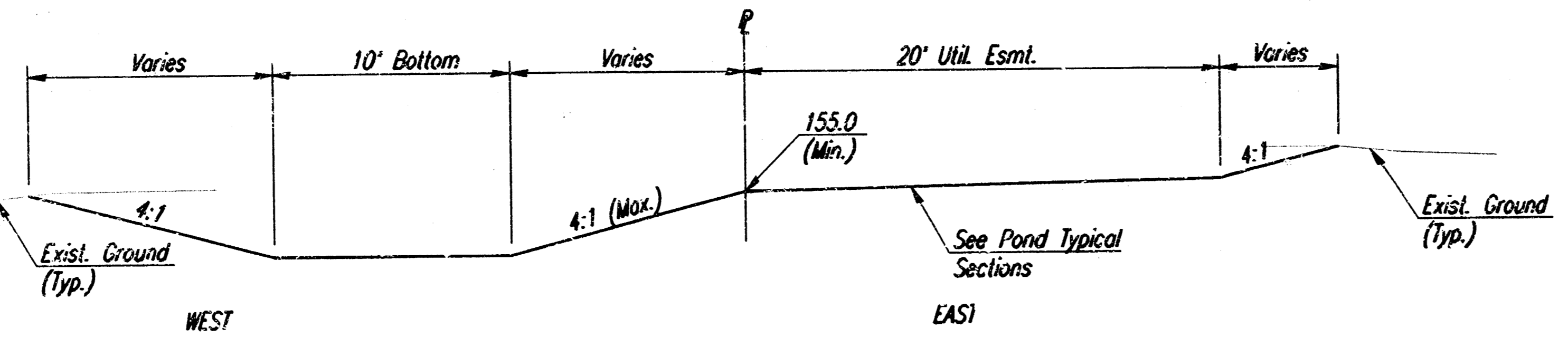
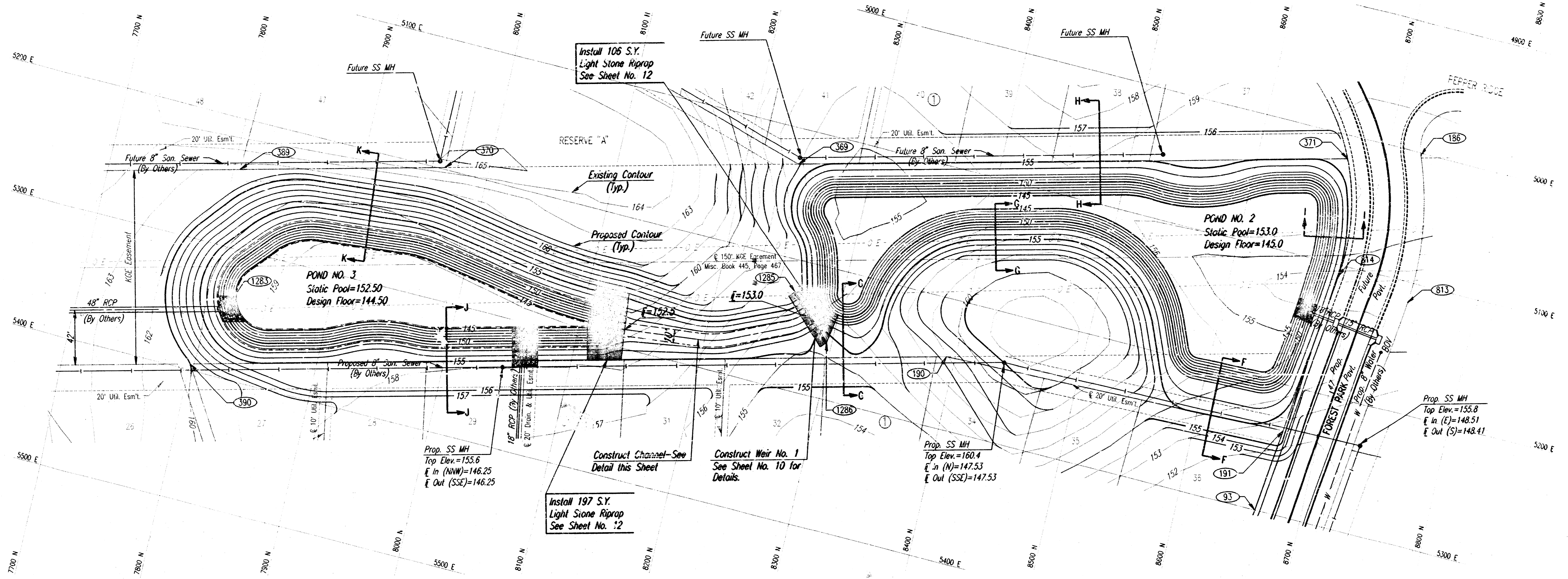
**POND NO. 1**  
GRADING PLAN

**PROFESSIONAL ENGINEERING CONSULTANTS, P.A.**  
ENGINEERS  
WICHITA, KANSAS

Designed by	BER, GDD	Checked by	
Drawn by	BJS	Date	OCT. 1997
		Job No.	97666-1

PROJECT NO.	SHEET NO.	TOTAL SHEETS
750PPS (607661)	5	12

SCALE: 1"=40'



TYPICAL CHANNEL SECTION

(723) = COORDINATE POINT NUMBER

FOREST LAKES WEST  
 STORM WATER DRAIN

**POND NOS. 2 & 3**  
 GRADING PLAN

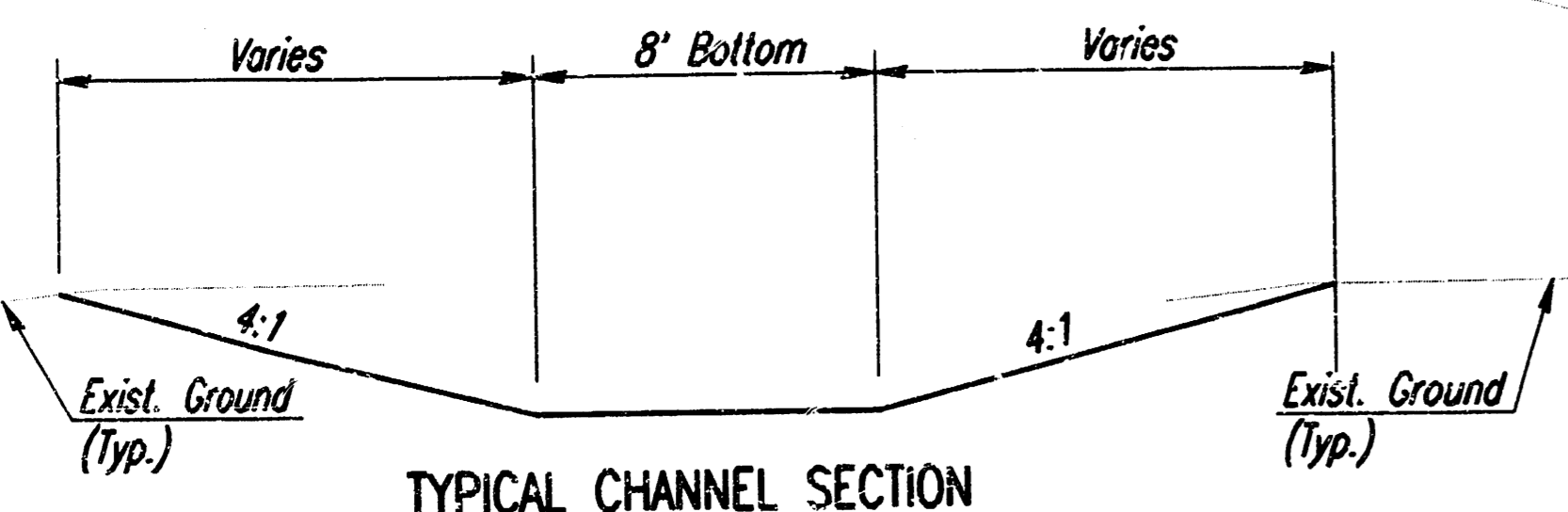
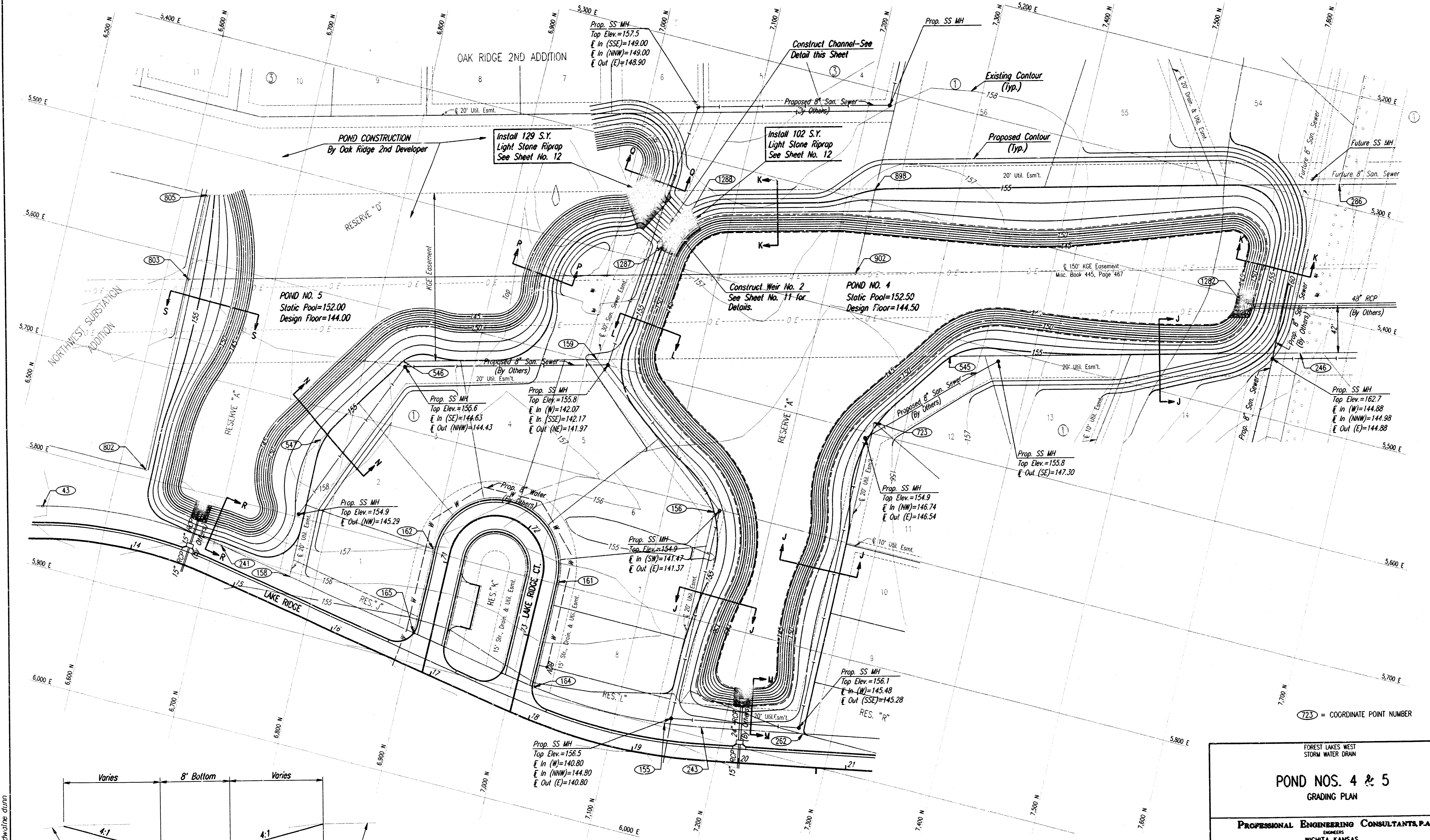
DESIGNED BY: BER, GDD  
 DRAWN BY: BUS  
 CHECKED BY: [ ]  
 DATE: OCT. 1997  
 JOB NO.: 97666-1

NOTE: CONTRACTOR SHALL CONSTRUCT TEMPORARY EROSION CONTROL FOR SLOPE PROTECTION AS DIRECTED BY THE OWNER. SEE SHEET NO. 9 FOR DETAILS.

usr/lustn.dgn: 1/1997/197666/001/pom2&3.dgn  
 date plotres: october 14, 1997  
 deliver to: dwalsh dunn

PROJECT NO.	SHEET NO.	TOTAL SHEETS
750PPS (607861)	6	12

SCALE: 1"=40'



NOTE: CONTRACTOR SHALL CONSTRUCT TEMPORARY EROSION CONTROL FOR SLOPE PROTECTION AS DIRECTED BY THE OWNER. SEE SHEET NO. 9 FOR DETAILS.

FOREST LAKES WEST  
STORM WATER DRAIN

**POND NOS. 4 & 5**  
GRADING PLAN

**PROFESSIONAL ENGINEERING CONSULTANTS, P.A.**  
ENGINEERS  
WICHITA, KANSAS

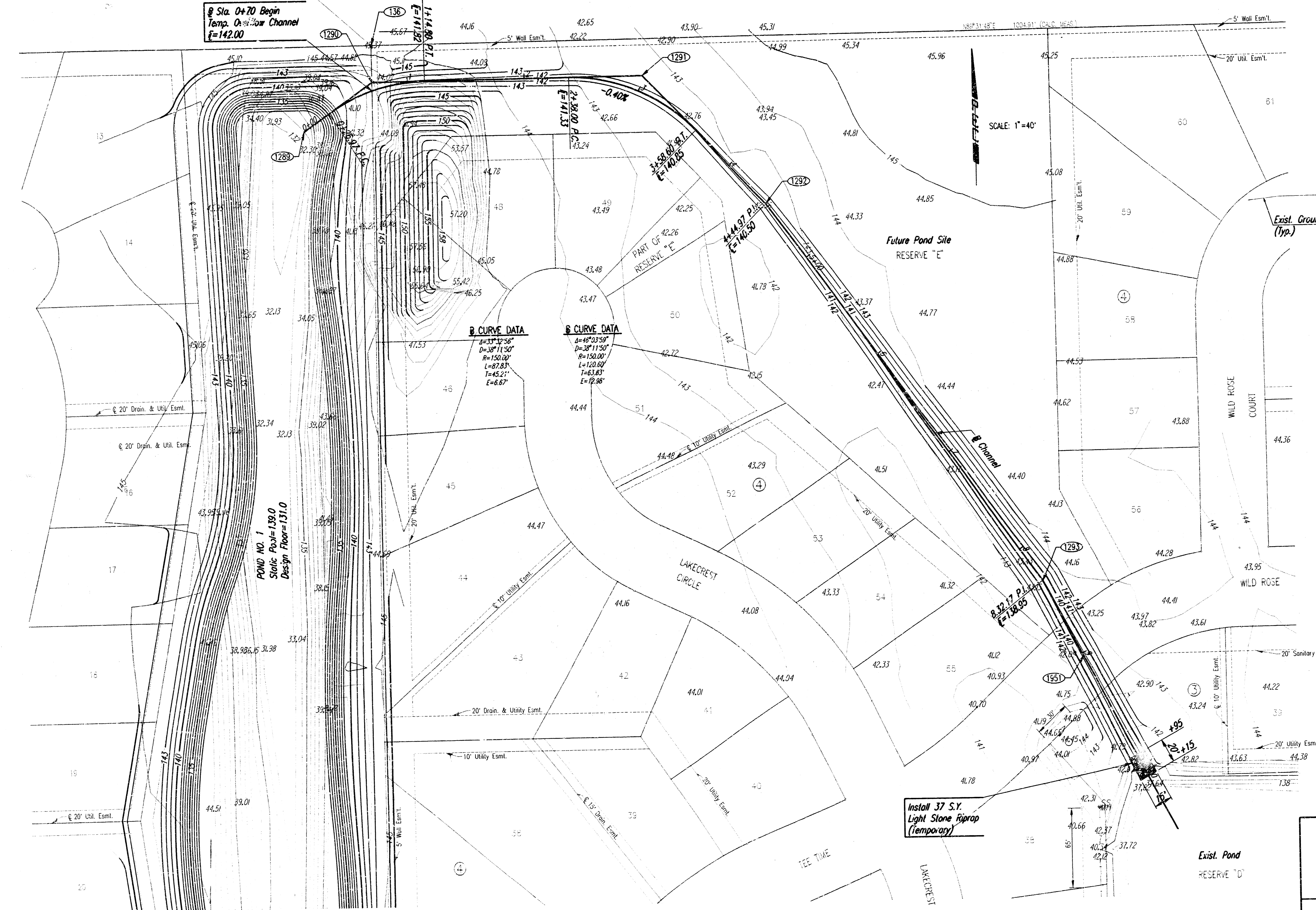
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Drawn by	BUS	Date	OCT. 1997
		Job No.	97666-1

