

# DYKE CREEK WATERSHED PROJECT

DRAINAGE AREA 46,348 ACRES

LENGTH OF DIKES 6,810 LIN. FT.

BUILT UNDER THE WATERSHED PROTECTION AND  
FLOOD PREVENTION ACT  
BY

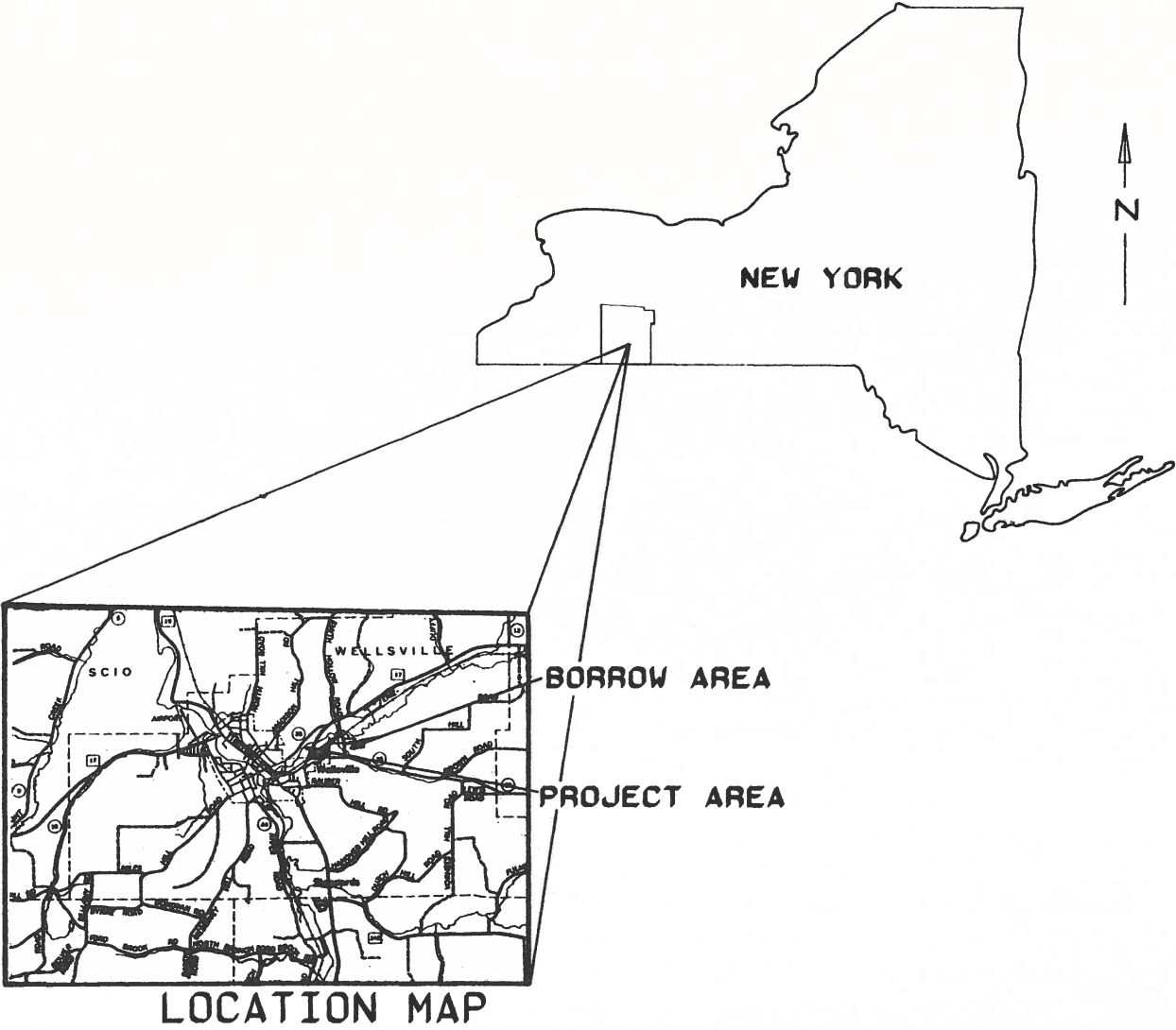
ALLEGANY COUNTY

TOWN OF WELLSVILLE

VILLAGE OF WELLSVILLE

ALLEGANY COUNTY SOIL AND WATER CONSERVATION DISTRICT

WITH THE ASSISTANCE OF  
THE U.S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE



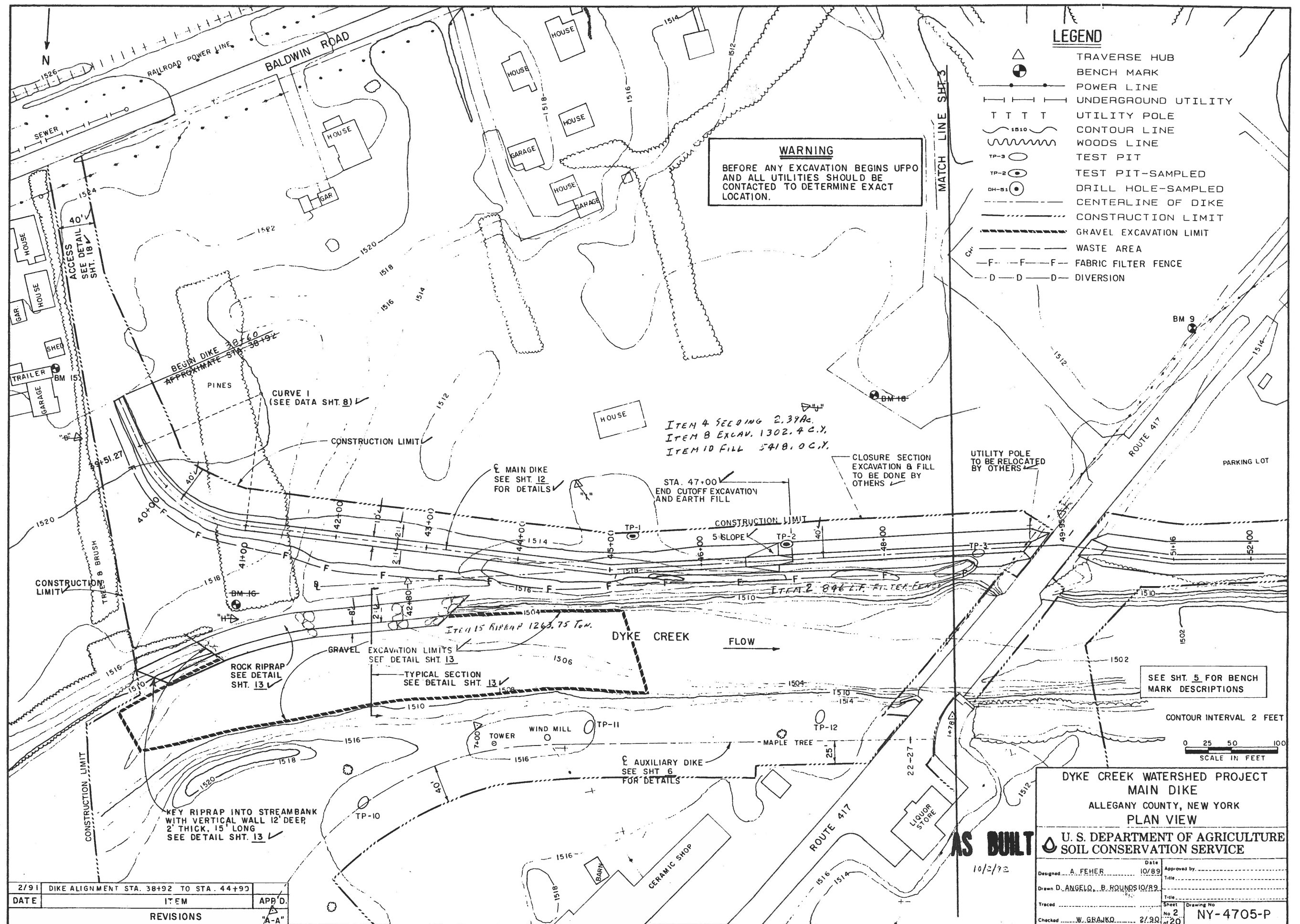
CONTRACTOR - R. L. BATES + ASSOCIATE  
GOV. REP - T. REPINE  
INSP - D. KOLESAR  
TOTAL CONTRACT COST \$1,919,853.93  
CONTRACT NO. + DATE - 50-2C31-1-13 7/23/91

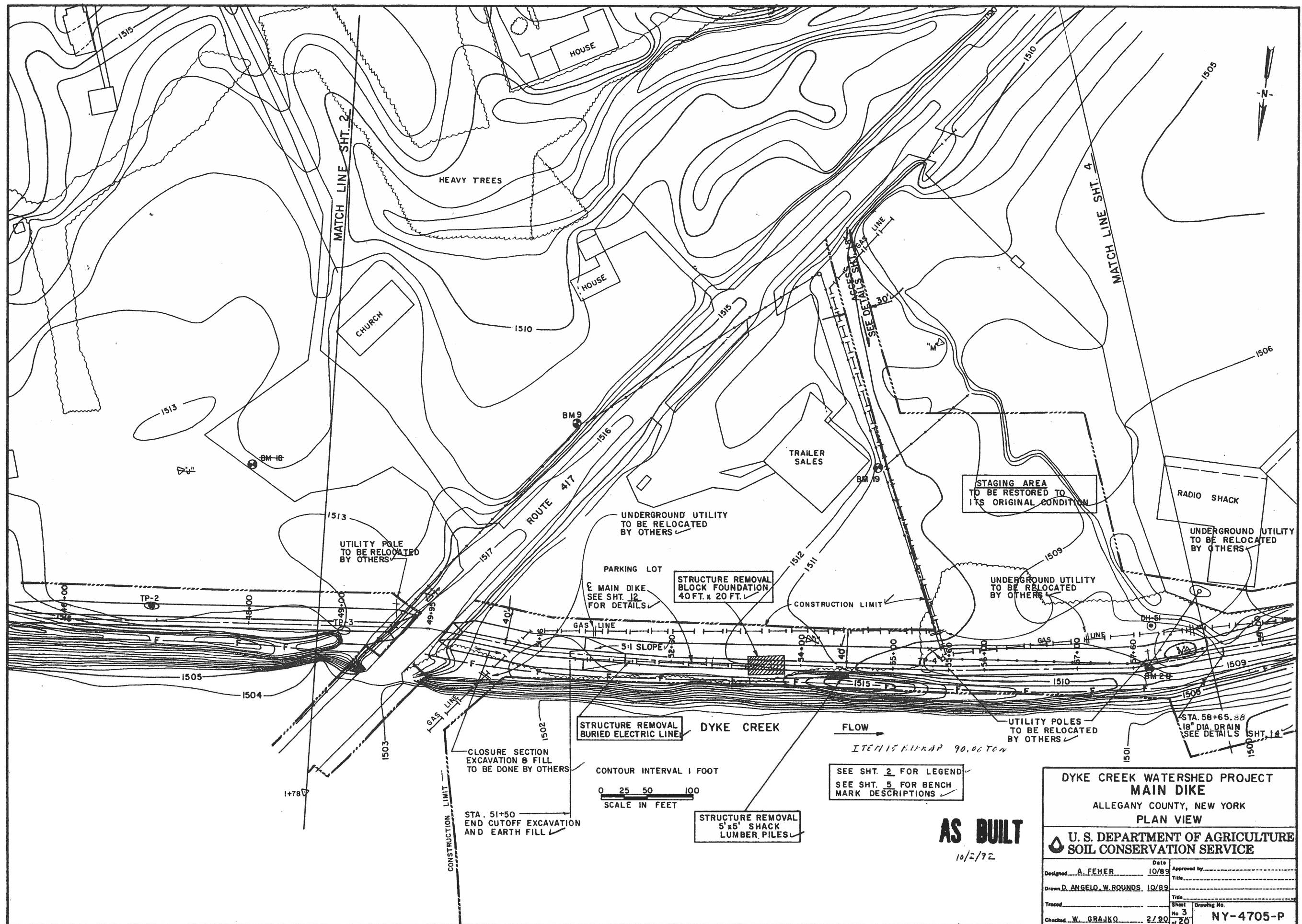
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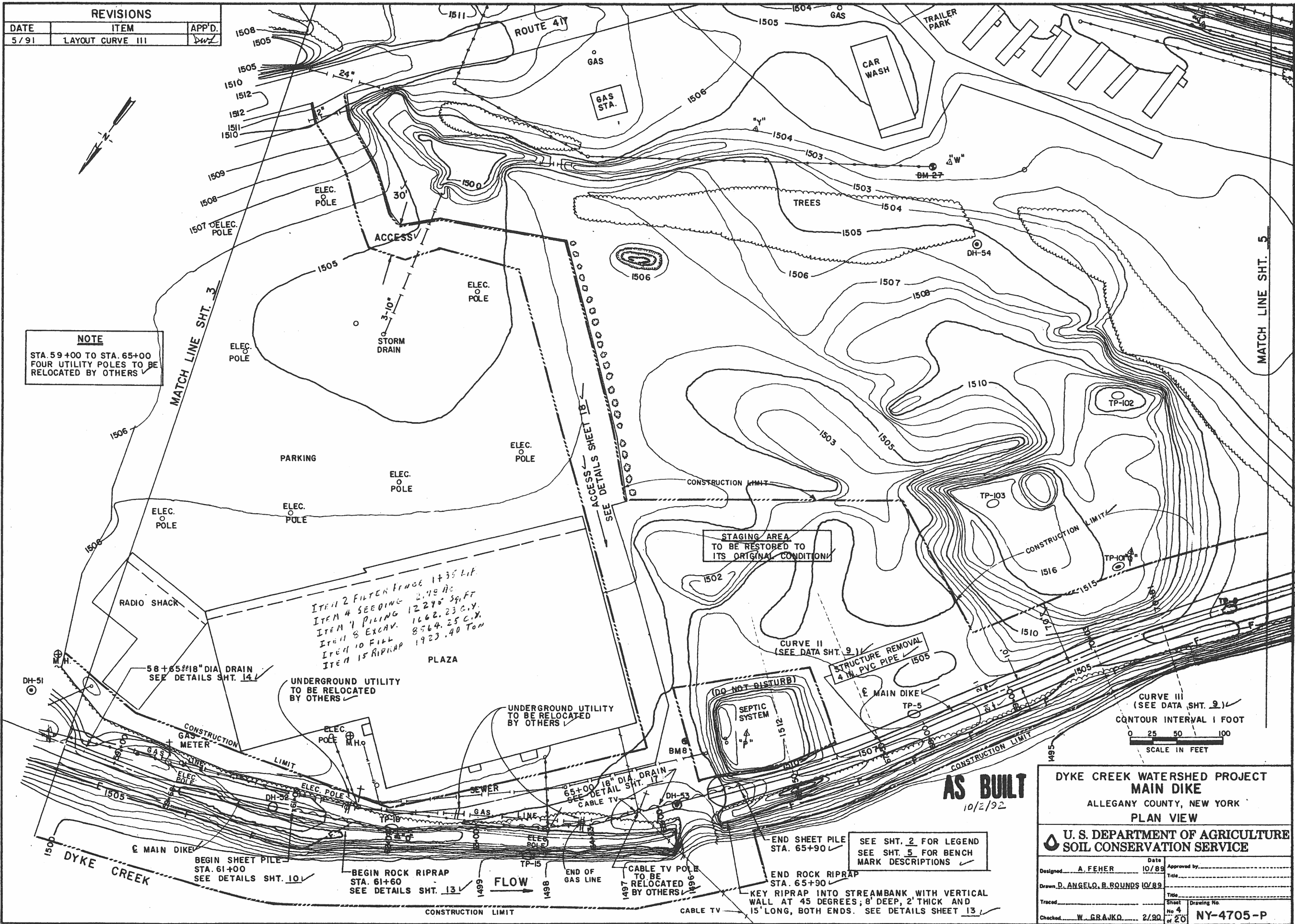
**AS BUILT**  
10/2/92