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date plotted: october, 14, 1997  
delivered to: dwaine dunn

PROJECT NO.	SHEET NO.	TOTAL SHEETS
750PPS (607881)	7	12

N.W. CORNER, S.E. 1/4  
SEC. 33, T28S, R1W  
OF THE 6TH P.M.  
FOUND 1/2" BAR

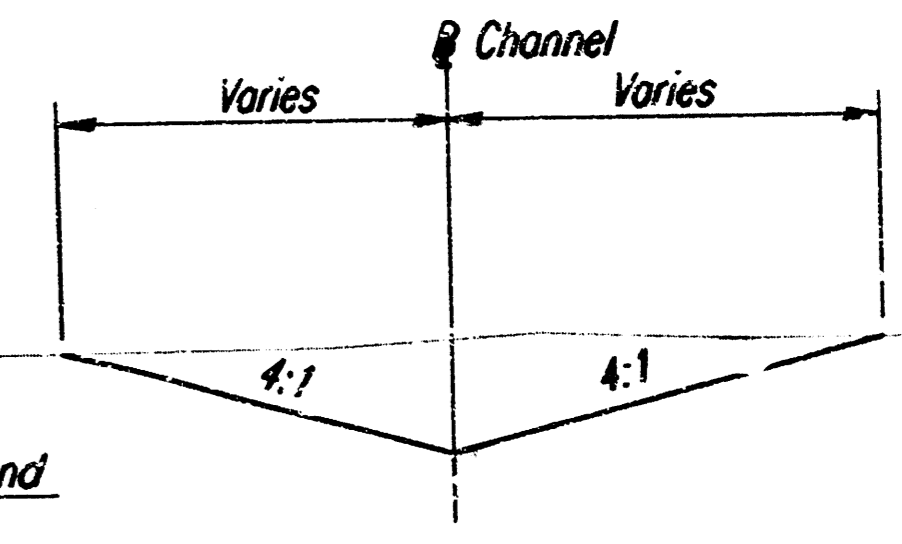
@ Sta. 0+70 Begin  
Temp. Overflow Channel  
E=142.00



**B CURVE DATA**  
 $\Delta = 45^{\circ}03'50''$   
 $D = 30^{\circ}11'50''$   
 $R = 150.00'$   
 $L = 87.83'$   
 $T = 45.21'$   
 $E = 6.67'$

**B CURVE DATA**  
 $\Delta = 45^{\circ}03'50''$   
 $D = 30^{\circ}11'50''$   
 $R = 150.00'$   
 $L = 120.00'$   
 $T = 63.83'$   
 $E = 12.98'$

SCALE: 1"=40'



TYPICAL SECTION

Install 37 S.Y.  
Light Stone Riprap  
(Temporary)

(136) = COORDINATE POINT NUMBER

FOREST LAKES WEST

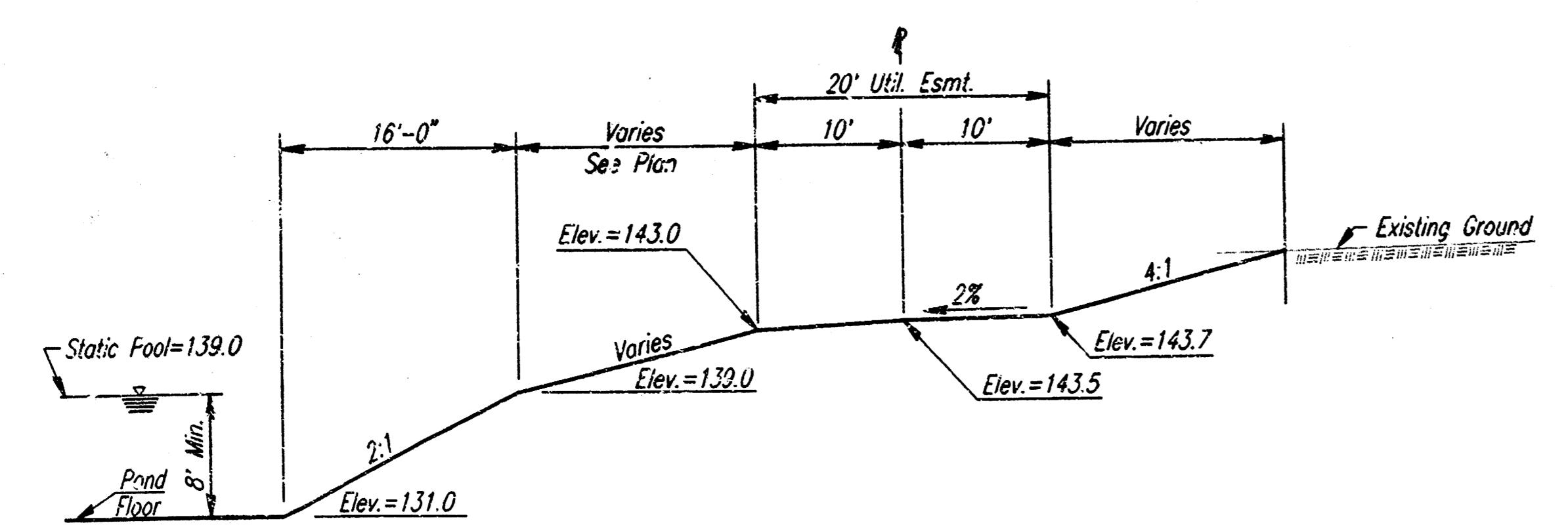
**TEMPORARY OVERFLOW CHANNEL**  
POND NO. 1

**PROFESSIONAL ENGINEERING CONSULTANTS, P.A.**  
ENGINEERS  
WICHITA, KANSAS

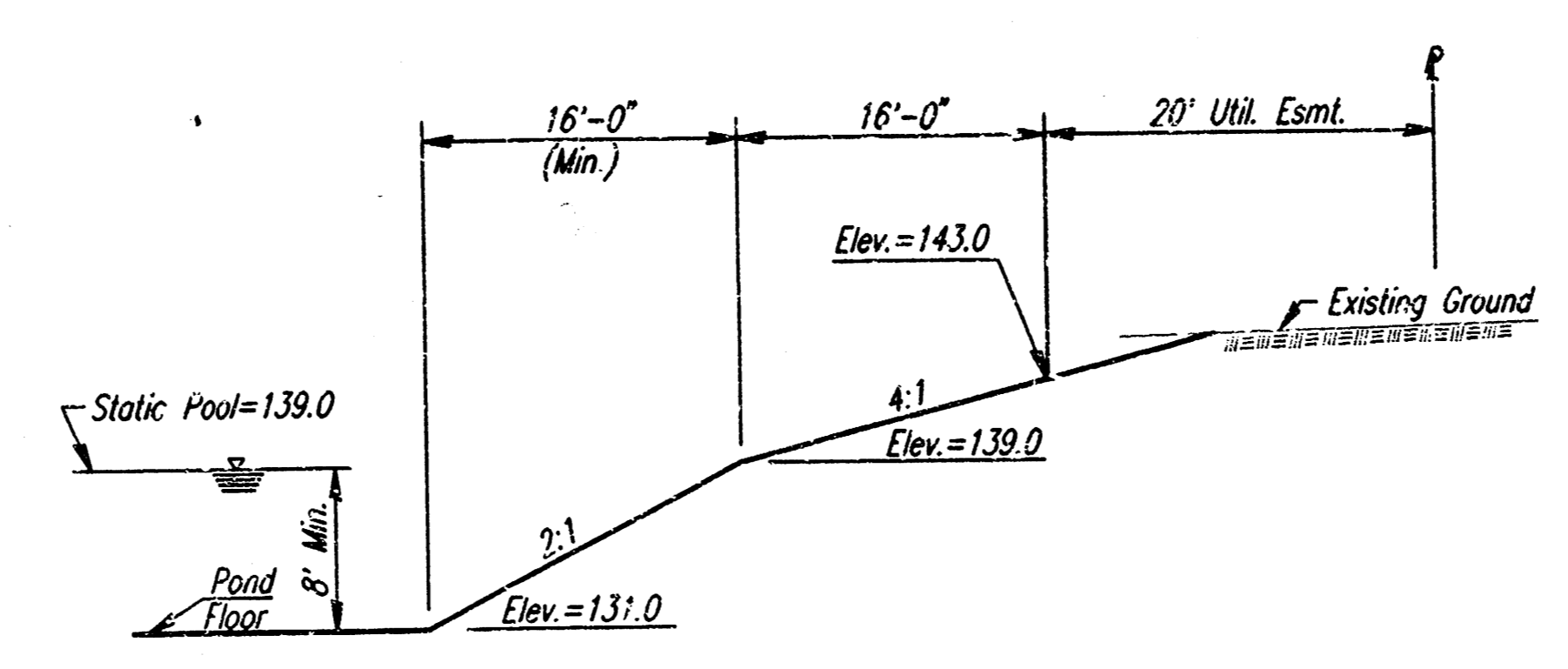
Designed by	BER, GDD	Checked by	
Drawn by	BJS	Date	OCT. 1997
		Job No.	976F6-1

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date plotted: october 14, 1997  
delivered to: dwaine dunn

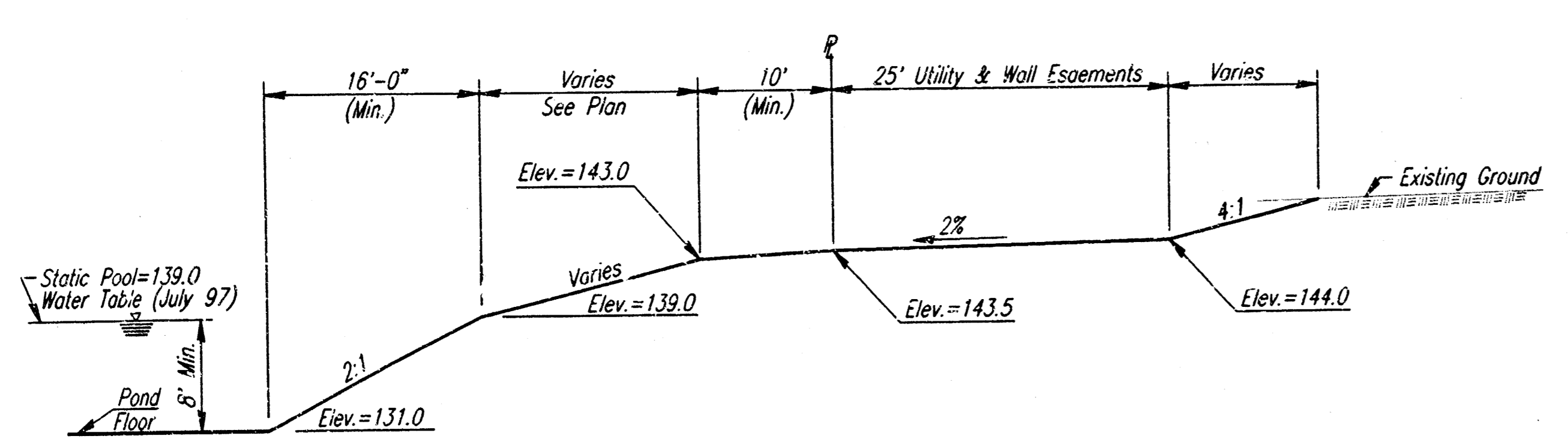
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750PPS (907861)	8	12