DYKE CREEK WATERSHED PROJECT			
ALLEGANY COUNTY, NEW YORK			
COVER SHEET			
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE			
Designed A. FEHER	Date 1/89	Approved by [Signature] Title Head U.S. Engineering Staff	
Drawn V. ROUNDS	Date 1/89	Title State Conservation Engineer	
Traced	Date	Sheet No. 1	Drawing No.
Checked V. GRAJCO	Date 1/89	NY-4705-P	









REVISIONS		
DATE	ITEM	APP'D.
5/91	LAYOUT CURVE III	DW

**NOTE**  
STA. 59+00 TO STA. 65+00  
FOUR UTILITY POLES TO BE  
RELOCATED BY OTHERS

ITEM 2 FILTER FENCE 1435 LF  
ITEM 4 SEEDING 2,49 AC  
ITEM 7 PILING 12295 SF  
ITEM 8 EXCAV. 1662.23 C.Y.  
ITEM 10 FILL 8564.25 C.Y.  
ITEM 15 RIPRAP 1923.40 TON

**AS BUILT**  
10/2/92

DYKE CREEK WATERSHED PROJECT MAIN DIKE ALLEGANY COUNTY, NEW YORK PLAN VIEW			
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE			
Designed	A. FEHER	Date	10/89
Drawn	D. ANGELO, B. ROUNDS	10/89	
Traced		Sheet	No. 4 of 20
Checked	W. GRAJKO	2/90	Drawing No. NY-4705-P

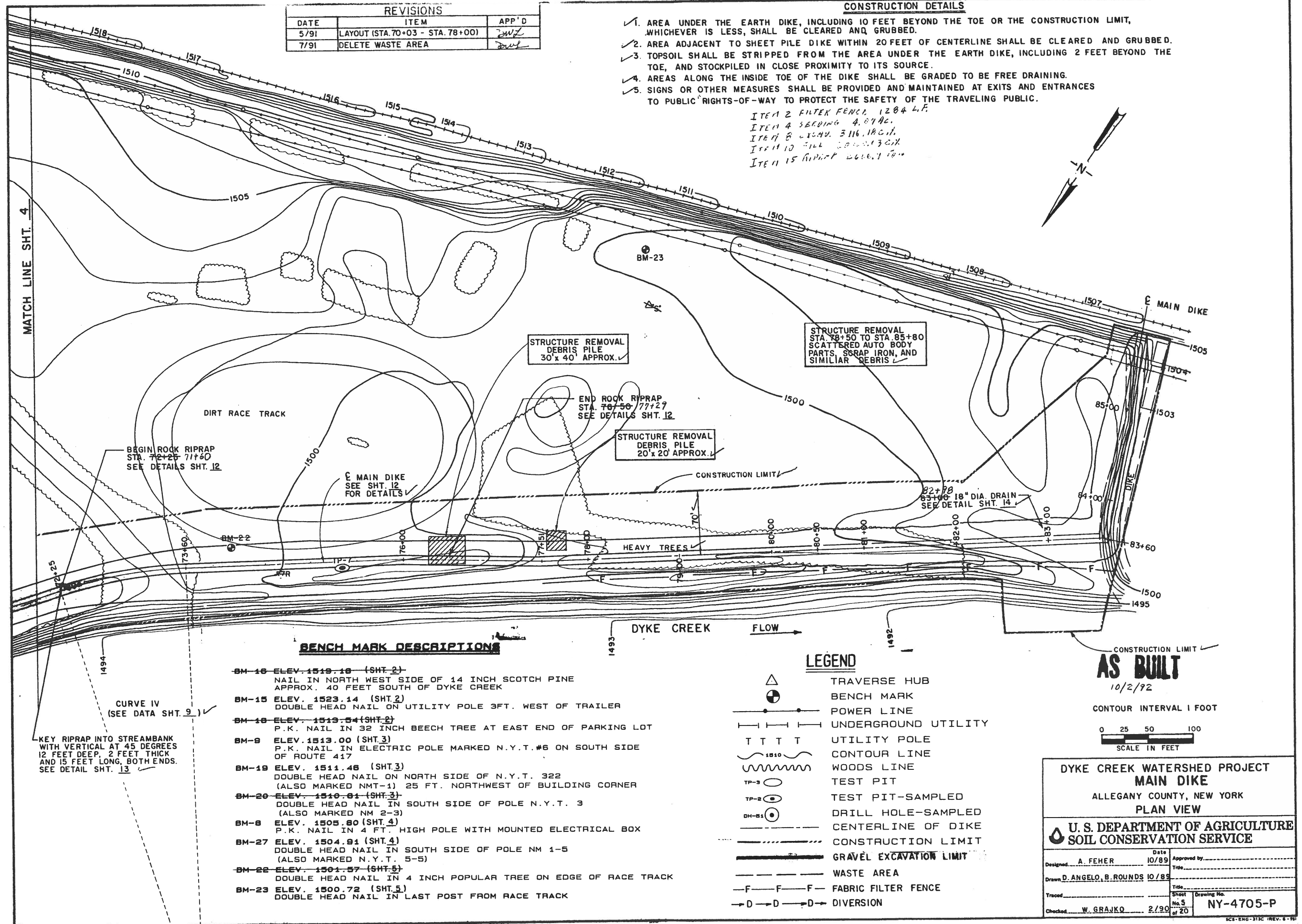


REVISIONS		
DATE	ITEM	APP'D
5/91	LAYOUT (STA. 70+03 - STA. 78+00)	JWZ
7/91	DELETE WASTE AREA	JWZ

# CONSTRUCTION DETAILS

1. AREA UNDER THE EARTH DIKE, INCLUDING 10 FEET BEYOND THE TOE OR THE CONSTRUCTION LIMIT, WHICHEVER IS LESS, SHALL BE CLEARED AND GRUBBED.
2. AREA ADJACENT TO SHEET PILE DIKE WITHIN 20 FEET OF CENTERLINE SHALL BE CLEARED AND GRUBBED.
3. TOPSOIL SHALL BE STRIPPED FROM THE AREA UNDER THE EARTH DIKE, INCLUDING 2 FEET BEYOND THE TOE, AND STOCKPILED IN CLOSE PROXIMITY TO ITS SOURCE.
4. AREAS ALONG THE INSIDE TOE OF THE DIKE SHALL BE GRADED TO BE FREE DRAINING.
5. SIGNS OR OTHER MEASURES SHALL BE PROVIDED AND MAINTAINED AT EXITS AND ENTRANCES TO PUBLIC RIGHTS-OF-WAY TO PROTECT THE SAFETY OF THE TRAVELING PUBLIC.

ITEM 2 FILTER FENCE 1204 L.F.  
ITEM 4 SEEDING 4.07 AC.  
ITEM 8 EXCAV. 3116.18 CU.Y.  
ITEM 10 FILL 2014.13 CU.Y.  
ITEM 15 RIPRAP 2666.1 CU.Y.



STRUCTURE REMOVAL  
DEBRIS PILE  
30' x 40' APPROX.

STRUCTURE REMOVAL  
STA. 78+50 TO STA. 85+80  
SCATTERED AUTO BODY  
PARTS, SCRAP IRON, AND  
SIMILAR DEBRIS

END ROCK RIPRAP  
STA. 78+50 TO 77+29  
SEE DETAILS SHT. 12

STRUCTURE REMOVAL  
DEBRIS PILE  
20' x 20' APPROX.

BEGIN ROCK RIPRAP  
STA. 72+25 TO 71+60  
SEE DETAILS SHT. 12

E MAIN DIKE  
SEE SHT. 12  
FOR DETAILS

18" DIA. DRAIN  
82+78 TO 83+00  
SEE DETAIL SHT. 14

## BENCH MARK DESCRIPTIONS

- BM-16 ELEV. 1519.16 (SHT. 2)  
NAIL IN NORTH WEST SIDE OF 14 INCH SCOTCH PINE  
APPROX. 40 FEET SOUTH OF DYKE CREEK
- BM-15 ELEV. 1523.14 (SHT. 2)  
DOUBLE HEAD NAIL ON UTILITY POLE 3FT. WEST OF TRAILER
- BM-18 ELEV. 1519.54 (SHT. 2)  
P.K. NAIL IN 32 INCH BEECH TREE AT EAST END OF PARKING LOT
- BM-9 ELEV. 1513.00 (SHT. 3)  
P.K. NAIL IN ELECTRIC POLE MARKED N.Y.T. #6 ON SOUTH SIDE  
OF ROUTE 417
- BM-19 ELEV. 1511.46 (SHT. 3)  
DOUBLE HEAD NAIL ON NORTH SIDE OF N.Y.T. 322  
(ALSO MARKED NMT-1) 25 FT. NORTHWEST OF BUILDING CORNER
- BM-20 ELEV. 1510.81 (SHT. 3)  
DOUBLE HEAD NAIL IN SOUTH SIDE OF POLE N.Y.T. 3  
(ALSO MARKED NM 2-3)
- BM-8 ELEV. 1505.80 (SHT. 4)  
P.K. NAIL IN 4 FT. HIGH POLE WITH MOUNTED ELECTRICAL BOX
- BM-27 ELEV. 1504.91 (SHT. 4)  
DOUBLE HEAD NAIL IN SOUTH SIDE OF POLE NM 1-5  
(ALSO MARKED N.Y.T. 5-5)
- BM-22 ELEV. 1501.57 (SHT. 5)  
DOUBLE HEAD NAIL IN 4 INCH POPULAR TREE ON EDGE OF RACE TRACK
- BM-23 ELEV. 1500.72 (SHT. 5)  
DOUBLE HEAD NAIL IN LAST POST FROM RACE TRACK

## LEGEND

- TRAVERSE HUB
- BENCH MARK
- POWER LINE
- UNDERGROUND UTILITY
- UTILITY POLE
- CONTOUR LINE
- WOODS LINE
- TEST PIT
- TEST PIT-SAMPLED
- DRILL HOLE-SAMPLED
- CENTERLINE OF DIKE
- CONSTRUCTION LIMIT
- GRAVEL EXCAVATION LIMIT
- WASTE AREA
- FABRIC FILTER FENCE
- DIVERSION