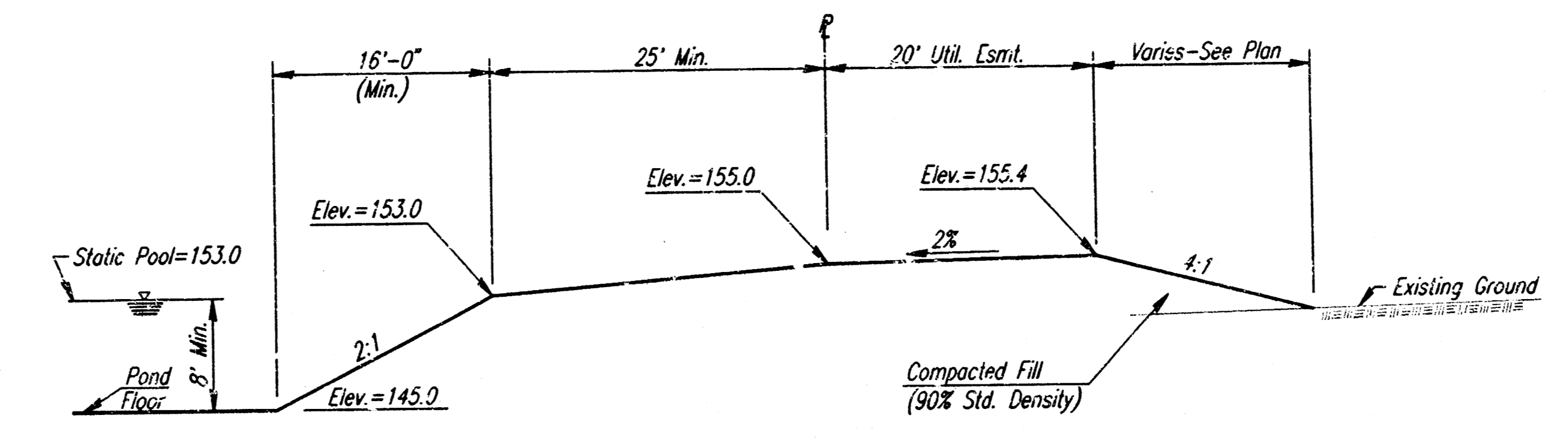
SECTION A-A  
Pond No. 1



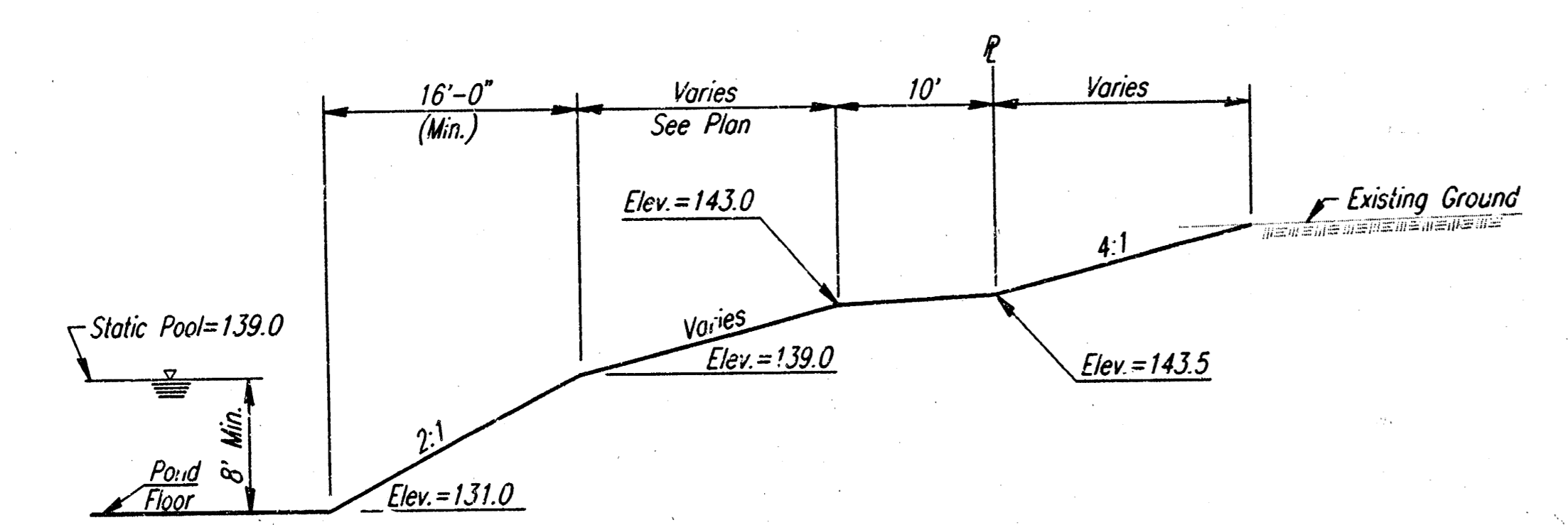
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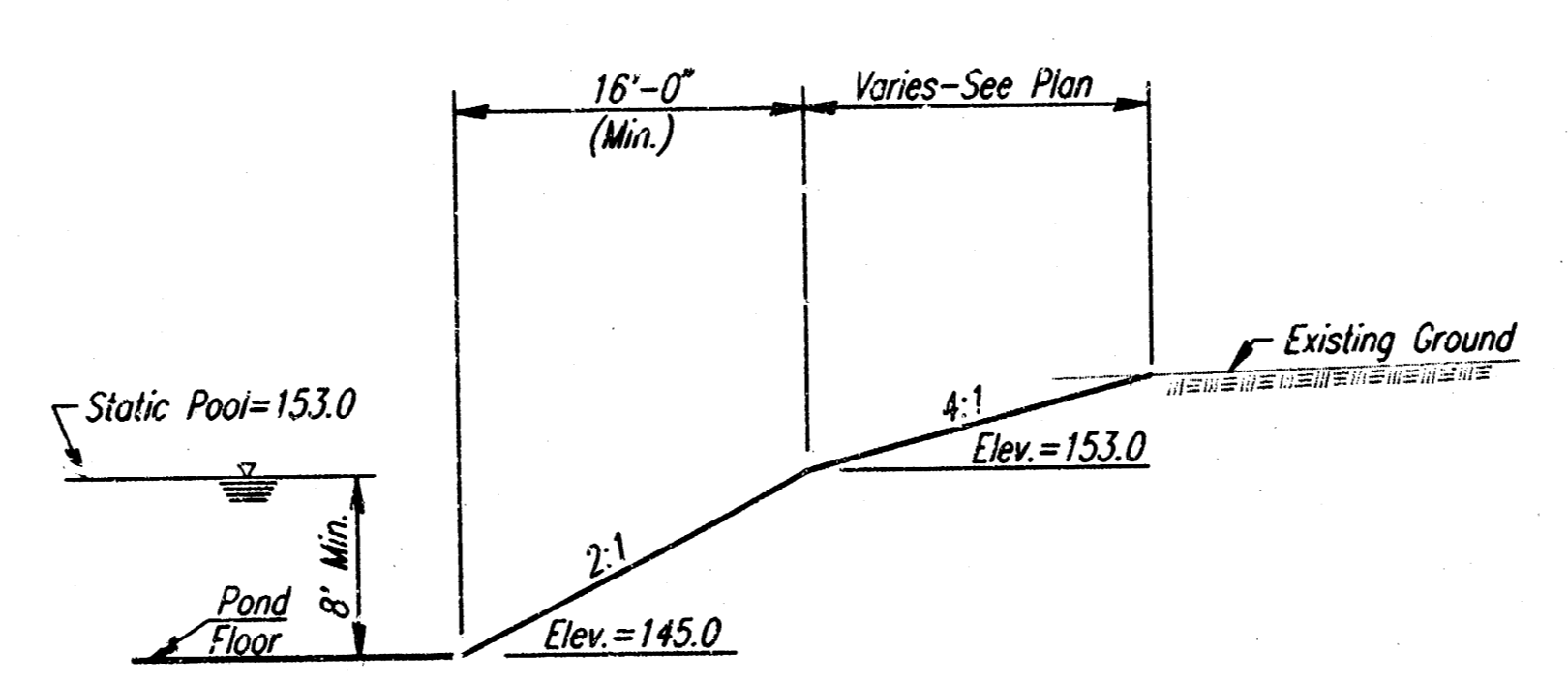
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Pond No. 1



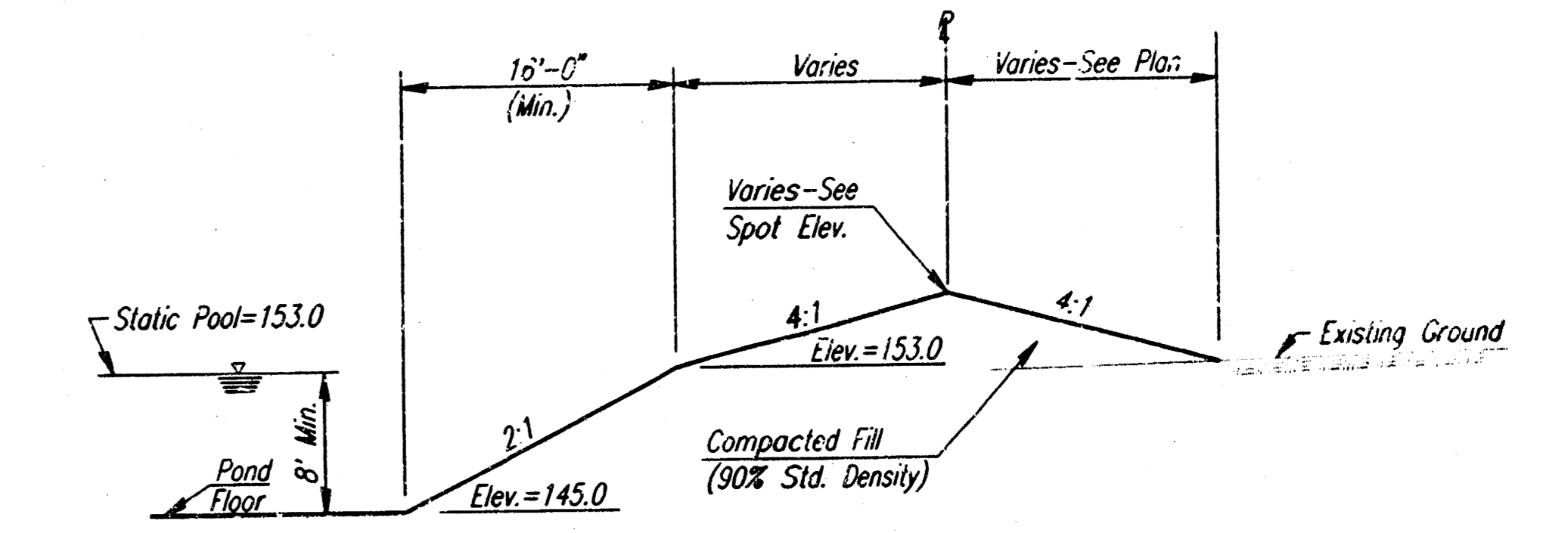
SECTION F-F  
Pond No. 2



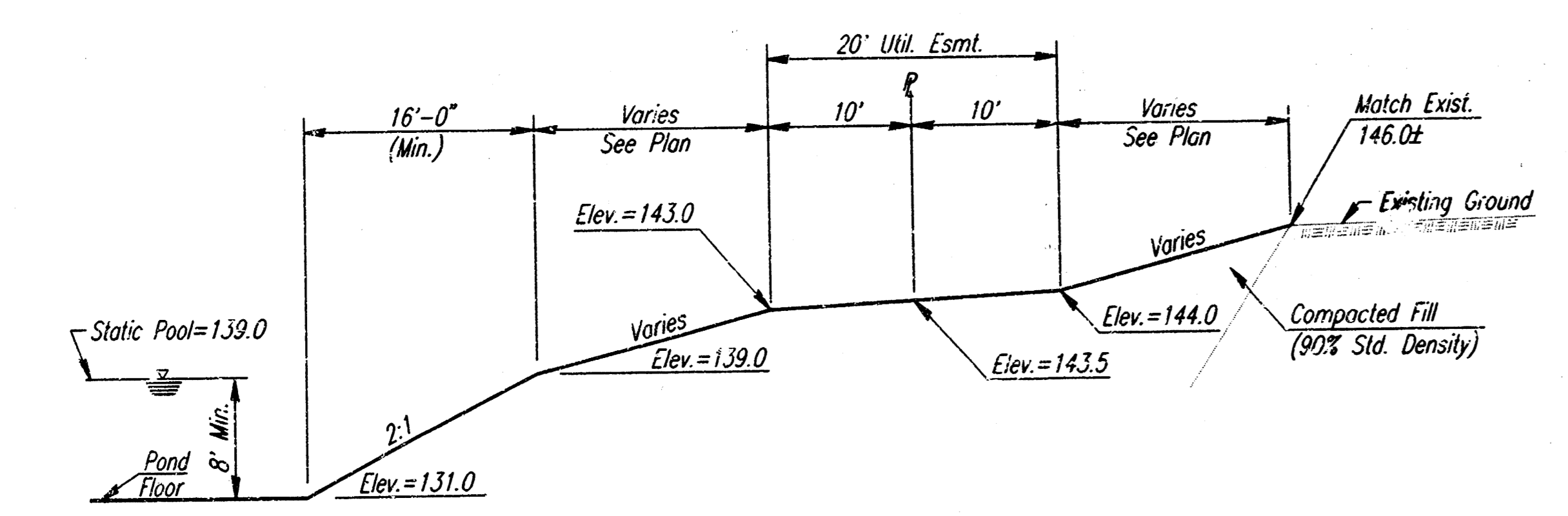
SECTION C-C  
Pond No. 1



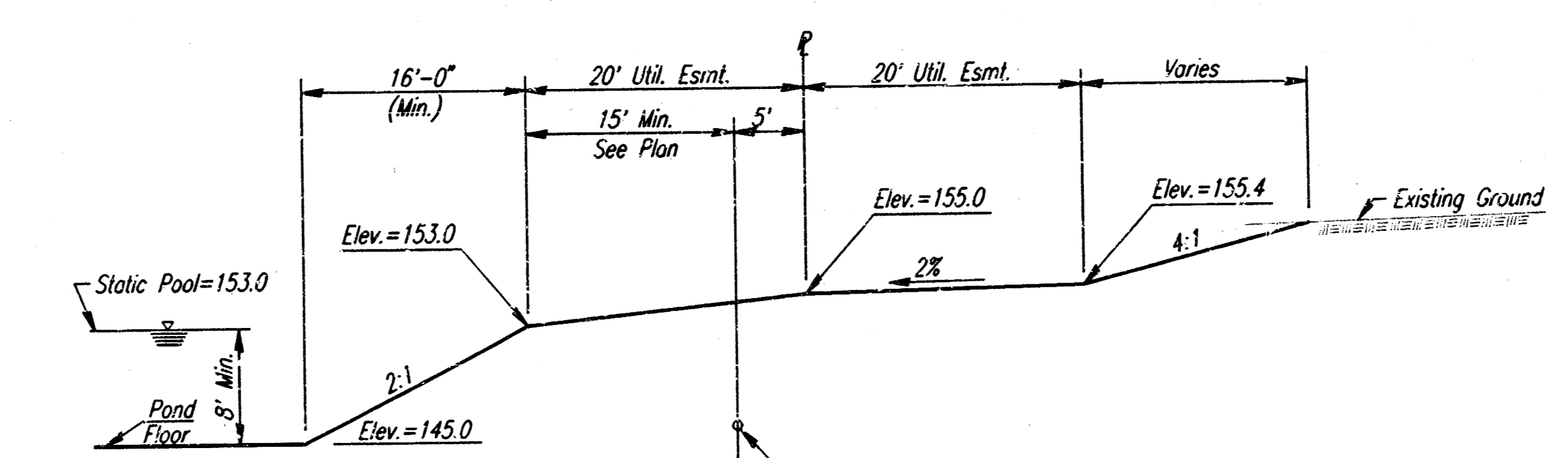
SECTION G-G  
Pond No. 2



SECTION I-I  
Pond No. 2



SECTION D-D  
Pond No. 1



SECTION H-H  
Pond No. 2

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 date plotted: october 14, 1997  
 deliver to: dwaine dunn

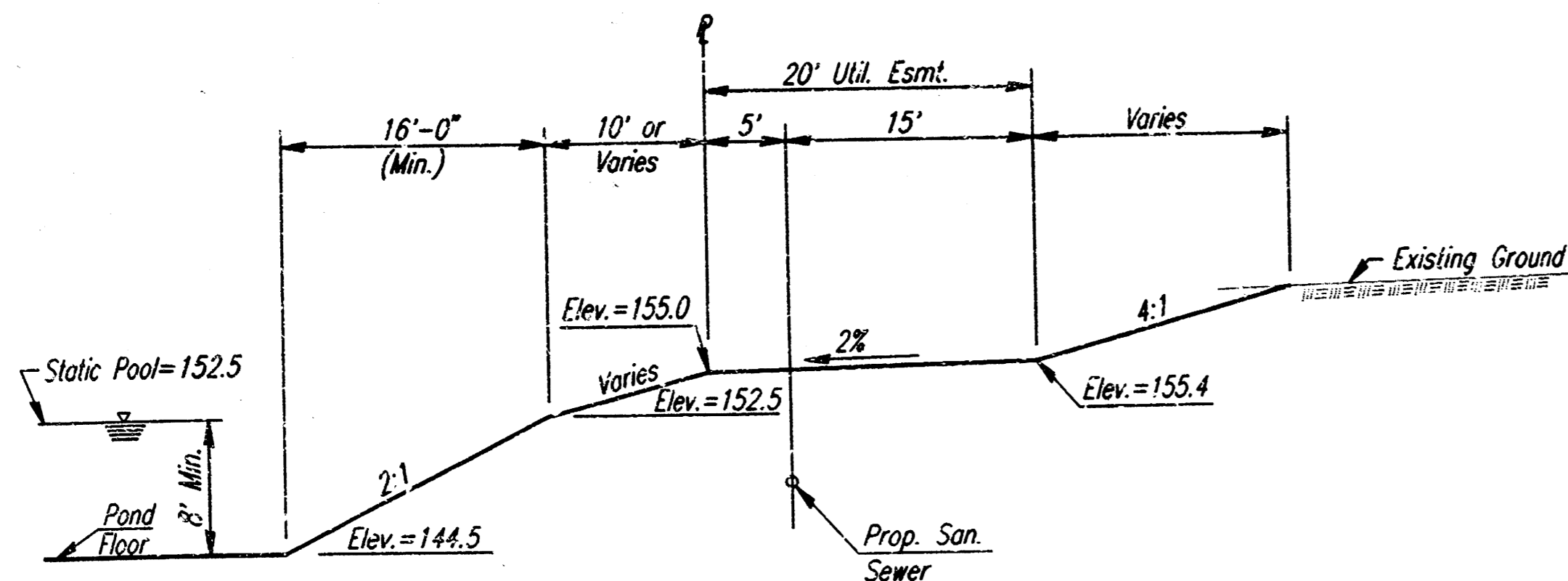
FOREST LAKES WEST  
STORM WATER DRAIN

## TYPICAL POND SECTIONS

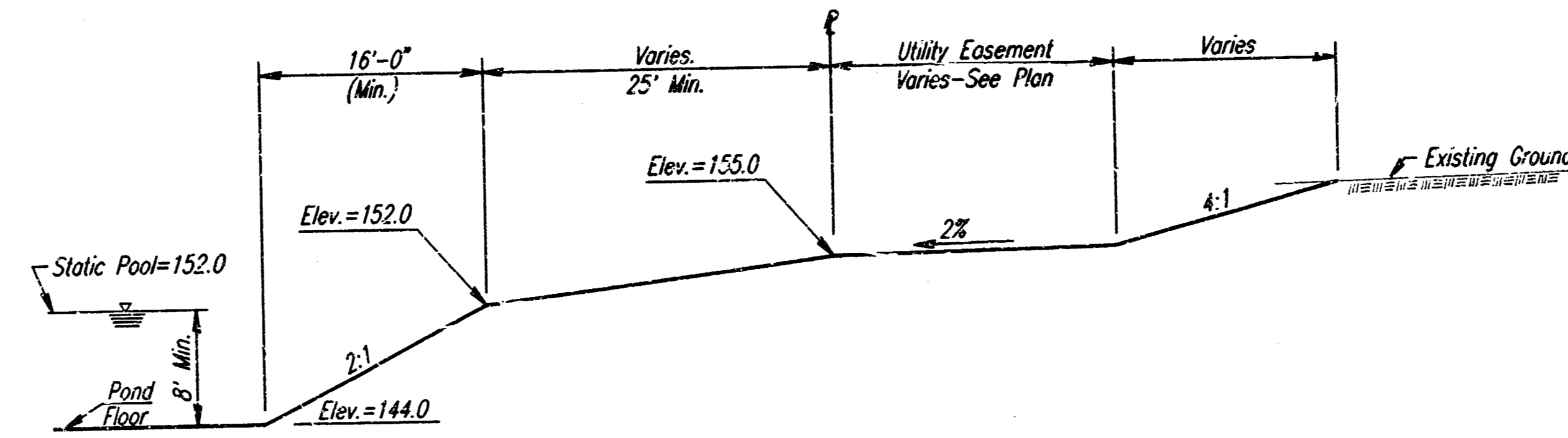
**PROFESSIONAL ENGINEERING CONSULTANTS, P.A.**  
ENGINEERS  
WICHITA, KANSAS

Designed by	BER, GED	Checked by	
Drawn by	BJS	Date	OCT. 1997
		Job No.	97666-1

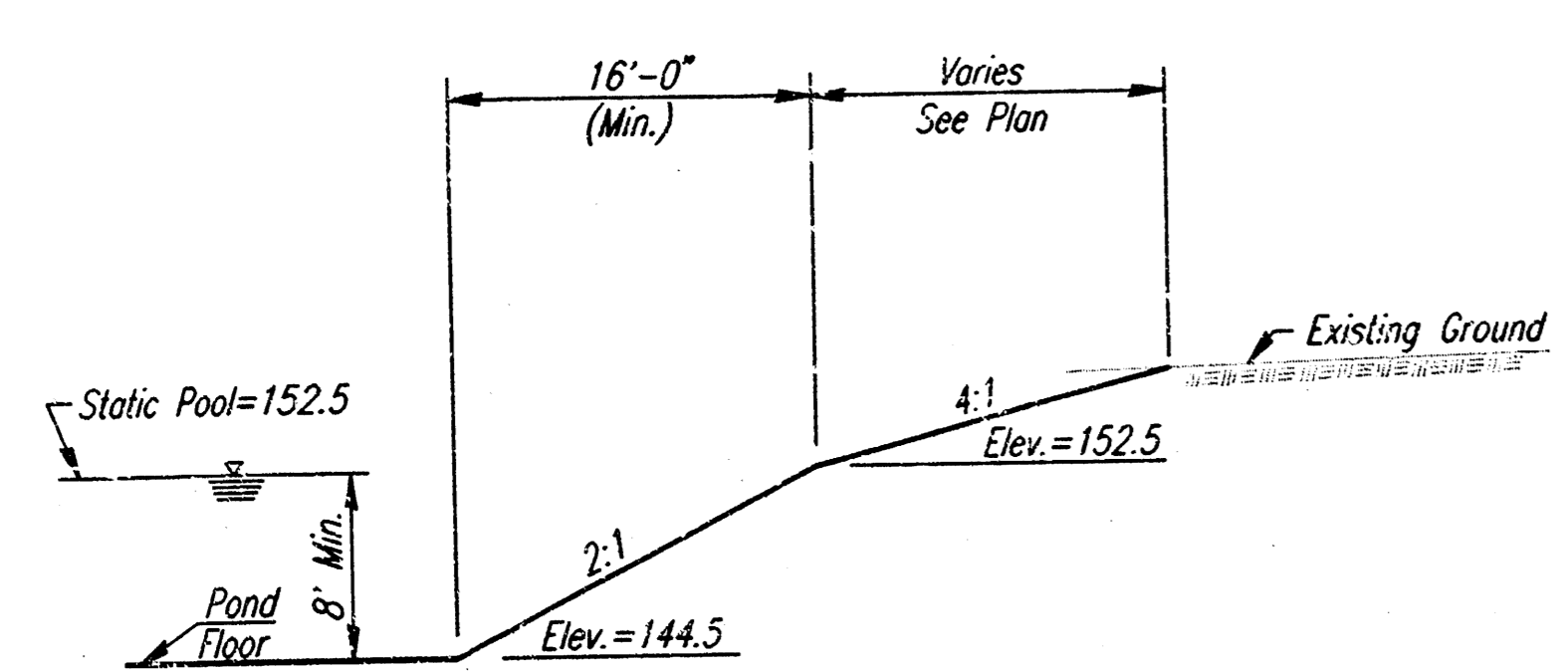
PROJECT NO.	SHEET NO.	TOTAL SHEETS
750PPS (607861)	9	12



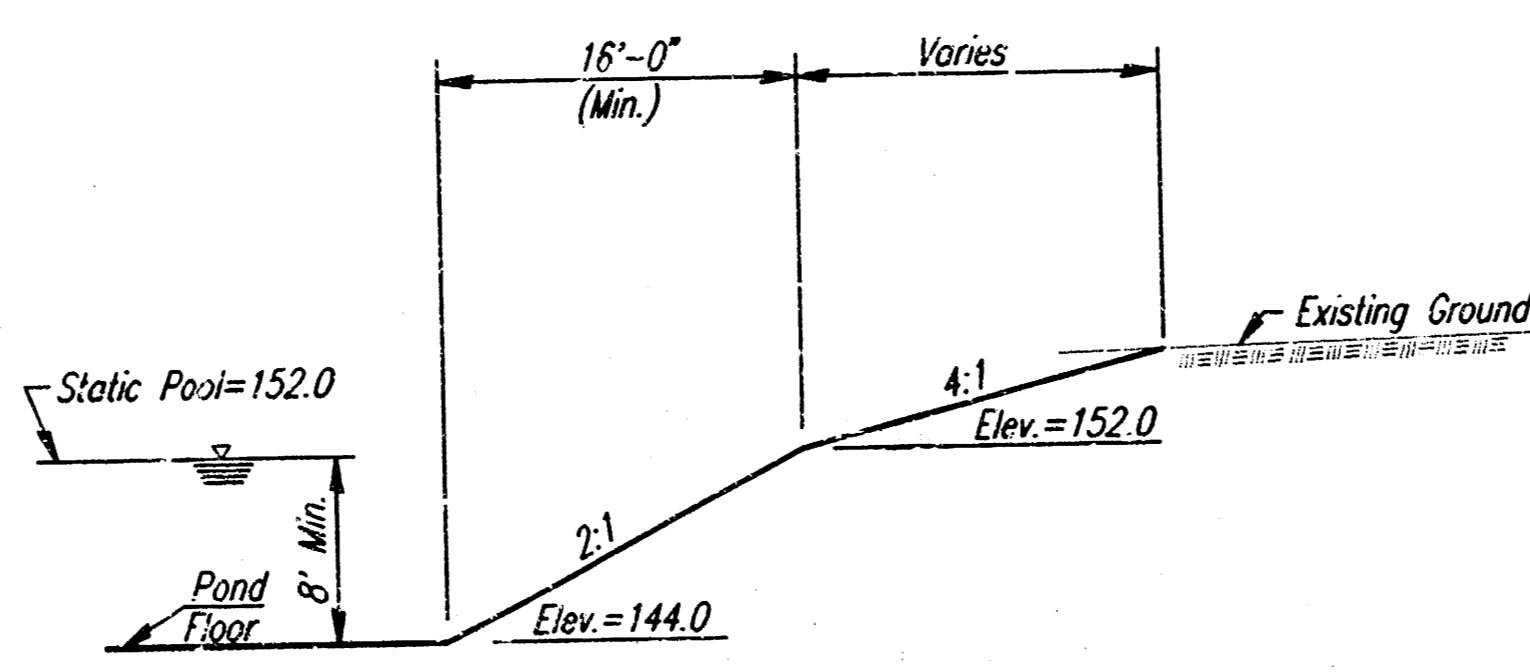
SECTION J-J  
Pond Nos. 3 & 4



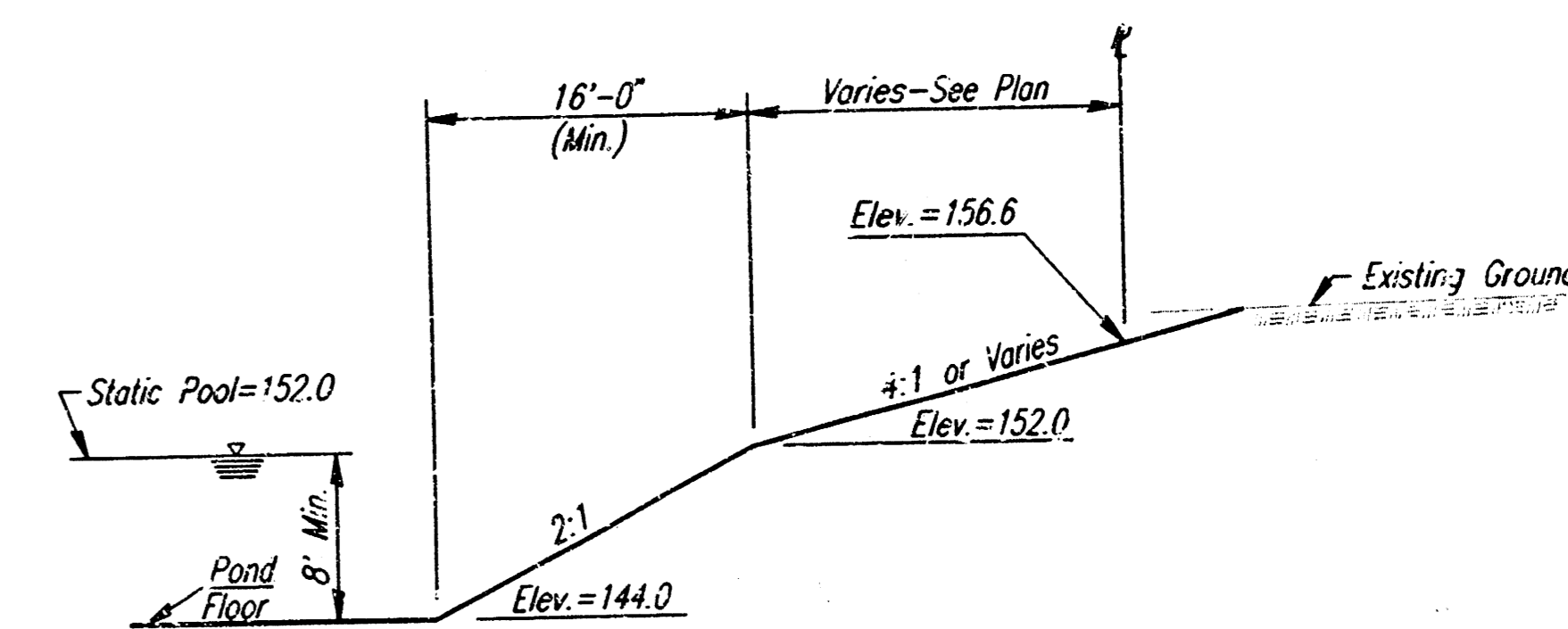
SECTION N-N  
Pond No. 5



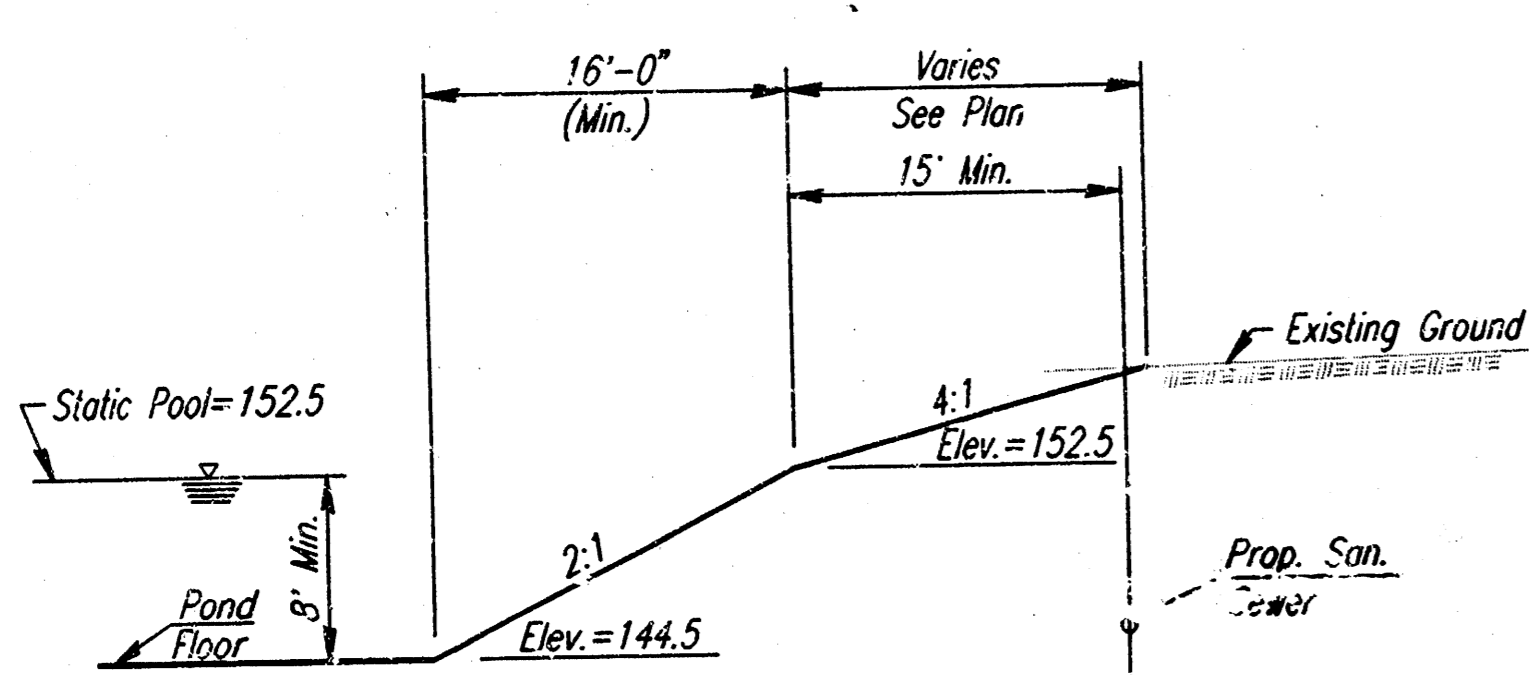
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Pond Nos. 3 & 4