AS BUILT  
10/2/92

CONTOUR INTERVAL 1 FOOT  
0 25 50 100  
SCALE IN FEET

DYKE CREEK WATERSHED PROJECT  
MAIN DIKE  
ALLEGANY COUNTY, NEW YORK  
PLAN VIEW

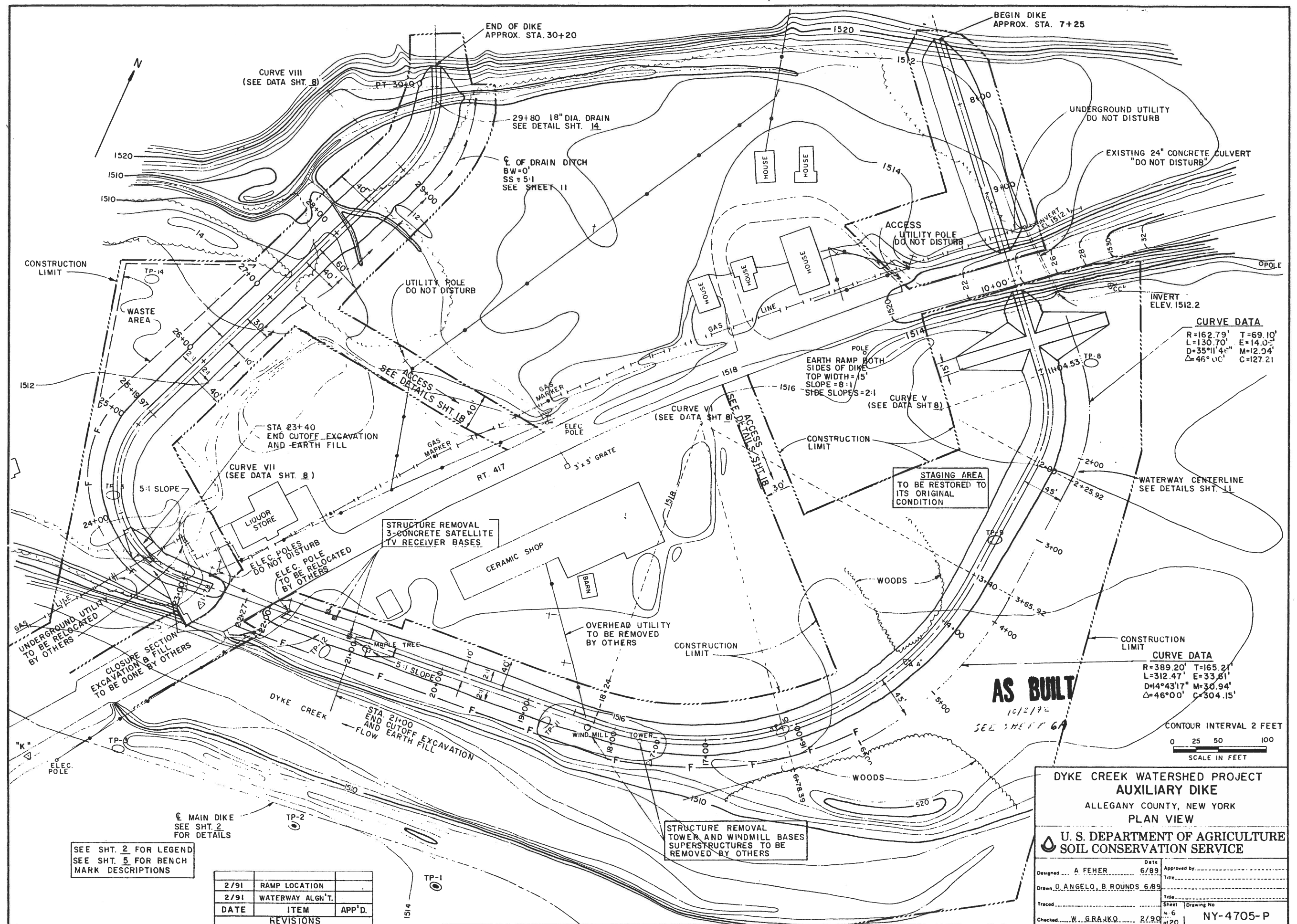
U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

Designed: A. FEHER Date: 10/89  
Drawn: D. ANGELO, B. ROUNDS 10/89  
Traced: W. GRAJKO 2/90  
Checked: W. GRAJKO 2/90

Approved by: \_\_\_\_\_  
Title: \_\_\_\_\_  
Drawing No. NY-4705-P  
Sheet No. 5 of 20

CURVE IV  
(SEE DATA SHT. 9)

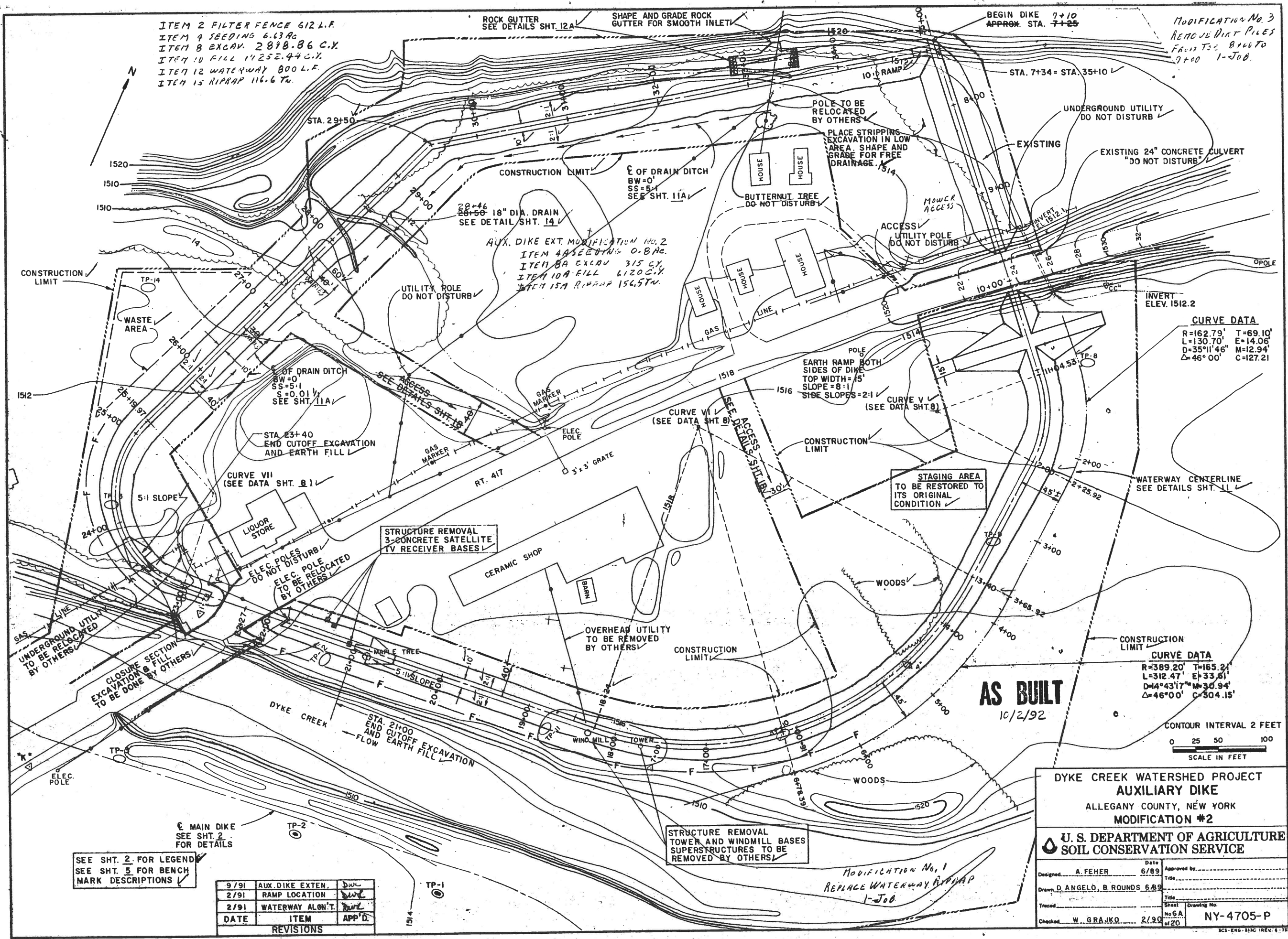
KEY RIPRAP INTO STREAMBANK  
WITH VERTICAL AT 45 DEGREES  
12 FEET DEEP, 2 FEET THICK  
AND 15 FEET LONG, BOTH ENDS.  
SEE DETAIL SHT. 13



SEE SHT. 2 FOR LEGEND  
SEE SHT. 5 FOR BENCH  
MARK DESCRIPTIONS

2/91	RAMP LOCATION	
2/91	WATERWAY ALGN'T.	
DATE	ITEM	APP'D.
REVISIONS		

DYKE CREEK WATERSHED PROJECT AUXILIARY DIKE ALLEGANY COUNTY, NEW YORK PLAN VIEW			
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE			
Designed by A. FEHER		Date 6/89	Approved by
Drawn D. ANGELO, B. ROUNDS		Date 6/89	Title
Traced		Sheet 6	Drawing No.
Checked W. GRAJKO		Date 2/90	NY-4705-P



ITEM 2 FILTER FENCE 612 L.F.  
ITEM 4 SEEDING 6.13 AC.  
ITEM 8 EXCAV. 2818.86 C.Y.  
ITEM 10 FILL 11252.44 C.Y.  
ITEM 12 WATERWAY 800 L.F.  
ITEM 15 RIPRAP 116.6 Tn.

MODIFICATION No. 3  
REMOVE DIKE PILES  
FROM STA. 8+00 TO  
7+00 1-JOB.

CURVE DATA  
R=162.79' T=69.10'  
L=130.70' E=14.06'  
D=35°11'46" M=12.94'  
Δ=46°00' C=127.21

CURVE DATA  
R=389.20' T=165.21'  
L=312.47' E=33.61'  
D=44°43'17" M=30.94'  
Δ=46°00' C=304.15'

AS BUILT  
10/2/92

CONTOUR INTERVAL 2 FEET  
0 25 50 100  
SCALE IN FEET

SEE SHT. 2 FOR LEGEND  
SEE SHT. 5 FOR BENCH  
MARK DESCRIPTIONS

DATE	ITEM	APP'D.
9/91	AUX. DIKE EXTEN.	DWL
2/91	RAMP LOCATION	DWL
2/91	WATERWAY ALGN'T.	DWL
DATE	ITEM	APP'D.
REVISIONS		

DYKE CREEK WATERSHED PROJECT  
AUXILIARY DIKE  
ALLEGANY COUNTY, NEW YORK  
MODIFICATION #2

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

Designed: A. FEHER Date: 6/89  
Drawn: D. ANGELO, B. ROUNDS 6/89  
Traced: W. GRAUKE 2/90  
Checked: W. GRAUKE 2/90  
Approved by: \_\_\_\_\_  
Title: \_\_\_\_\_  
Drawing No.: NY-4705-P  
Sheet No. 6A of 20

MODIFICATION No. 1  
REPLACE WATERWAY RIPRAP  
1-JOB.





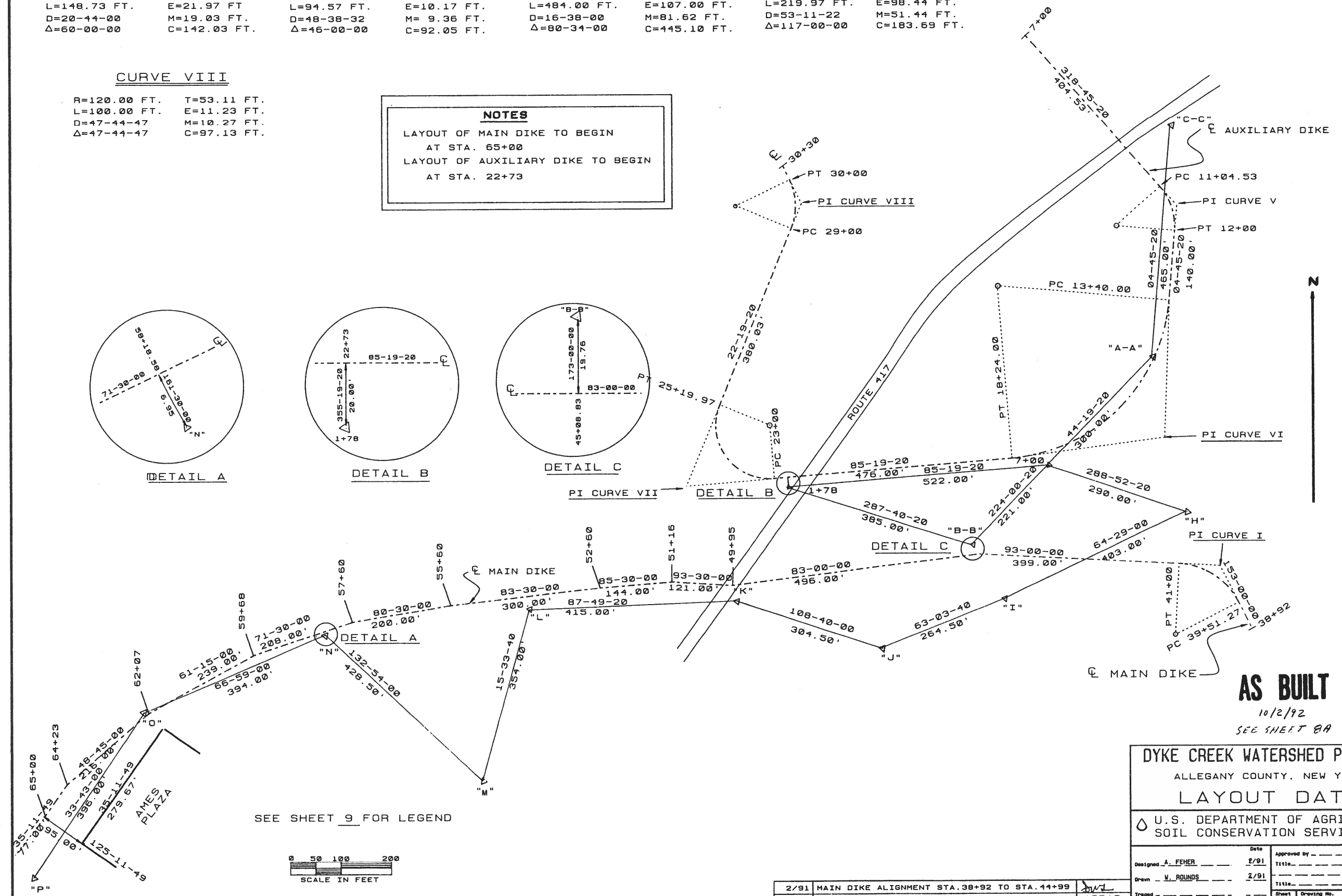
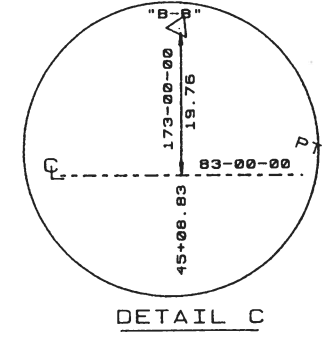
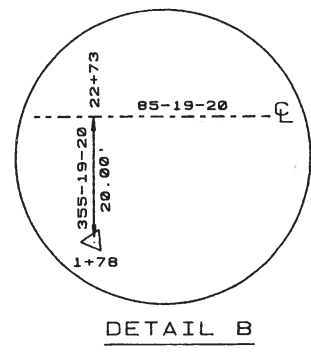
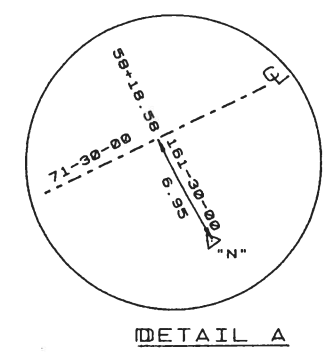
CURVE I				CURVE V				CURVE VI				CURVE VII			
R=142.03 FT.	T=82.00 FT.	L=148.73 FT.	E=21.97 FT.	R=117.79 FT.	T=50.00 FT.	L=94.57 FT.	E=10.17 FT.	R=344.20 FT.	T=291.73 FT.	L=484.00 FT.	E=107.00 FT.	R=107.72 FT.	T=175.78 FT.	L=219.97 FT.	E=98.44 FT.
D=20-44-00	M=19.03 FT.	Δ=60-00-00	C=142.03 FT.	D=48-38-32	M=9.36 FT.	Δ=46-00-00	C=92.05 FT.	D=16-38-00	M=81.62 FT.	Δ=80-34-00	C=445.10 FT.	D=53-11-22	M=51.44 FT.	Δ=117-00-00	C=183.69 FT.