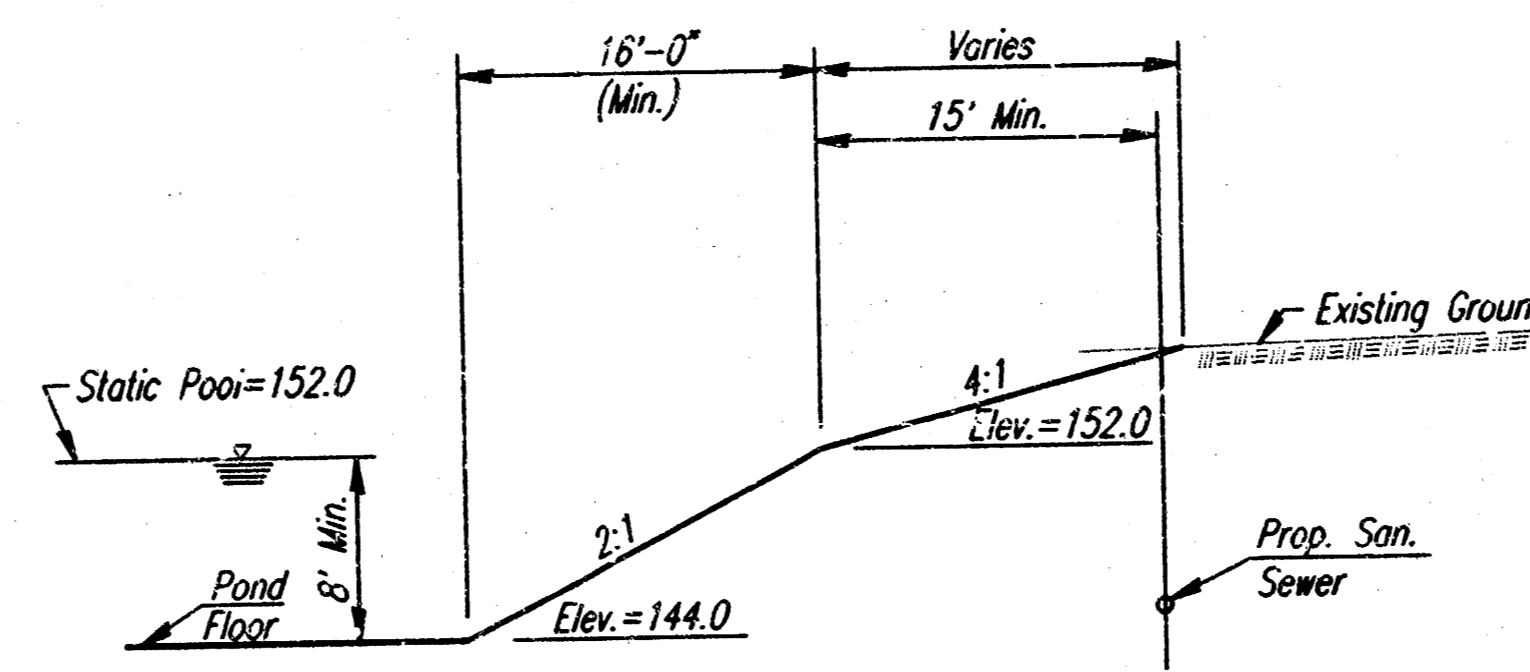
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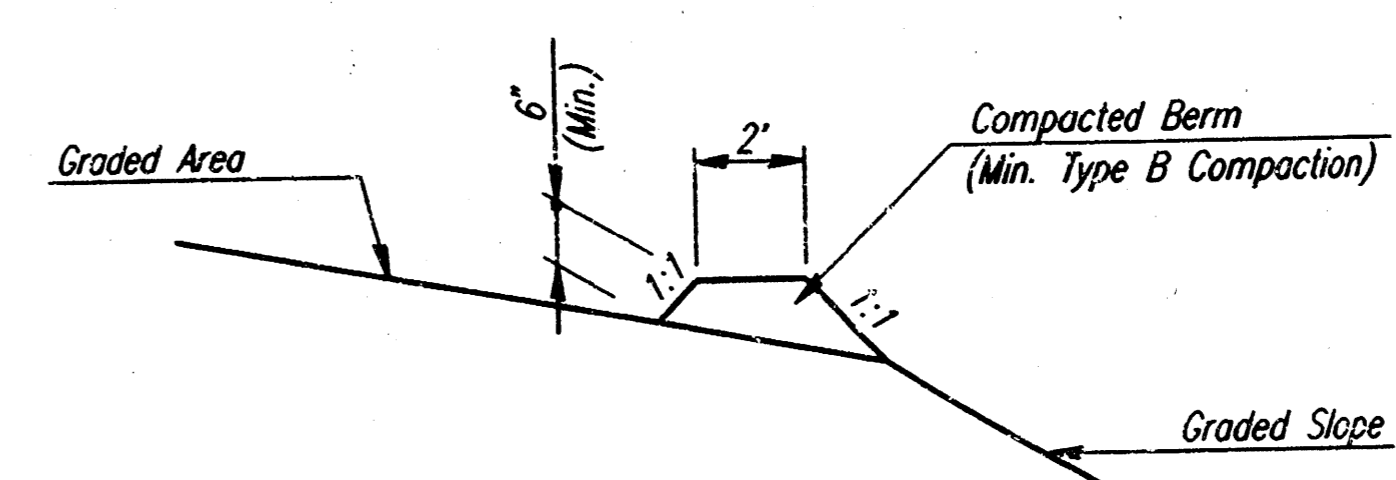
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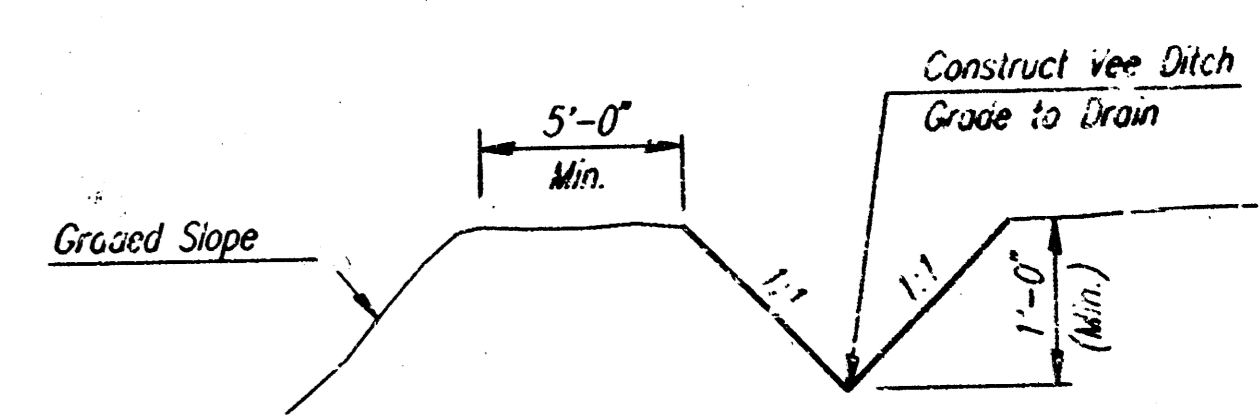
SECTION L-L  
Pond No. 4



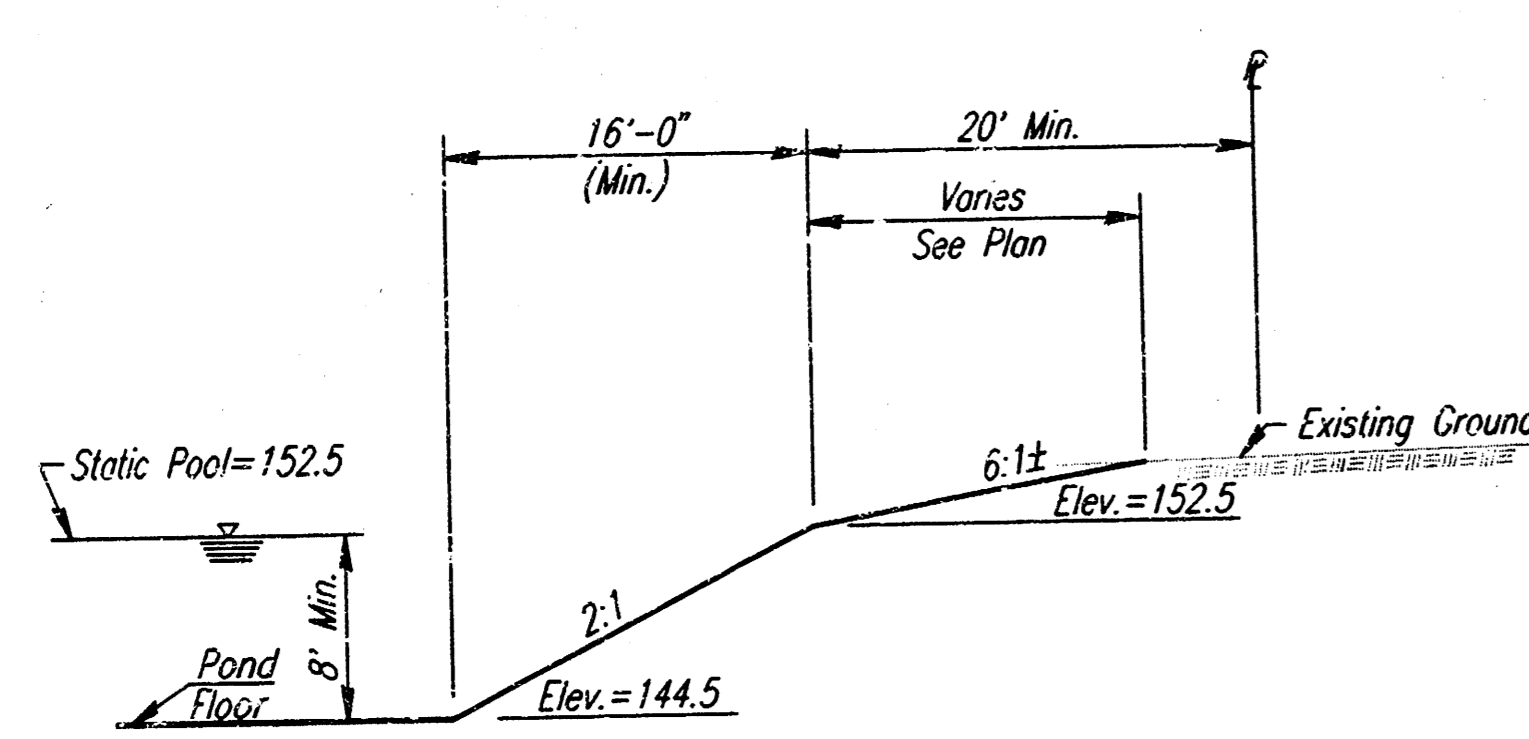
SECTION Q-Q  
Pond No. 5



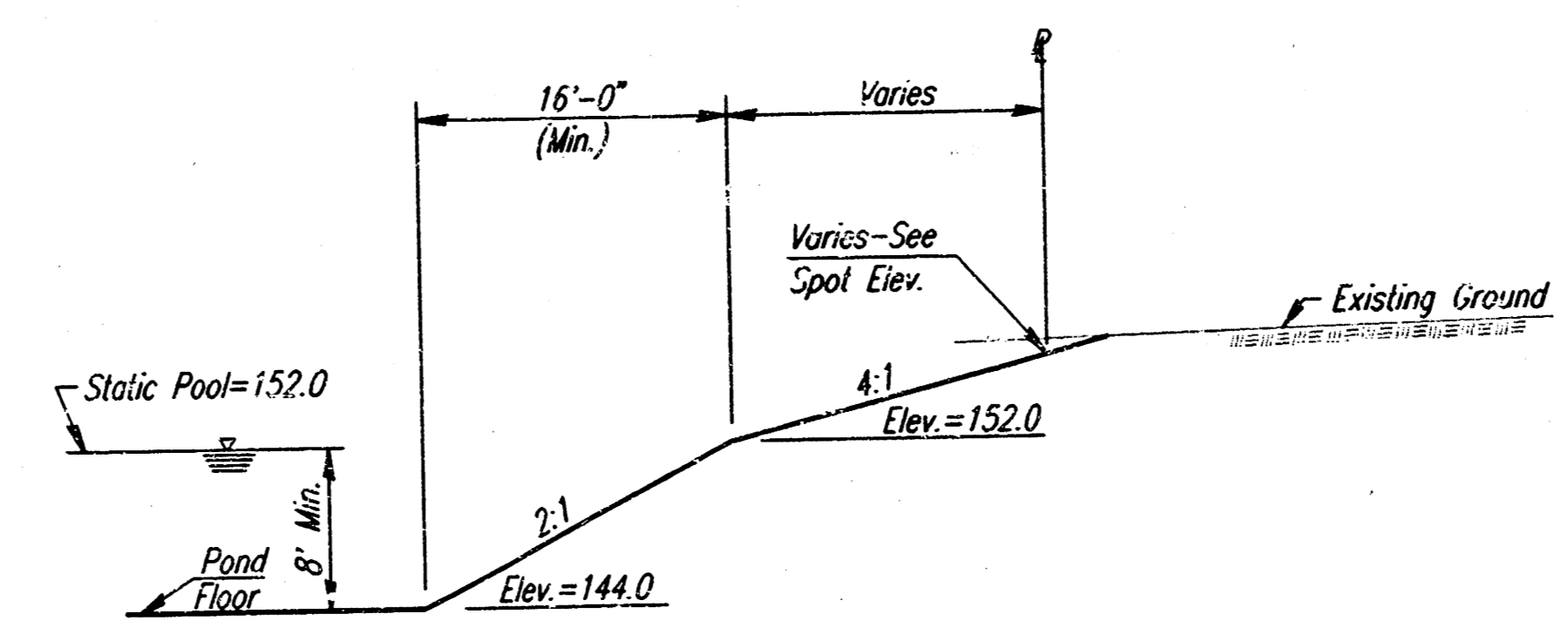
BERM DETAIL



INTERCEPT DITCH DETAIL



SECTION M-M  
Pond No. 4



SECTION R-R  
Pond No. 5

**TEMPORARY EROSION CONTROL DETAILS FOR SLOPE PROTECTION**

The Engineer may determine that the height of Berm or depth of Ditch should be increased over that shown if Drainage conditions are producing Slope Erosion.

FOREST LAKES WEST STORM WATER DRAIN			
<b>TYPICAL POND SECTIONS</b>			
<b>PROFESSIONAL ENGINEERING CONSULTANTS, P.A.</b> ENGINEERS WICHITA, KANSAS			
Designed by	BER, GDD	Checked by	
Drawn by	BJS	Date	OCT. 1997
		Job No.	97666-1

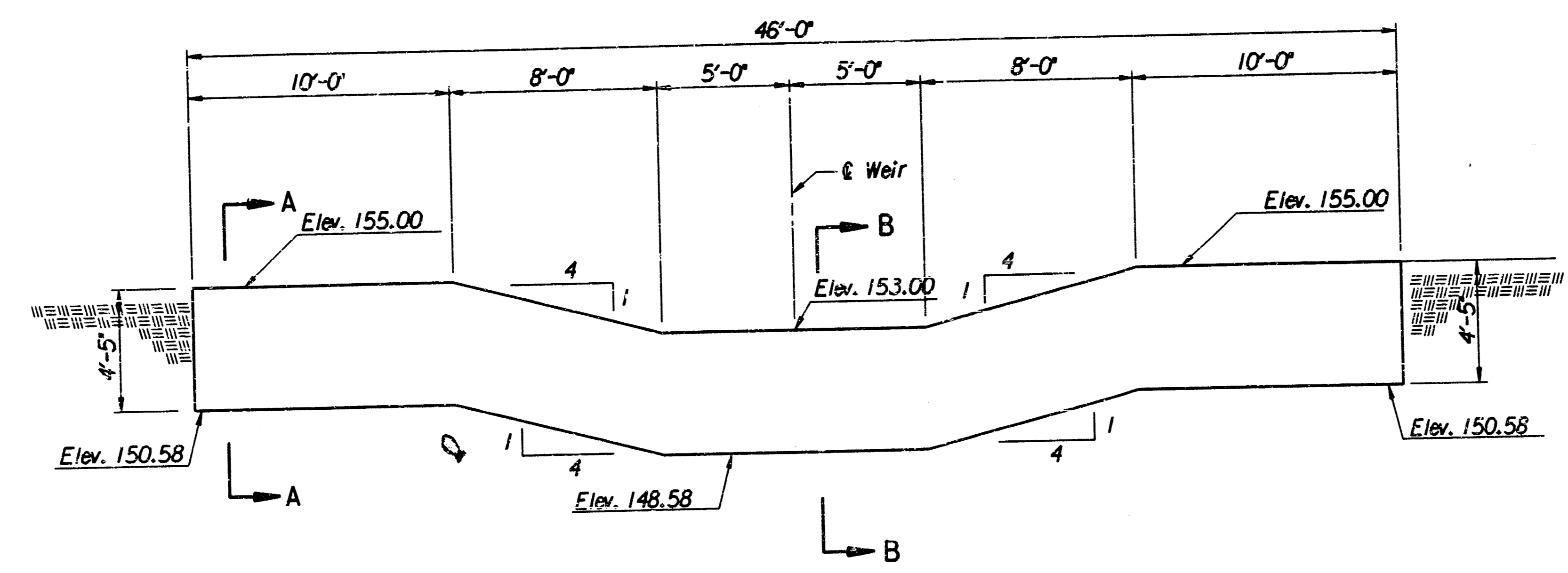
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 date printed: October 14, 1997  
 designer: ts.chalife.drum

PROJECT NO. 750PPS (607861)	SHEET NO. 10	TOTAL SHEETS 12
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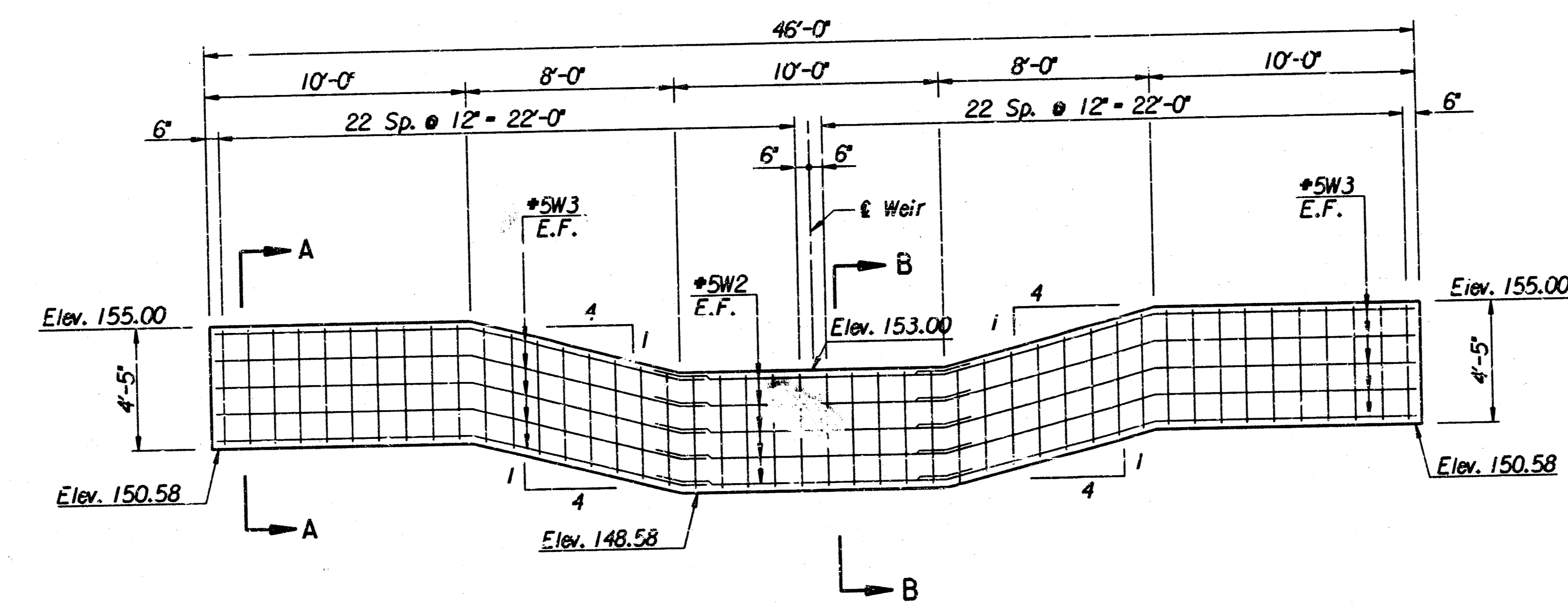
BILL OF MATERIALS					
REINFORCING STEEL					
Straight Bars			Bent Bars *		
Mark	No.	Size	Length	Mark	No.
W1	92	#6	4'-0"	W2	10
				W3	20

\* See Bending Diagrams

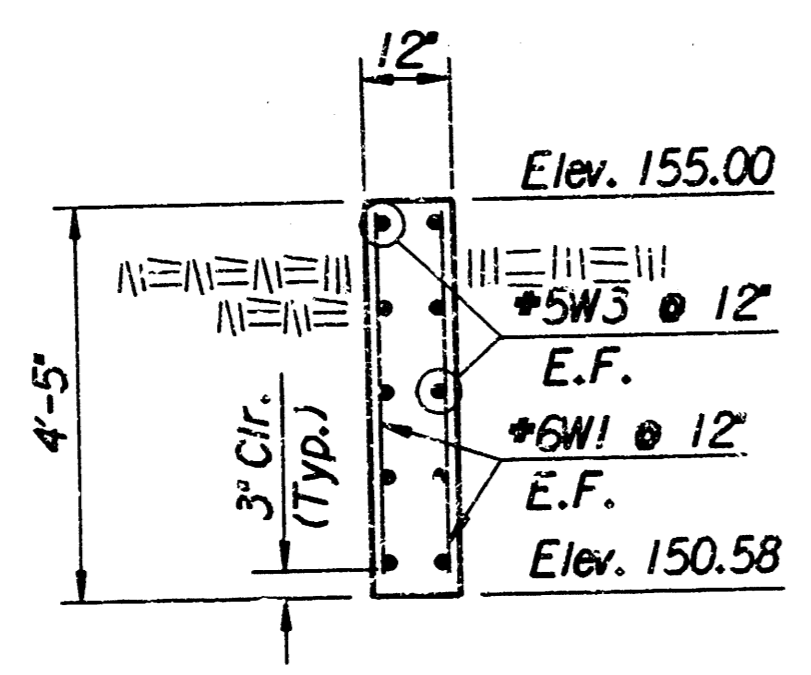
SUMMARY OF QUANTITIES		
ITEM	QUANTITY	UNIT
Concrete	7.5	C.Y.
Reinforcing Steel	1076	Lbs.



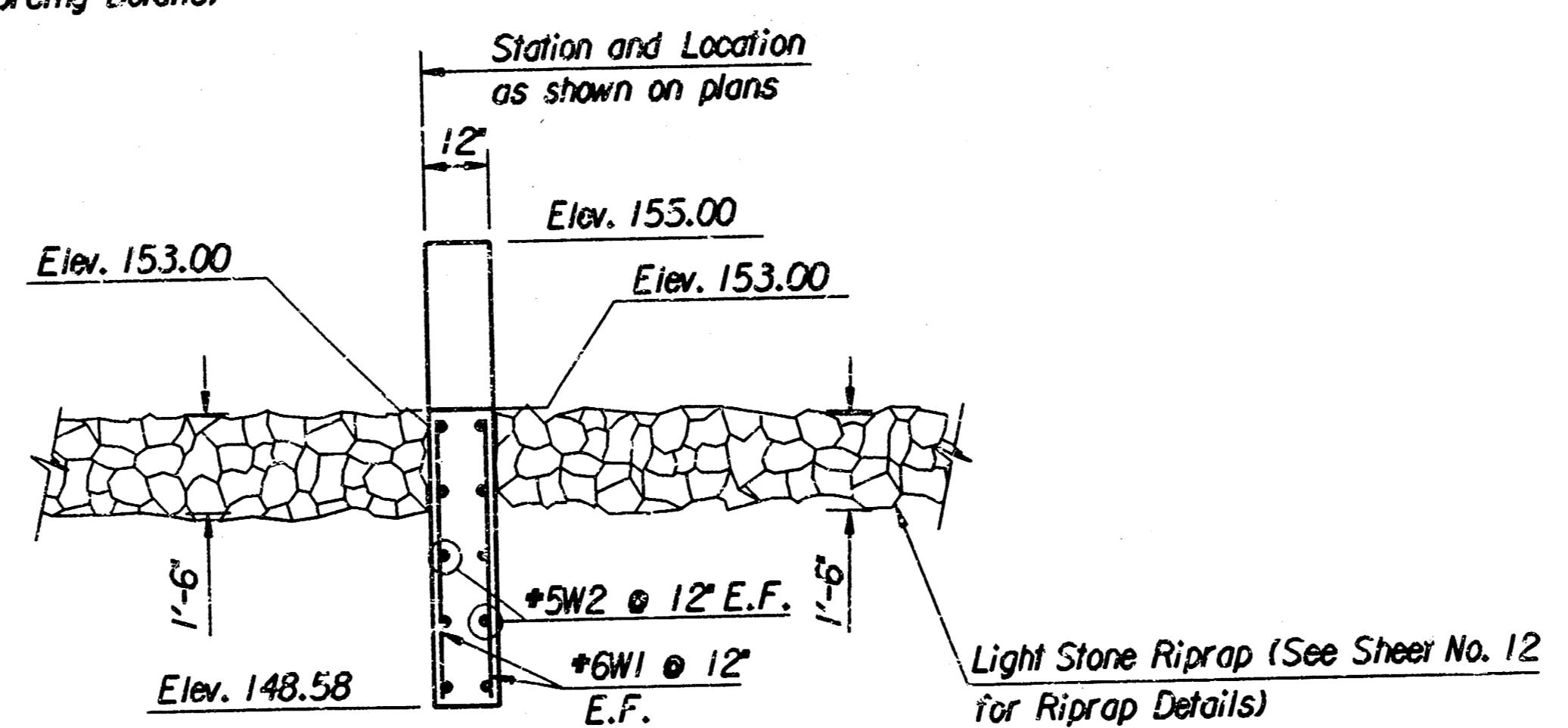
ELEVATION  
(Concrete Details)



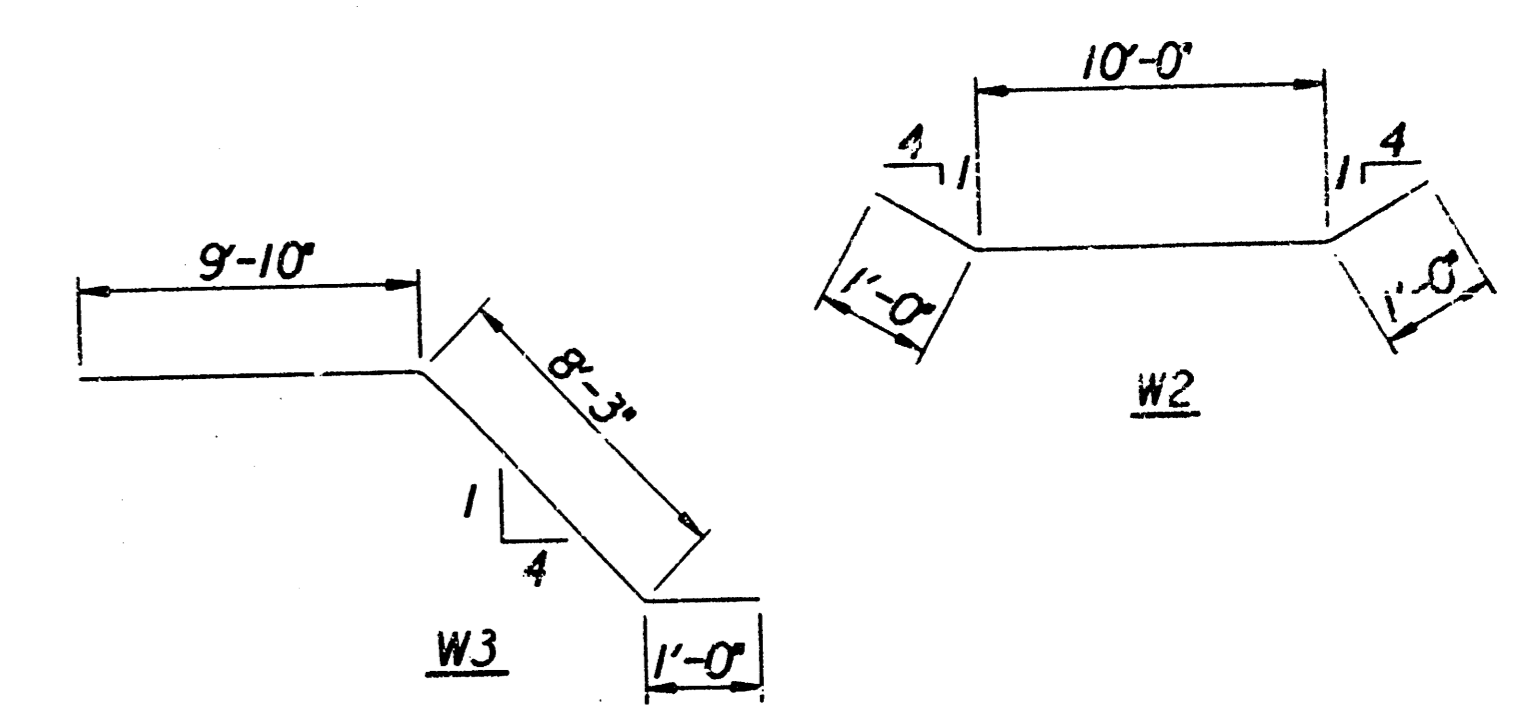
ELEVATION  
(Reinforcing Details)



SECTION A-A



SECTION B-B



BENDING DIAGRAMS

GENERAL NOTES

- UNIT STRESSES:**  
CONCRETE:  $F'_c=4,000$  P.S.I.,  $F_y=60,000$  P.S.I.  
 $F_c=1,600$  P.S.I.,  $F_s=24,000$  P.S.I.
- CONCRETE:** Concrete shall have a minimum 28 day compressive strength of 4,000 P.S.I. Bevel all exposed edges with a 3/4" triangular moulding, unless otherwise noted.
- REINFORCING STEEL:** All reinforcing steel shall conform to ASTM Designation A615 Grade 60 and shall be epoxy-coated. All dimensions relative to reinforcing are to centerline of bars unless otherwise noted. Bar bending and dimensions shall be as shown and noted on the bar bending diagrams. The concrete cover for all reinforcing shall be a minimum of 2" unless otherwise noted.
- JOINTS:** Construction Joints shall only be formed at locations shown or as approved by the Engineer.
- BASIS OF PAYMENT**  
The "R.C. Weir No. 1" shall be paid as a lump sum which shall include all labor, material, excavation, concrete, reinforcing steel and all other incidentals necessary to complete the work. Quantities shown are for information only.