CURVE VIII			
R=120.00 FT.	T=53.11 FT.	L=100.00 FT.	E=11.23 FT.
D=47-44-47	M=10.27 FT.	Δ=47-44-47	C=97.13 FT.

**NOTES**

LAYOUT OF MAIN DIKE TO BEGIN  
AT STA. 65+00

LAYOUT OF AUXILIARY DIKE TO BEGIN  
AT STA. 22+73

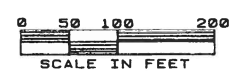


**AS BUILT**  
10/2/92  
SEE SHEET 8A

DYKE CREEK WATERSHED PROJECT			
ALLEGANY COUNTY, NEW YORK			
LAYOUT DATA			
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE			
Designed <u>A. FEHER</u>	Date <u>2/91</u>	Approved by _____	Title _____
Drawn <u>W. ROUNDS</u>	Date <u>2/91</u>	Checked _____	Title _____
Traced _____	Sheet _____	Drawing No. _____	
Checked <u>W. GRAJKO</u>	Date <u>2/91</u>	Sheet <u>8</u>	Drawing No. <u>NY-4705-P</u>
		of 20	

DATE	ITEM	APP'D.
2/91	MAIN DIKE ALIGNMENT STA. 38+92 TO STA. 44+99	
REVISIONS		

SEE SHEET 9 FOR LEGEND

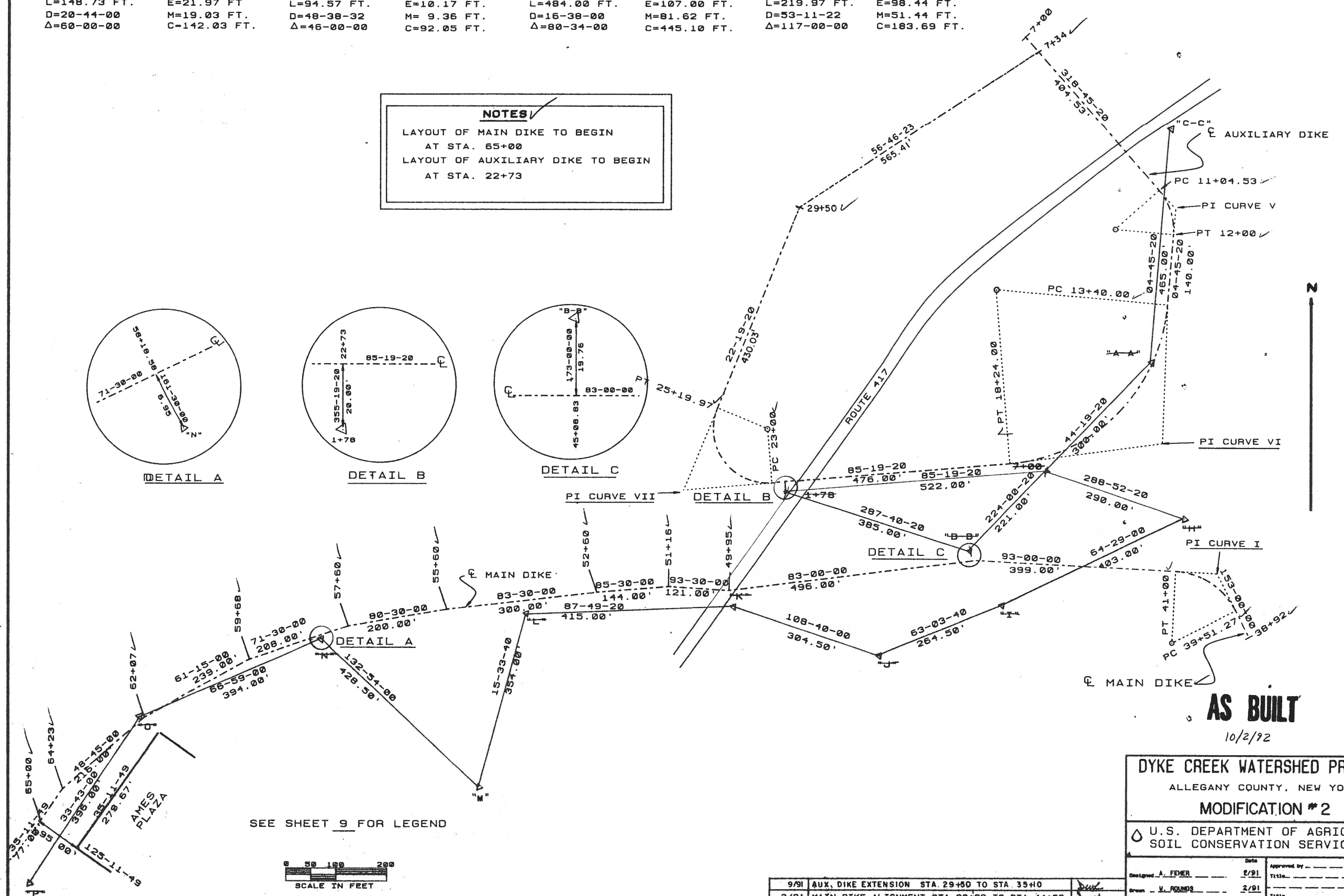
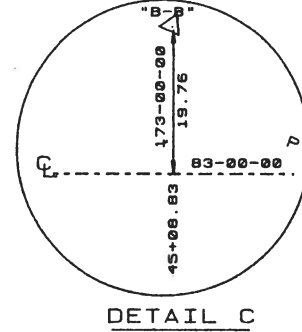
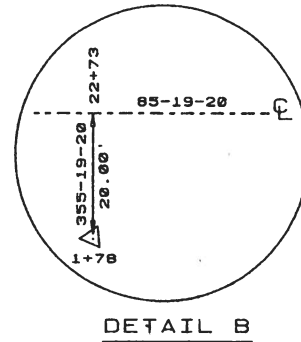
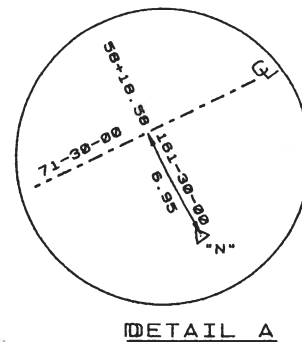


CURVE I		CURVE V		CURVE VI		CURVE VII	
R=142.03 FT.	T=82.00 FT.	R=117.79 FT.	T=50.00 FT.	R=344.20 FT.	T=291.73 FT.	R=107.72 FT.	T=175.78 FT.
L=148.73 FT.	E=21.97 FT.	L=94.57 FT.	E=10.17 FT.	L=484.00 FT.	E=107.00 FT.	L=219.97 FT.	E=98.44 FT.
D=20-44-00	M=19.03 FT.	D=48-38-32	M= 9.36 FT.	D=16-38-00	M=81.62 FT.	D=53-11-22	M=51.44 FT.
Δ=60-00-00	C=142.03 FT.	Δ=46-00-00	C=92.05 FT.	Δ=80-34-00	C=445.10 FT.	Δ=117-00-00	C=183.69 FT.

**NOTES**

LAYOUT OF MAIN DIKE TO BEGIN  
AT STA. 65+00

LAYOUT OF AUXILIARY DIKE TO BEGIN  
AT STA. 22+73



**AS BUILT**

10/2/92

DYKE CREEK WATERSHED PROJECT			
ALLEGANY COUNTY, NEW YORK			
MODIFICATION #2			
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE			
Designed by	A. FEHER	Date	8/91
Drawn by	V. ROUNDS	Date	2/91
Checked by	V. GRANKO	Date	2/91
Approved by		Date	
Sheet		Drawing No.	
20		NY-4705-P	

DATE	ITEM	APP'D.
9/91	AUX. DIKE EXTENSION STA. 29+50 TO STA. 35+10	
2/91	MAIN DIKE ALIGNMENT STA. 38+82 TO STA. 44+99	
REVISIONS		



### CURVE II

R=723.74 FT. T=50.08 FT.  
L=100.00 FT. E=1.73 FT.  
D=7-55-00 M=1.73 FT.  
Δ=7-55-00 C=99.92 FT.

### CURVE III

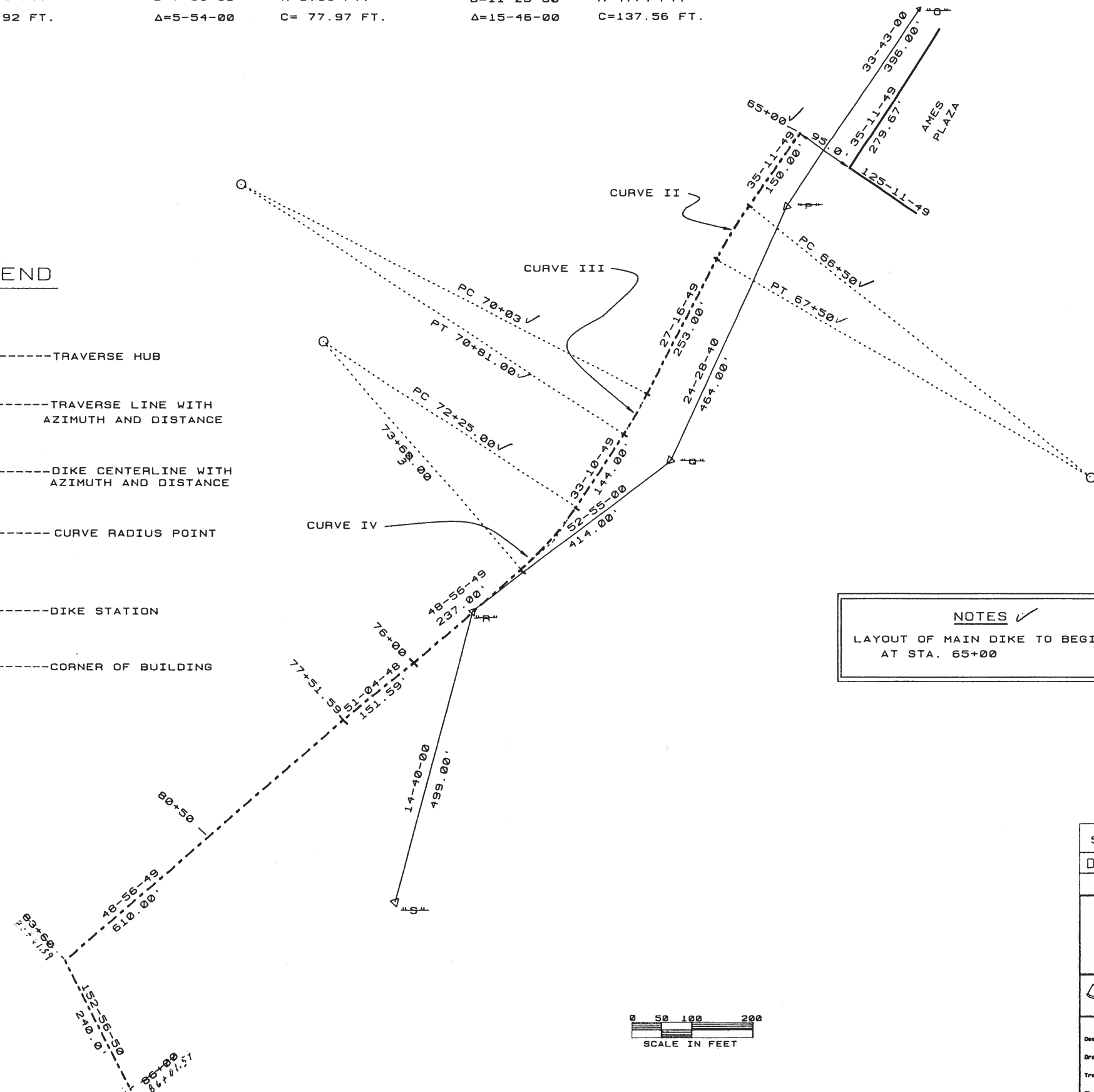
R=757.47 FT. T=39.03 FT.  
L= 78.00 FT. E=1.00 FT.  
D=7-33-51 M=1.00 FT.  
Δ=5-54-00 C= 77.97 FT.

### CURVE IV

R=501.49 FT. T=69.44 FT.  
L=138.00 FT. E=4.78 FT.  
D=11-25-30 M=4.74 FT.  
Δ=15-46-00 C=137.56 FT.