FOREST LAKES WEST  
STORM DRAINAGE

## WEIR NO. 1 DETAILS

**PROFESSIONAL ENGINEERING CONSULTANTS, P.A.**  
ENGINEERS  
WICHITA, KANSAS

Designed by RWA	Checked by RAS
Drawn by BJS	Date OCT 1997
	Job No. 97666-1

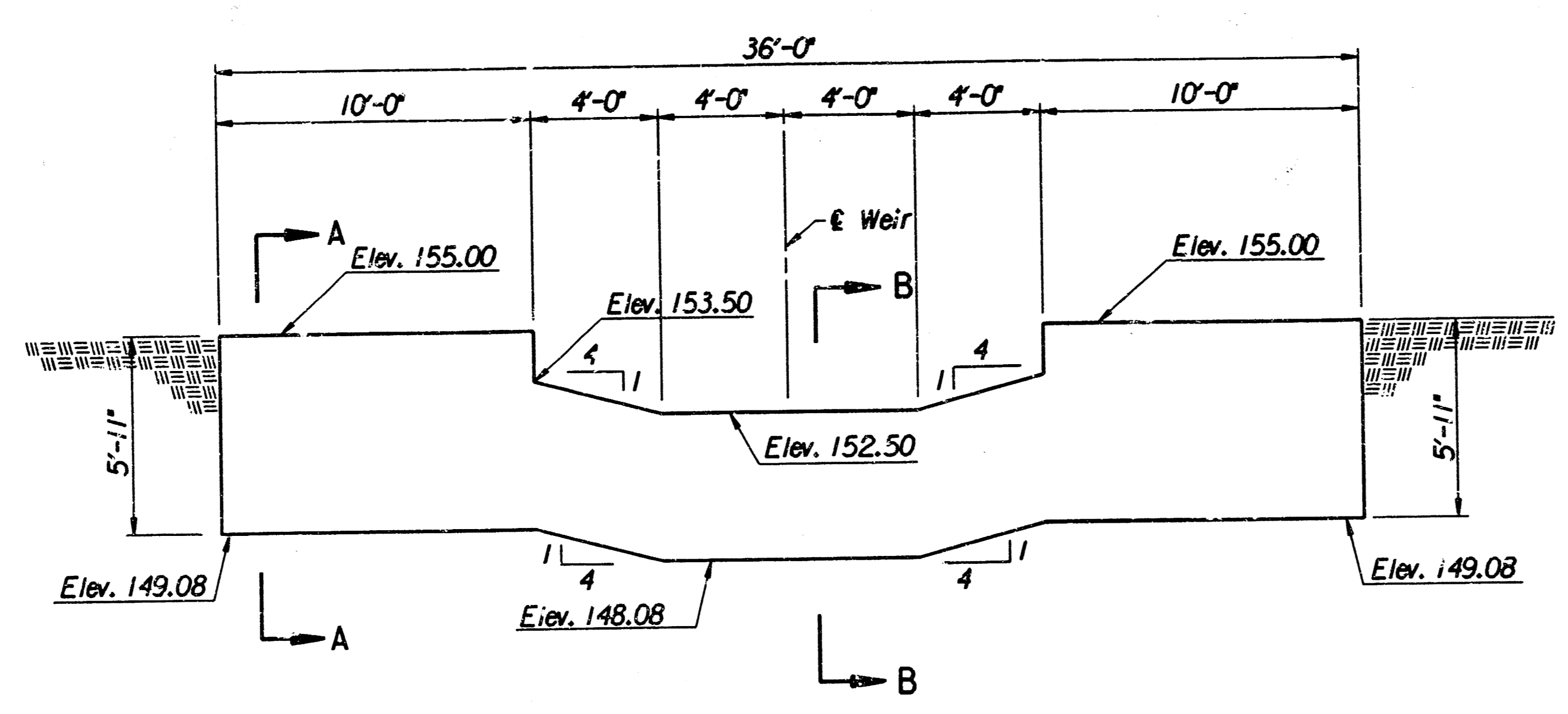
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 deliver: to: bob augustine

PROJECT NO.	SHEET NO.	TOTAL SHEETS
750PPS (607861)	11	12

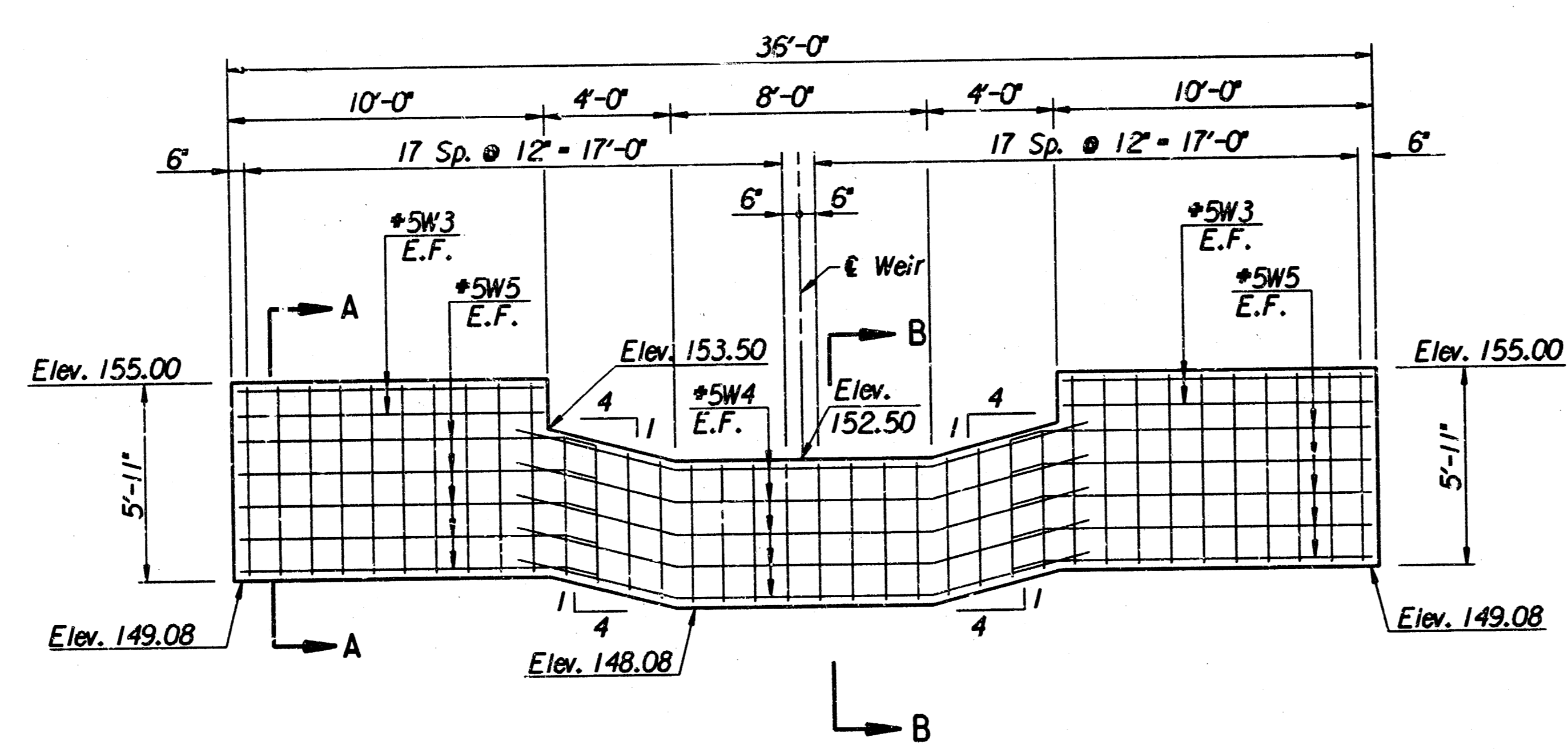
BILL OF MATERIALS					
REINFORCING STEEL					
Straight Bars			Bent Bars *		
Mark No.	Size	Length	Mark No.	Size	Length
W1	32	#6 4'-0"	W4	10	#5 19'-0"
W2	40	#6 5'-6"	W5	20	#5 10'-10"
W3	8	#5 9'-8"			

\* See Bending Diagrams

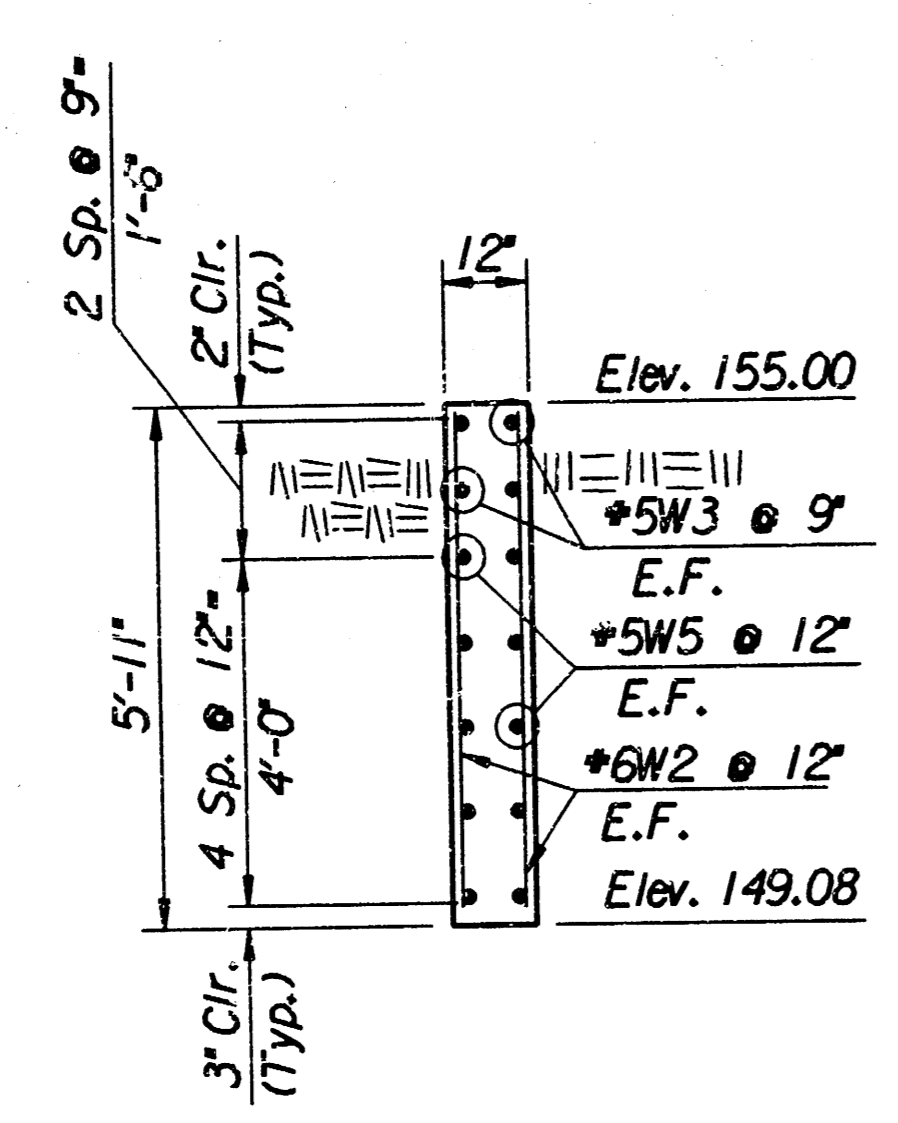
SUMMARY OF QUANTITIES		
ITEM	QUANTITY	UNIT
Concrete	7.0	C.Y.
Reinforcing Steel	1028	Lbs.



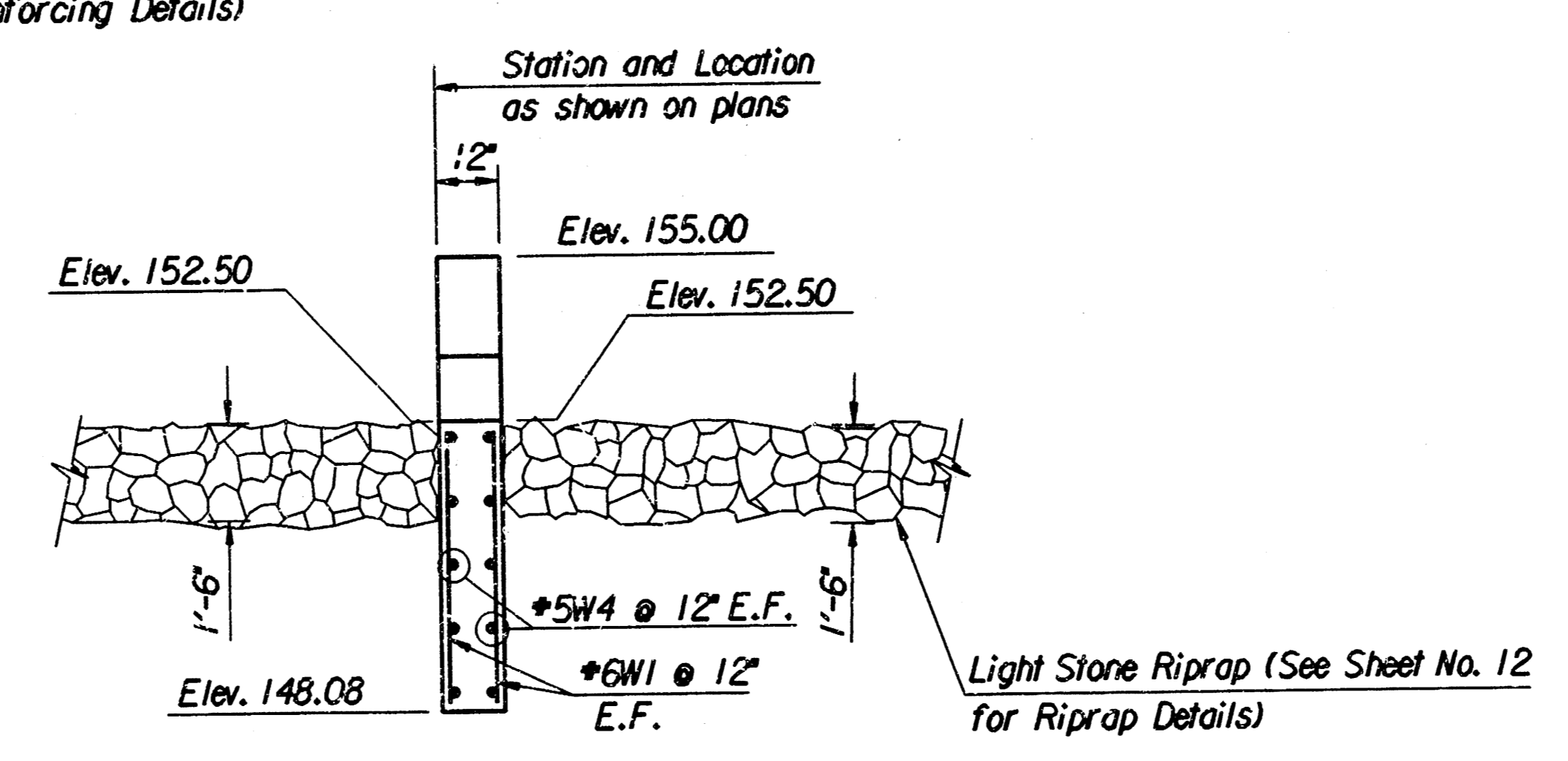
ELEVATION  
(Concrete Details)



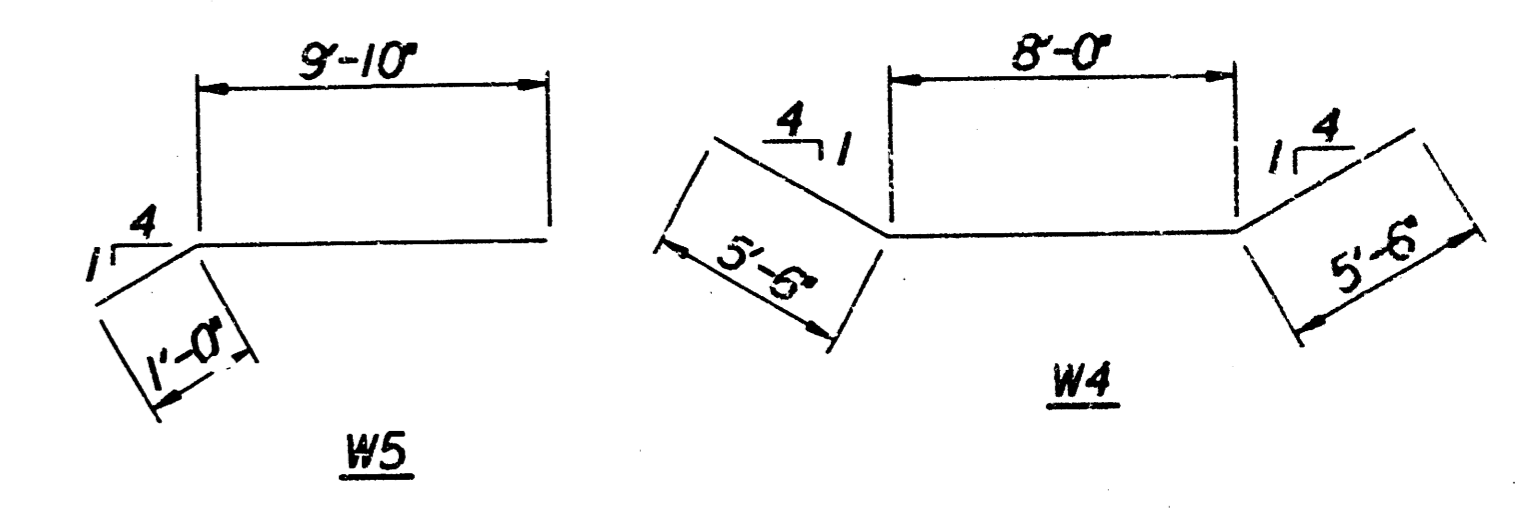
ELEVATION  
(Reinforcing Details)



SECTION A-A



SECTION B-B



BENDING DIAGRAMS

GENERAL NOTES

UNIT STRESSES:  
CONCRETE:  $F'_c=4,000$  P.S.I.,  $F_y=60,000$  P.S.I.  
 $F_c=1,600$  P.S.I.,  $F_s=24,000$  P.S.I.