### LEGEND

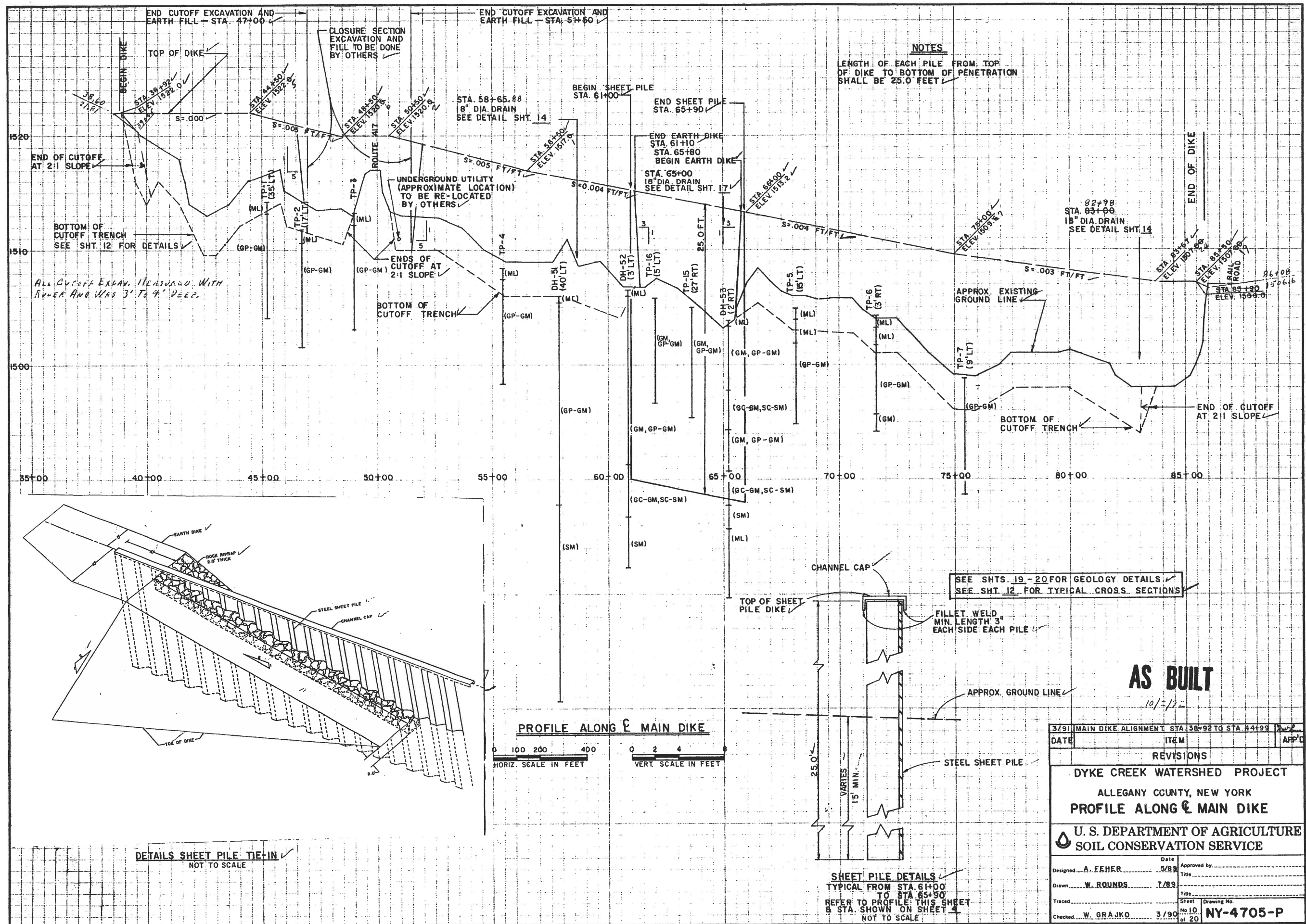
- △ "K" ----- TRAVERSE HUB
- △ 66-59-00 ----- TRAVERSE LINE WITH  
394.00' AZIMUTH AND DISTANCE
- 85-19-20 ----- DIKE CENTERLINE WITH  
476.00' AZIMUTH AND DISTANCE
- ----- CURVE RADIUS POINT
- 80+50 ----- DIKE STATION
- CORNER OF BUILDING

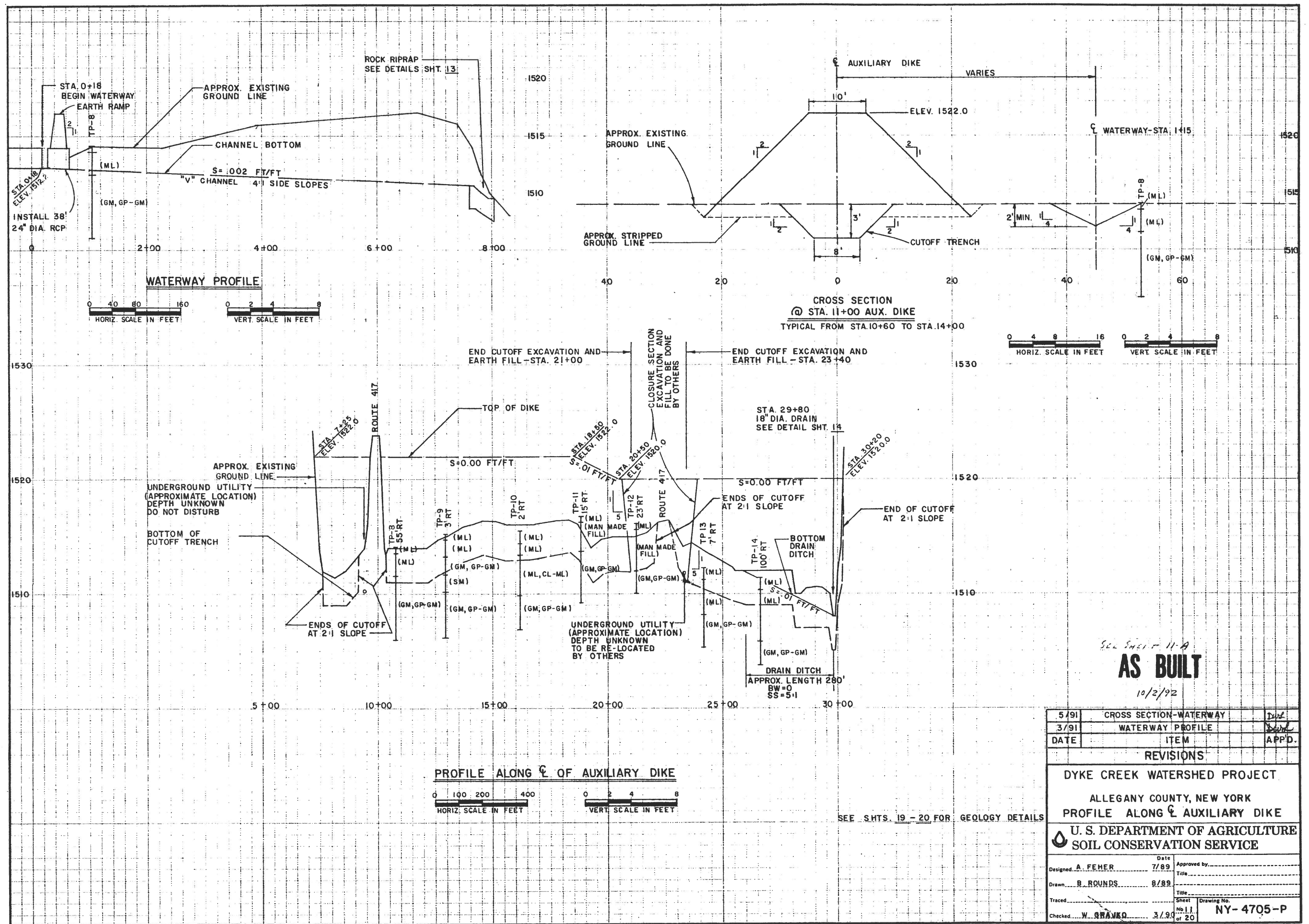


NOTES ✓  
LAYOUT OF MAIN DIKE TO BEGIN  
AT STA. 65+00

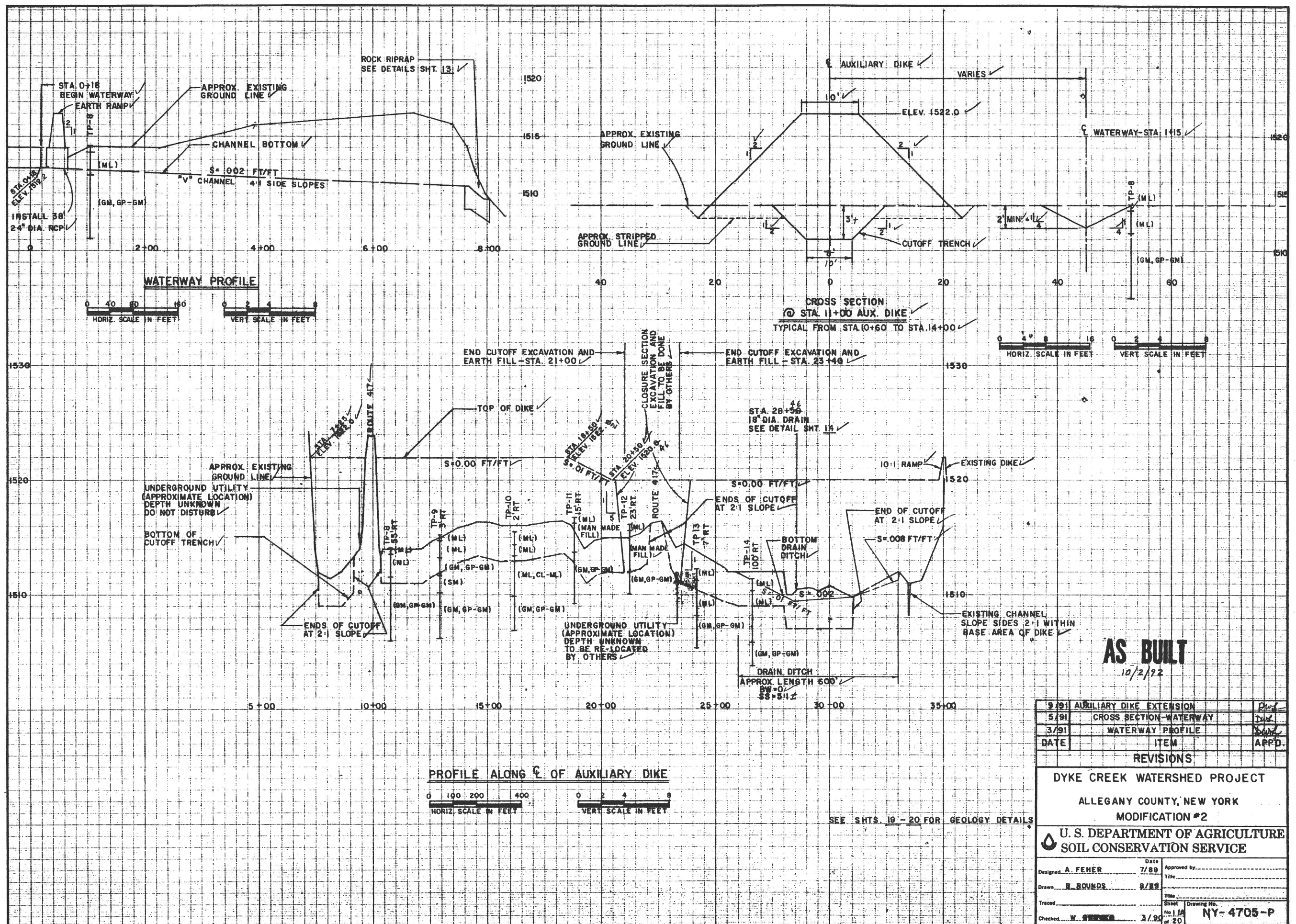
**AS BUILT**  
10/2/92

5/91	LAYOUT STA. 70+03 TO STA. 77+51	Dwg.
DATE	ITEM	APP'D.
REVISIONS		
DYKE CREEK WATERSHED PROJECT		
ALLEGANY COUNTY, NEW YORK		
LAYOUT DATA		
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE		
Designed A. FEHER	Date 5/89	Approved by _____
Drawn W. ROUNDS	Date 5/89	Title _____
Traced _____	Date _____	Title State Conservation Engineer
Checked W. GRAJCO	Date 5/89	Sheet _____
		Drawing No. _____
		No 9
		NY-4705-P
		of 20