CONCRETE: Concrete shall have a minimum 28 day compressive strength of 4,000 P.S.I. Bevel all exposed edges with a  $\frac{3}{4}$ " triangular mounding, unless otherwise noted.

REINFORCING STEEL: All reinforcing steel shall conform to ASTM Designation A615 Grade 60 and shall be epoxy-coated. All dimensions relative to reinforcing are to centerline of bars unless otherwise noted. Bar bending and dimensions shall be as shown and noted on the bar bending diagrams. The concrete cover for all reinforcing shall be a minimum of 2" unless otherwise noted.

JOINTS: Construction Joints shall only be formed at locations shown or as approved by the Engineer.

BASIS OF PAYMENT

The "R.C. Weir No. 2" shall be paid as a lump sum which shall include all labor, material, excavation, concrete, reinforcing steel and all other incidentals necessary to complete the work. Quantities shown are for information only.

FOREST LAKES WEST  
STORM DRAINAGE

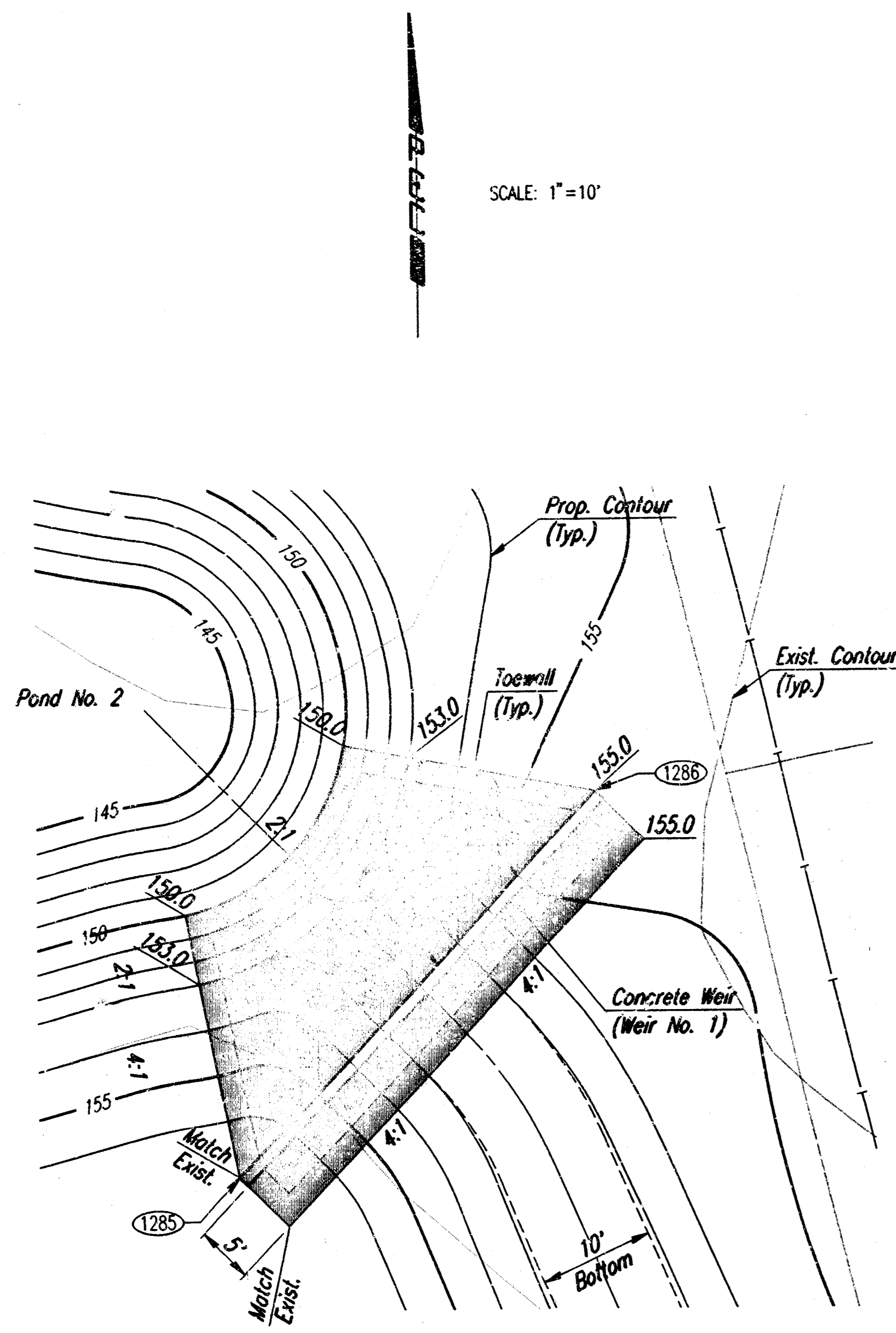
## WEIR NO. 2 DETAILS

**PROFESSIONAL ENGINEERING CONSULTANTS, P.A.**  
ENGINEERS  
WICHITA, KANSAS

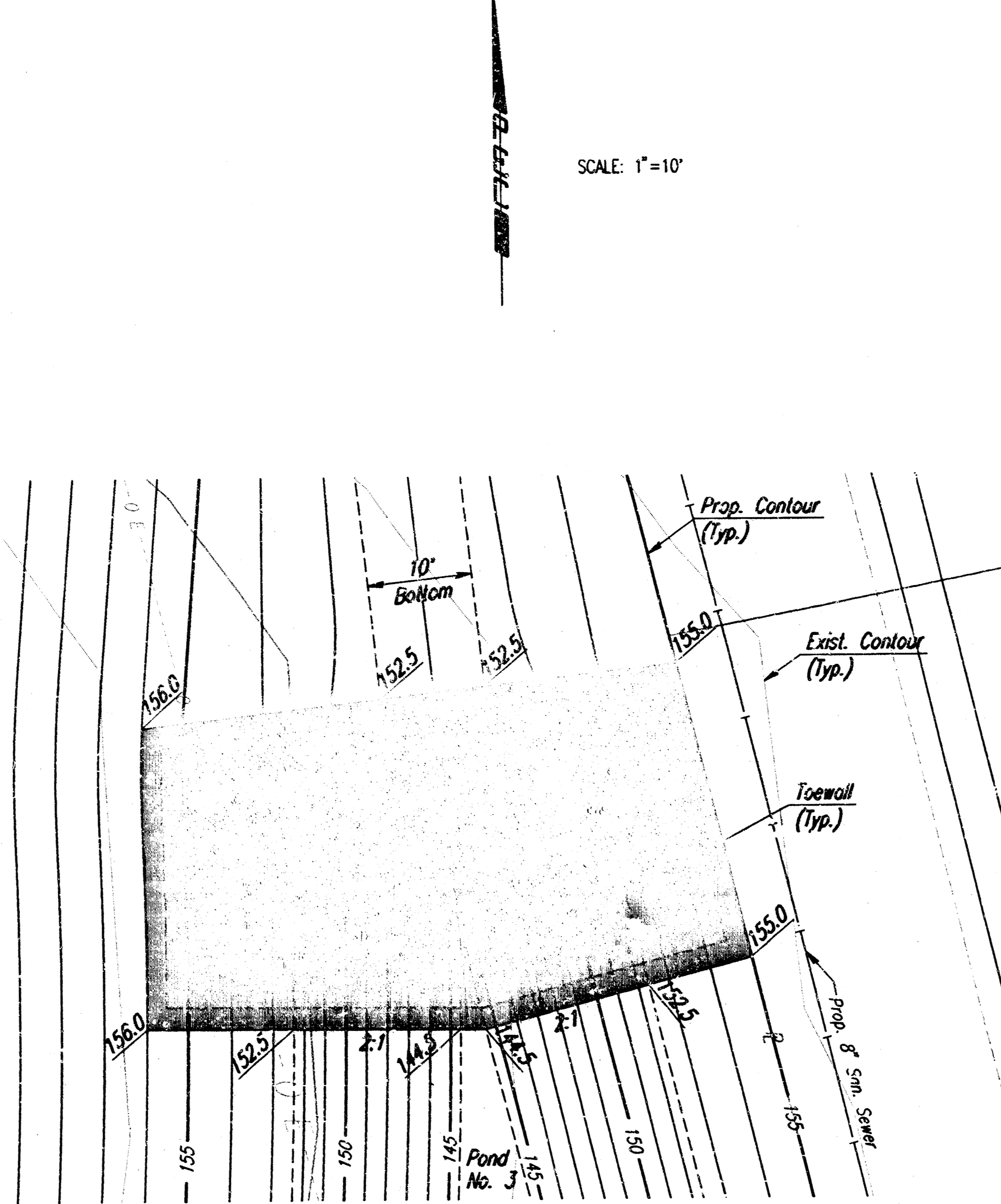
Designed by: RWA	Checked by: RAS
Drawn by: BAS	Date: OCT. 1997
Job No. 97666-1	

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 date plotted: october 14, 1997  
 deliver for: bob augustine

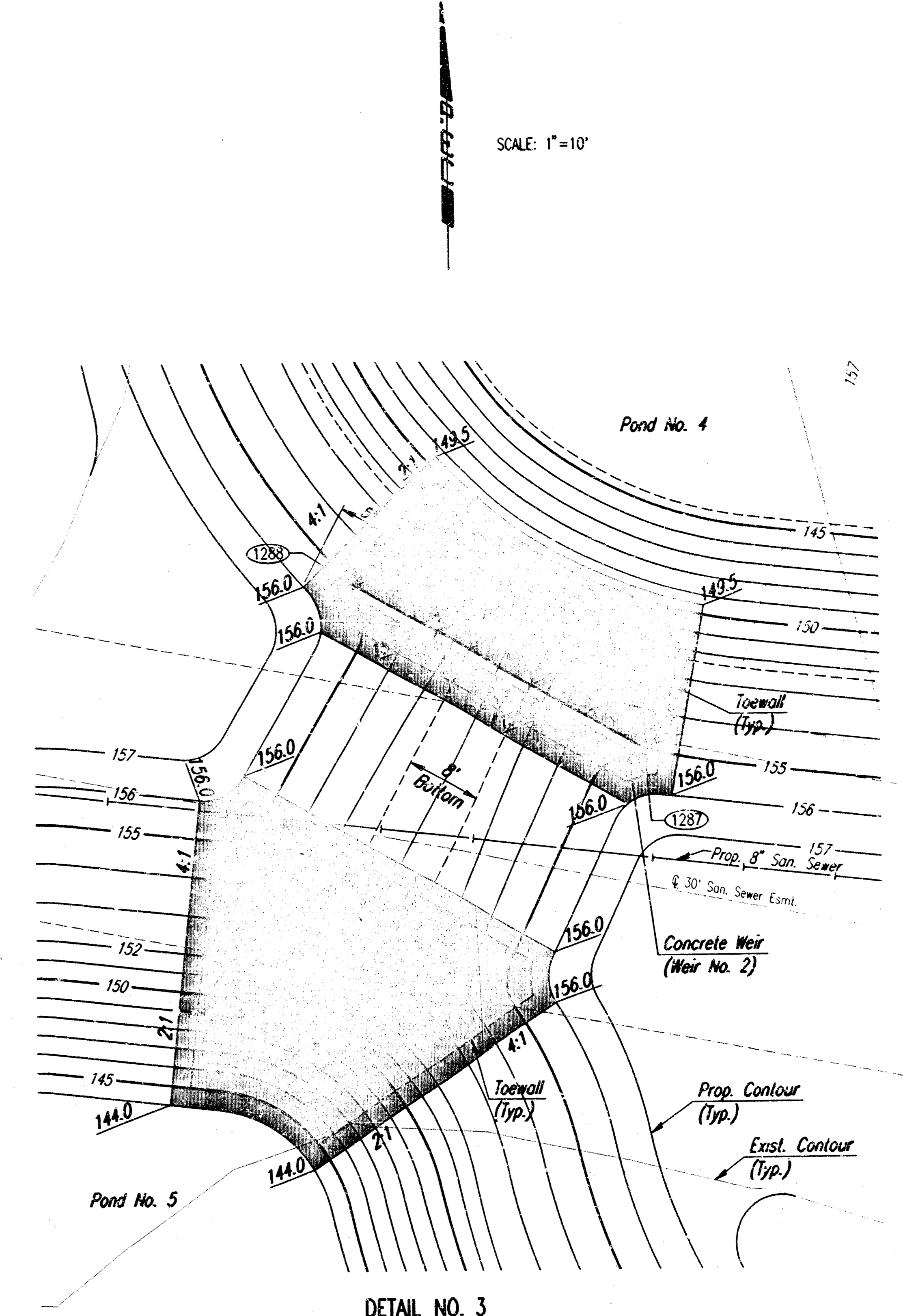
PROJECT NO.	SHEET NO.	TOTAL SHEETS
750PPS (607861)	12	12



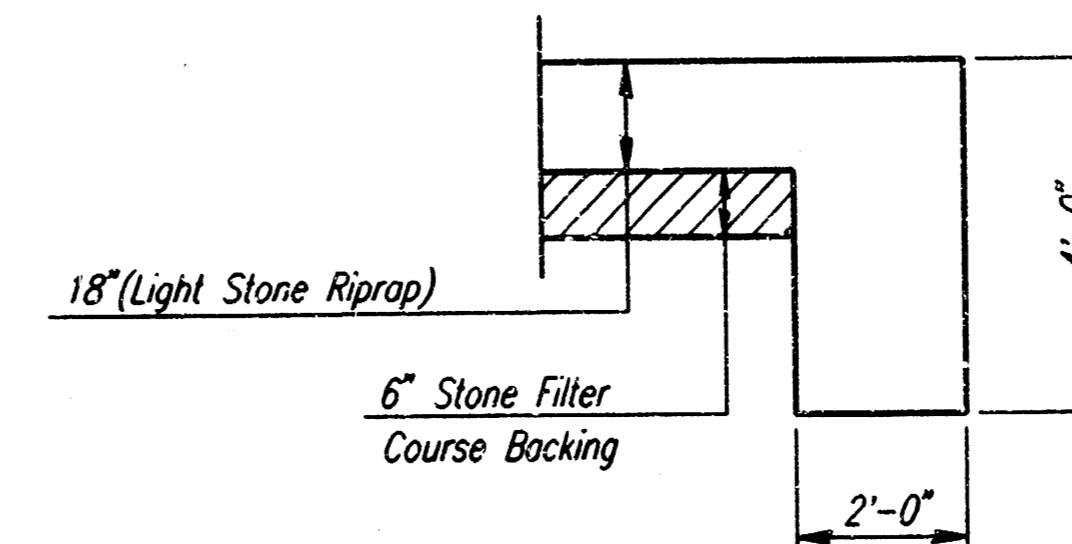
DETAIL NO. 1



DETAIL NO. 2



DETAIL NO. 3



TYPICAL SECTION THRU TOEWALL  
NO SCALE

NOTES

1. ALL RIPRAP FOR THIS PROJECT SHALL BE NATURAL STONE. NEITHER BROKEN CONCRETE, FABRIC ENVELOPE, NOR PREMIXED DRY PACKAGED CONCRETE BAG ALTERNATES WILL BE ALLOWED.
2. TOEWALLS SHALL BE INSTALLED ALONG EDGES OF STONE RIPRAP WHERE SHOWN.
3. GROUTING OF THE SURFACE OF THE RIPRAP SHALL NOT BE PERFORMED. GROUTING OF THE TOEWALLS SHALL BE PERFORMED PER CITY SPECIFICATIONS.

(1285) = COORDINATE POINT NUMBER

FOREST LAKES WEST  
STORM WATER DRAIN

### RIPRAP DETAILS

PROFESSIONAL ENGINEERING CONSULTANTS, P.A.  
ENGINEERS  
WICHITA, KANSAS

Designed by	BER, GDD	Checked by	
Drawn by	BJS	Date	OCT. 1997
		Job No.	97866-1

11-10-98-12

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deliver to: dwaine dunn