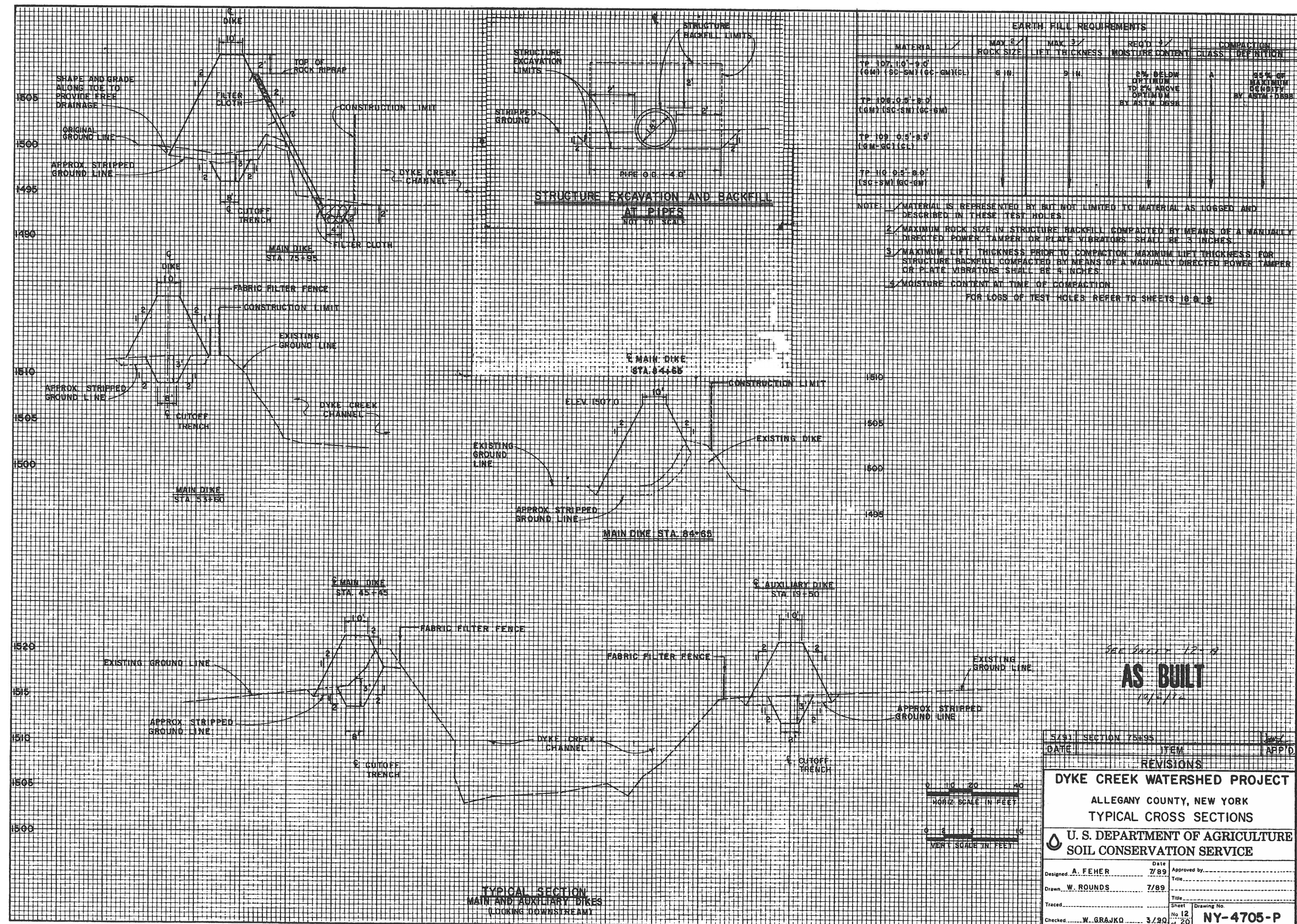




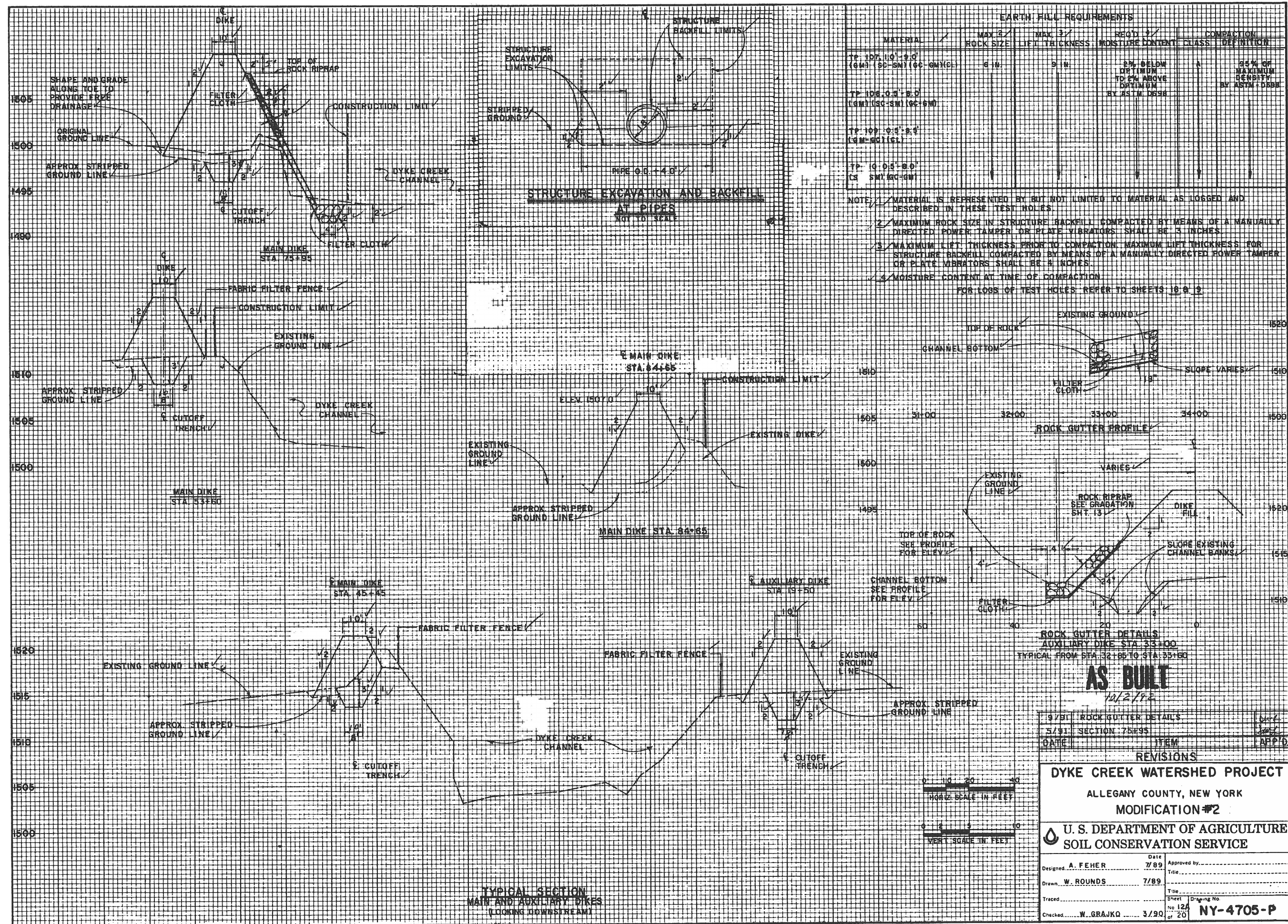






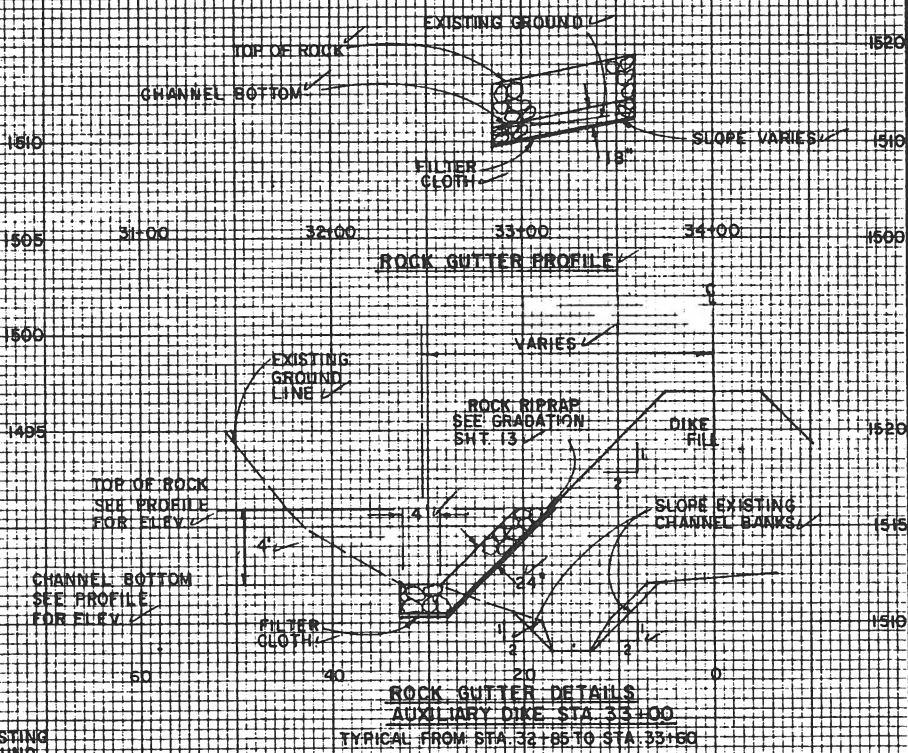






EARTH FILL REQUIREMENTS					
MATERIAL	MAX 2/ ROCK SIZE	MAX 3/ LIFT THICKNESS	REQ'D 2/ MOISTURE CONTENT	COMPACTION	
TP 107 10'-9.0' (6M) (SC-SM) (CC-GM)(G)	6" W.	9" H.	2% BELOW OPTIMUM TO 2% ABOVE OPTIMUM BY ASTM D998	A	95% OF MAXIMUM DENSITY BY ASTM D998
TP 108 0.5'-9.0' (6M) (SC-SM) (CC-GM)					
TP 109 0.5'-9.0' (6M-GC) (CL)					
TP 10 0.5'-9.0' (S SM) (CC-GM)					

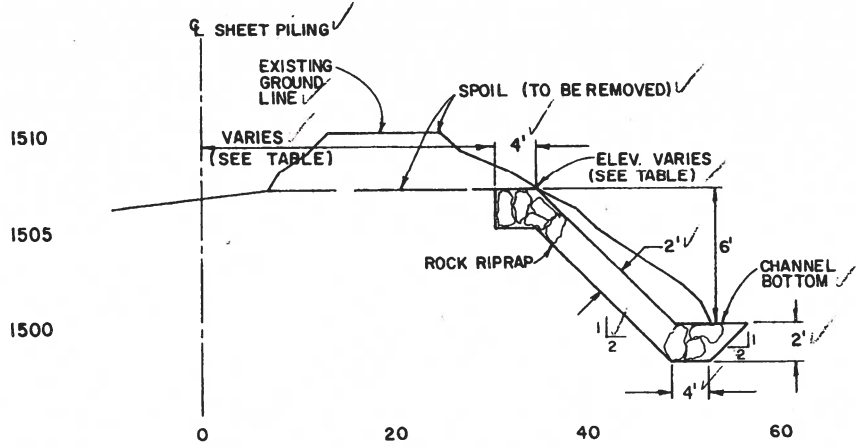
NOTE: 1. MATERIAL IS REPRESENTED BY BUT NOT LIMITED TO MATERIAL AS LOGGED AND DESCRIBED IN THESE TEST HOLES.  
2. MAXIMUM ROCK SIZE IN STRUCTURE BACKFILL COMPACTED BY MEANS OF A MANUALLY DIRECTED POWER TAMPER OR PLATE VIBRATORS SHALL BE 3 INCHES.  
3. MAXIMUM LIFT THICKNESS PRIOR TO COMPACTION MAXIMUM LIFT THICKNESS FOR STRUCTURE BACKFILL COMPACTED BY MEANS OF A MANUALLY DIRECTED POWER TAMPER OR PLATE VIBRATORS SHALL BE 9 INCHES.  
4. MOISTURE CONTENT AT TIME OF COMPACTION.  
FOR LOGS OF TEST HOLES REFER TO SHEETS 10 & 2



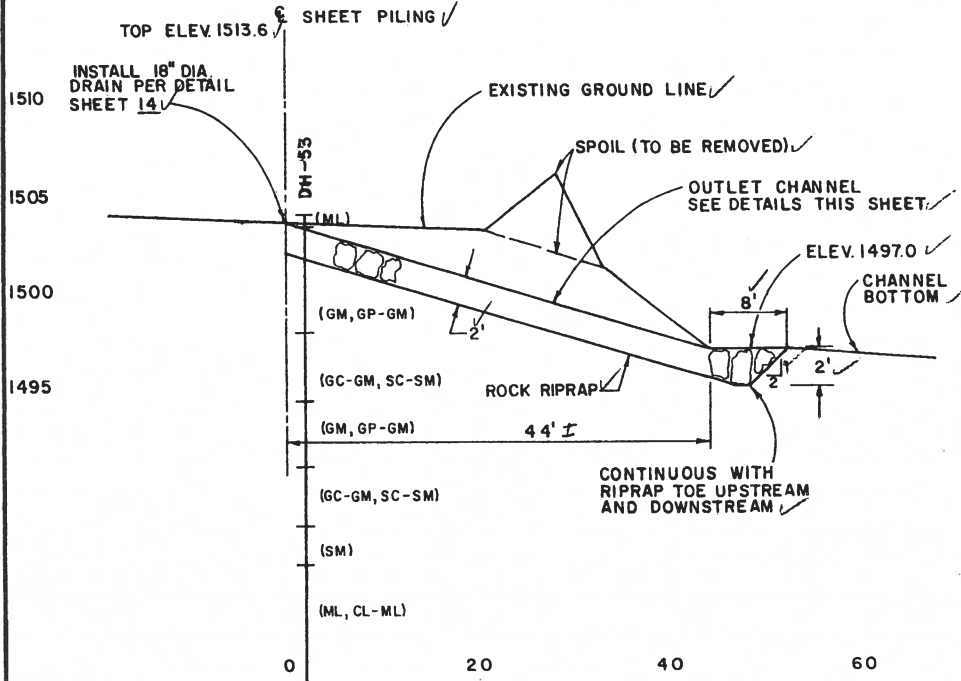
9/91	ROCK GUTTER DETAILS	Rev.
5/91	SECTION 75+95	Rev.
DATE	ITEM	APP'D
REVISIONS		
DYKE CREEK WATERSHED PROJECT		
ALLEGANY COUNTY, NEW YORK		
MODIFICATION #2		
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE		
Designed	A. FEHER	7/89
Drawn	W. ROUNDS	7/89
Traced		
Checked	W. GRAJKO	3/90
Date	7/89	Approved by
Title		
Sheet	No. 124	Drawing No.
of	20	
NY-4705-P		



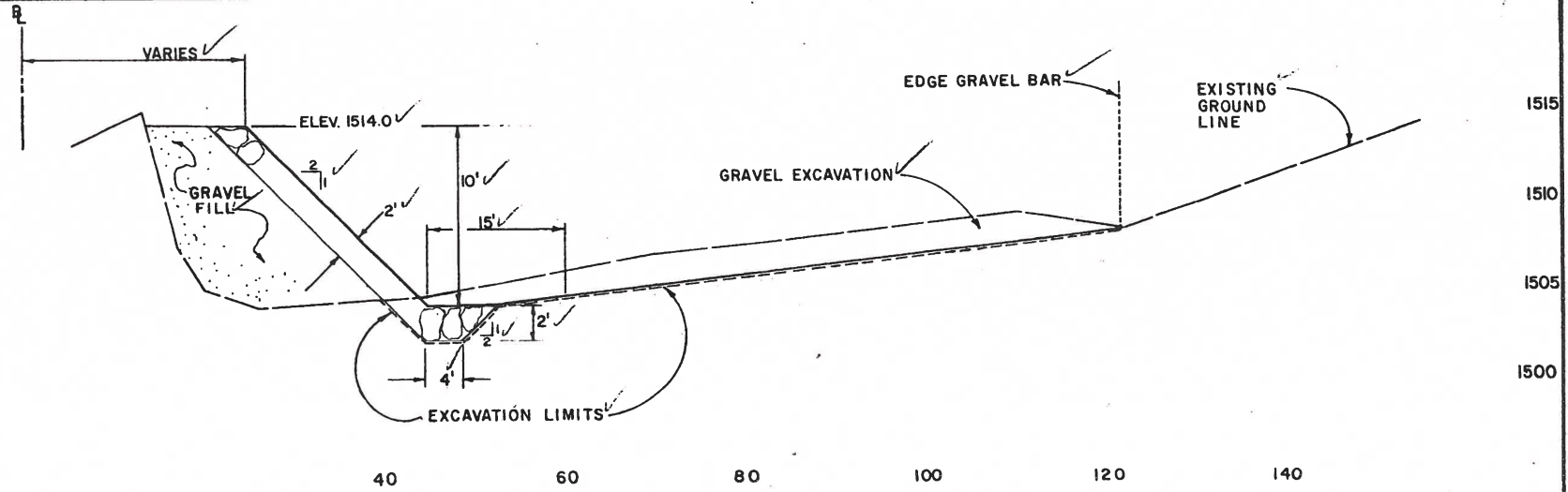
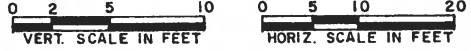
RIPRAP ELEVATIONS AND LOCATIONS		
STATION	DISTANCE FROM C	TOP ELEV.
65+00	28'	1503.0
64+00	10'	1503.5
63+00	10'	1504.0
62+00	10'	1504.5



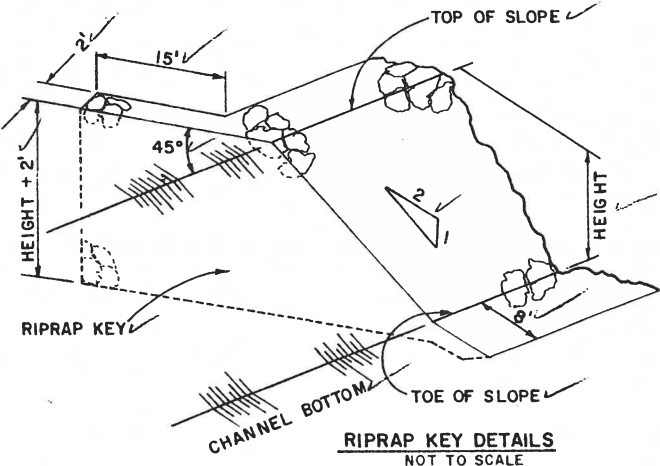
TYPICAL SECTION FROM STA. 61+60 TO STA. 65+90



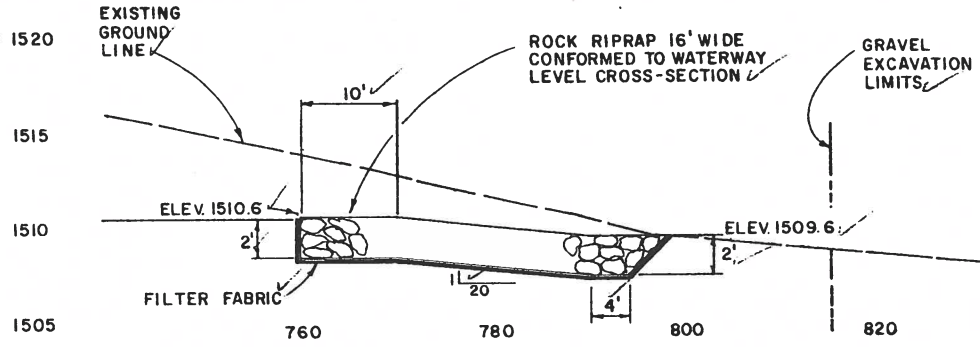
MAIN DIKE STA. 65+00



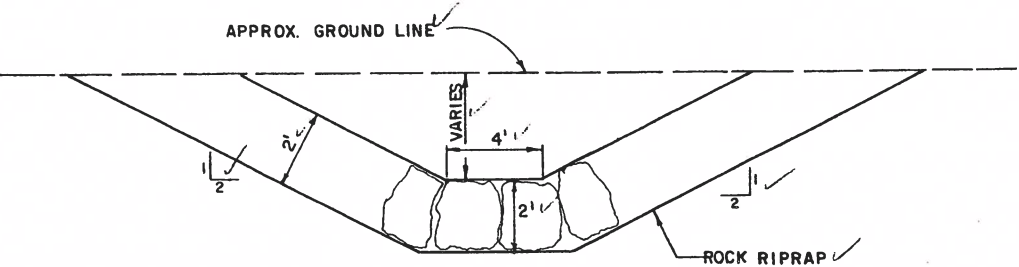
ROCK RIPRAP-TYPICAL SECTION  
 NOT TO SCALE  
 TYPICAL FROM APPROX. STA. 41+80 TO APPROX. STA. 43+10



RIPRAP KEY DETAILS  
 NOT TO SCALE



WATERWAY RIPRAP DETAILS  
 NOT TO SCALE



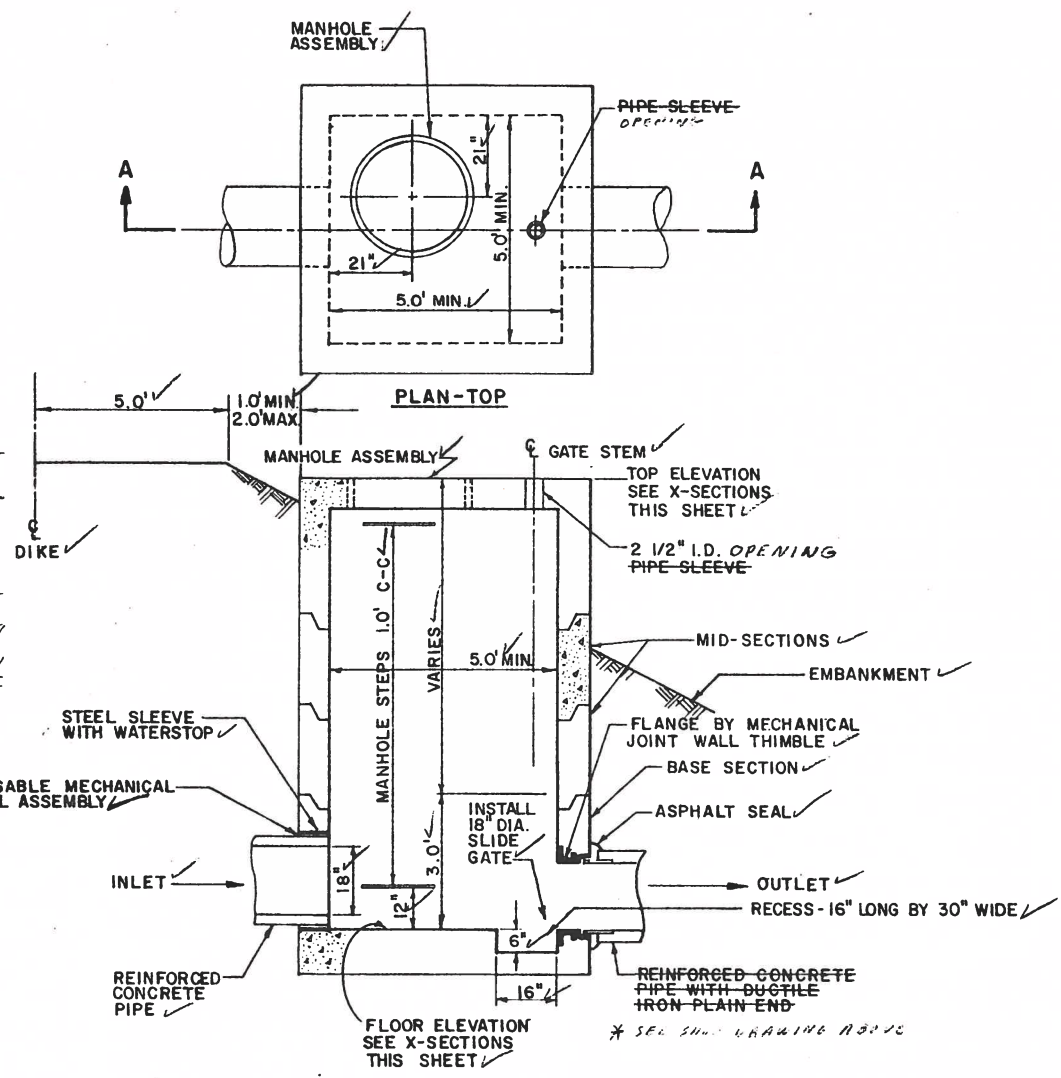
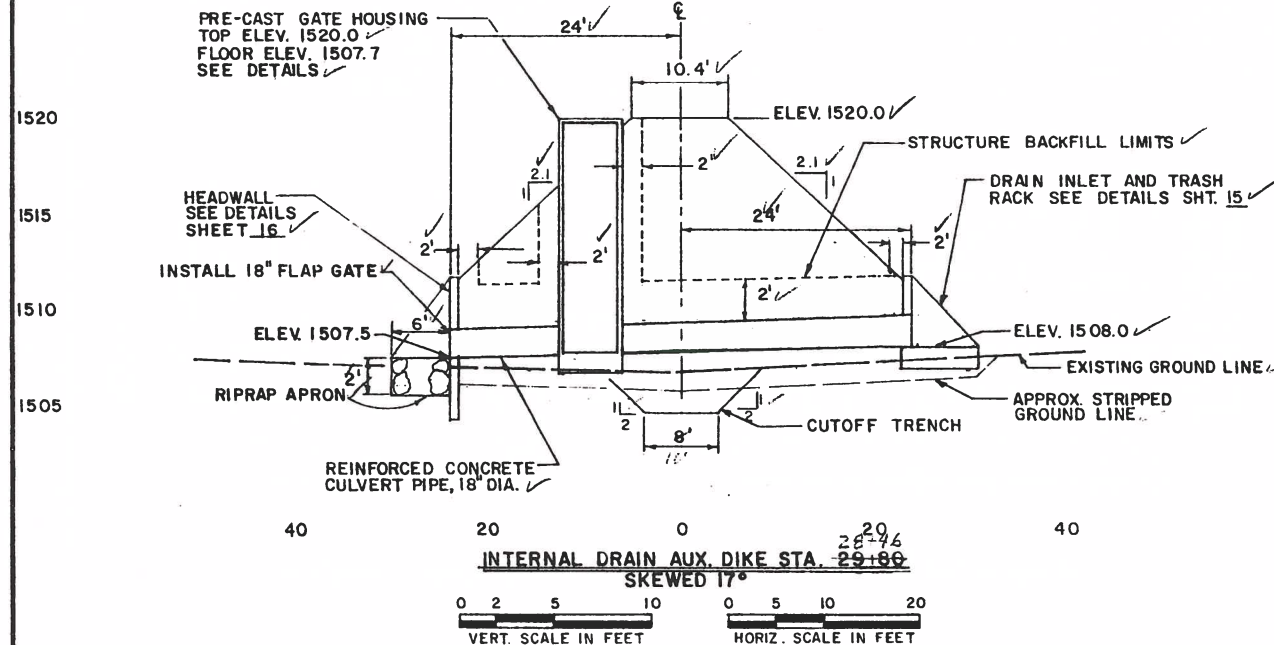
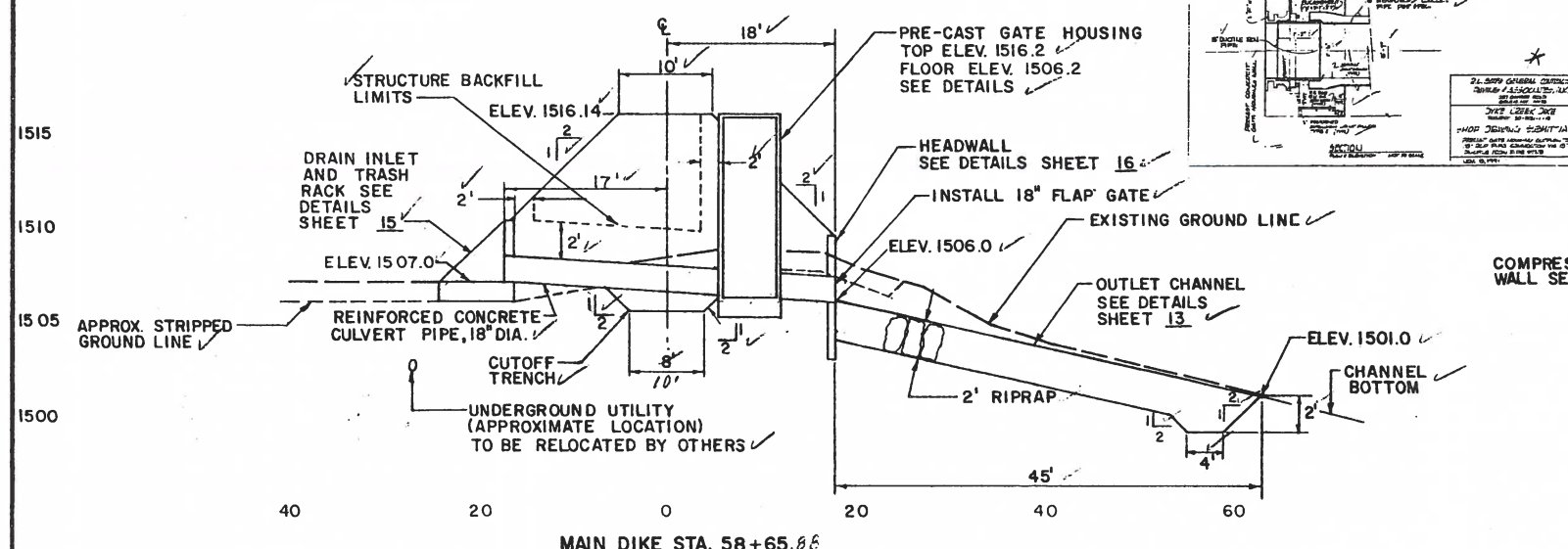
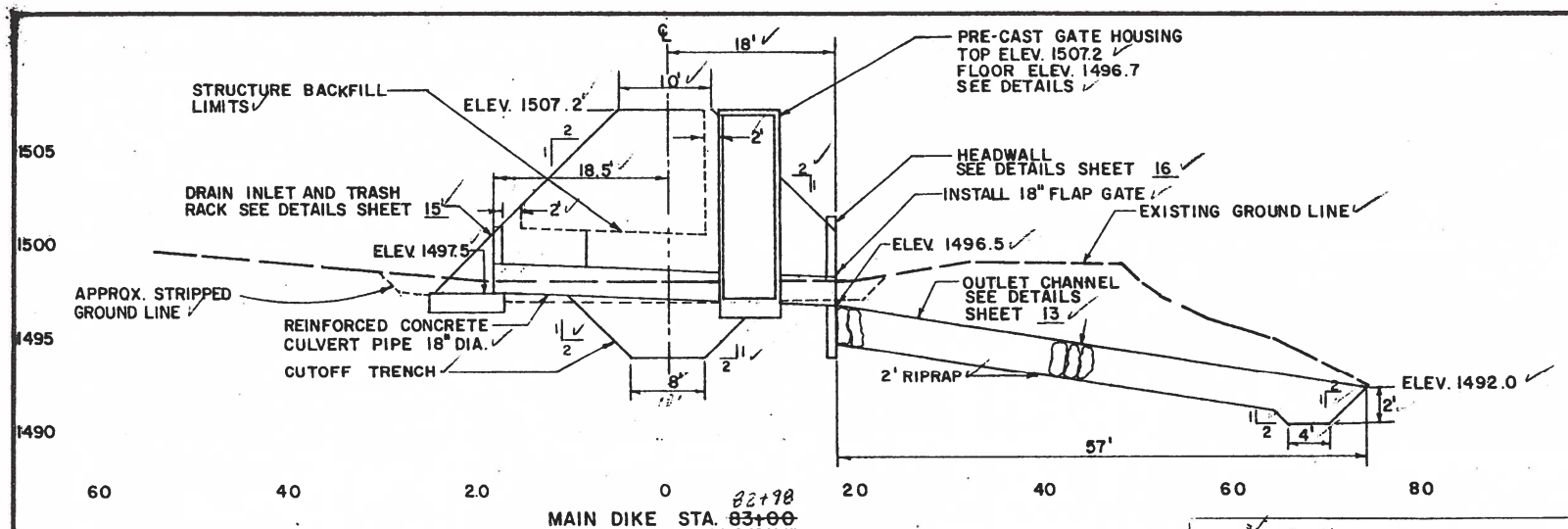
OUTLET CHANNEL-TYPICAL SECTION  
 NOT TO SCALE

ROCK RIPRAP DETAILS

1. THE FINISHED SURFACE OF ALL ROCK RIPRAP AREAS SHALL NOT HAVE MORE THAN 6" VARIATION FROM DESIGN GRADE, NOR MORE THAN 6" OF SURFACE CHANGE BETWEEN ADJACENT ROCKS. ROCKS SHALL BE PLACED TO MAXIMIZE THE CONTACT BETWEEN ADJACENT ROCKS.
2. 95% OF THE ROCK SHALL BE GREATER THAN 200 LBS.
3. 75% OF THE ROCK SHALL BE GREATER THAN 2000 LBS.
4. 95% OF THE ROCK SHALL HAVE ONE DIMENSION PERPENDICULAR TO THE FINISHED SURFACE OF A MINIMUM OF 22".
5. GRAVEL FILL FOR ROCK RIPRAP SHALL BE OBTAINED FROM GRAVEL DEPOSITS IN THE STREAM CHANNEL WITHIN THE LIMITS SHOWN.
6. ESTIMATED QUANTITY, GRAVEL FILL, 500 CU. YD.

AS BUILT

7/91	REVISE RIPRAP DETAILS	
3/91	WATERWAY RIPRAP DETAILS	
DATE	ITSM	APP'D.
REVISIONS		
DYKE CREEK WATERSHED PROJECT		
ALLEGANY COUNTY, NEW YORK		
STRUCTURAL DETAILS		
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE		
Designed	A. FEHER	Date 8/89
Drawn	B. ROUNDS	3/90
Traced		
Checked	W. GRAJKO	3/90
		Sheet No. 13 of 20
		Drawing No. NY-4705-P



### SLIDE GATE DETAILS

1. 18" DIA. FLAT FRAME SLIDE GATE, CLASS 0-20.
2. SLIDE GATE SHALL CONFORM TO MATERIAL SPECIFICATION 572 AND SHALL BY TYPE MMS-1, SELF CONTAINED, WITH FLUSH BOTTOM CLOSURE.
3. WALL THIMBLE SHALL BE FLANGE BY MECHANICAL JOINT.
4. WALL THIMBLES SHALL BE 8" DEEP EXCEPT AT STA. 65+00 WHERE THE WALL THIMBLE SHALL BE 24" DEEP.
5. STAINLESS STEEL RISING STEM, STEM GUIDES, AND LIFTING DEVICE SHALL BE SIZED AND SPACED ACCORDING TO MANUFACTURERS RECOMMENDATIONS.
6. HOLES DRILLED IN BACK FLANGE OF WALL THIMBLE BY GATE MANUFACTURER ACCORDING TO ASA CLASS 125 FLANGE SPECIFICATIONS.
7. RECESS FOR GATE BOTTOM TO BE FILLED WITH NON-SHRINK GROUT AFTER GATE INSTALLATION.

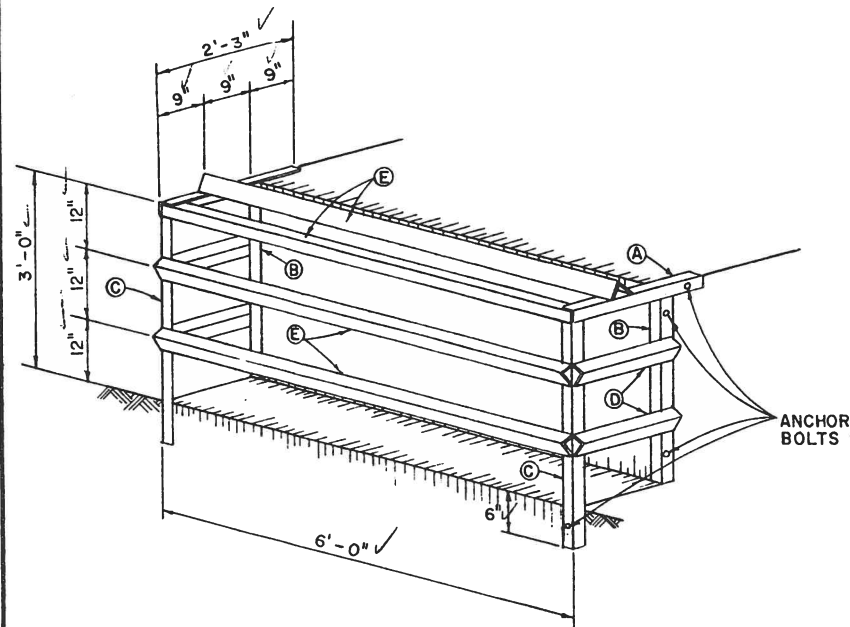
\* ITEM 13 REINF. CONCR. 2.0%  
 ITEM 14 18" CONCRETE PIPE 103 L.F.  
 ITEM 16 18" FLAP GATES 4 EA  
 ITEM 17 18" SLIDE GATES 4 EA  
 ITEM 20 PRE-CAST GATE HOUSING 3 EA

### MANHOLE ASSEMBLY DETAILS

1. MANHOLE ASSEMBLY SHALL BE CIRCULAR WITH A MINIMUM CLEAR OPENING OF 30 IN.
2. LID SHALL BE FASTENED TO FRAME WITH STAINLESS STEEL CAP SCREWS.
3. THE LIFTING DEVICE SHALL CONSIST OF A HOLE APPROX. 3 IN. FROM THE OUTSIDE PERIMETER OF THE LID.
4. THE LOCKING DEVICE SHALL CONSIST OF A HOOK AT ONE EDGE OF THE LID UNDERSIDE AND A ROTATING BAR WITH A HEX BOLT AT THE OPPOSITE EDGE.

**AS BUILT**  
 10/2/92

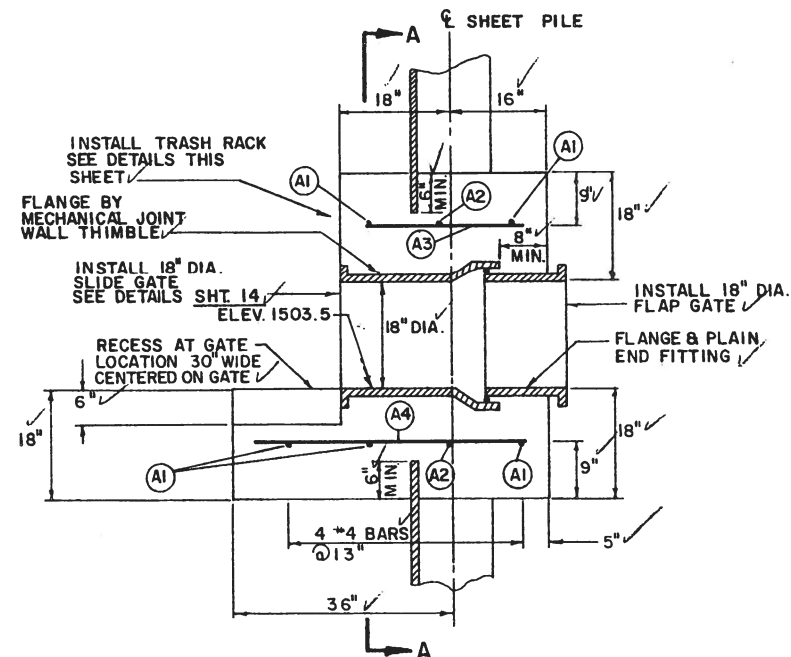
DYKE CREEK WATERSHED PROJECT ALLEGANY COUNTY, NEW YORK			
STRUCTURAL DETAILS			
U. S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE			
Designed: A. FEHER	Date: 9/90	Approved by: _____	
Drawn: W. R. R.	Date: 9/90	Title: _____	
Traced: _____	Sheet: No. 14	Drawing No.	NY-4705-P
Checked: _____	or 20		



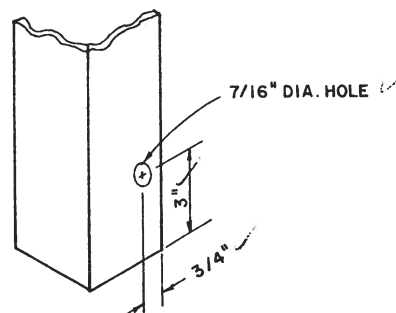
**TRASH RACK DETAILS**  
NOT TO SCALE

- CONSTRUCTION NOTES**
- ✓ SHOP WELD ALL INTERSECTIONS OF ANGLE IRON.
  - ✓ ANGLE IRON TO BE SHOP DRILLED AT ANCHOR BOLT LOCATIONS.
  - ✓ INSTALL 3/8" DIA. EXPANDABLE SLEEVE TYPE CONCRETE ANCHOR BOLTS AT LOCATIONS SHOWN.

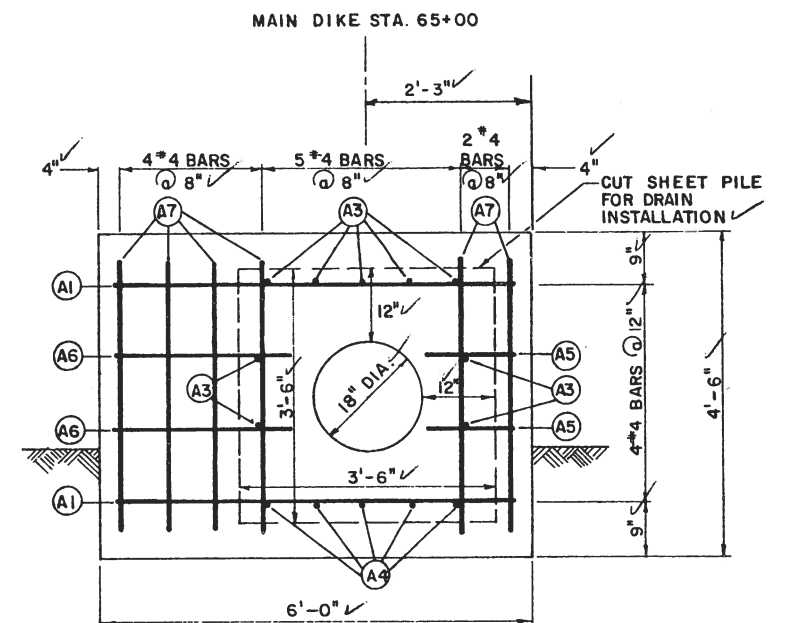
BILL OF MATERIALS			
ITEM	SIZE	LENGTH	QUAN.
ANGLE IRON A	3" x 3" x 1/4"	2'-3"	2 ✓
ANGLE IRON B	3" x 3" x 1/4"	2'-9"	2 ✓
ANGLE IRON C	3" x 3" x 1/4"	3'-6"	2 ✓
ANGLE IRON D	2" x 2" x 1/4"	1'-9"	4 ✓
ANGLE IRON E	2" x 2" x 1/4"	6'-1/2"	4 ✓
ANCHOR BOLTS	3/8" DIA.	3"	8 ✓



**DRAIN DETAIL STA. 65+00**  
SCALE IN FEET  
0 1 2 4



**TYPICAL DRILLING DETAIL**  
NOT TO SCALE



**DRAIN DETAIL-SECTION A-A**

**DRAIN INLET QUANTITIES**

STEEL  
NO. 4 BARS 133 LIN. FT. 89 LBS.  
CONCRETE 3.4  
REINFORCED 3.3 CU. YDS.

STEEL SCHEDULE					
MARK	QUAN.	SIZE	LENGTH	TYPE	TOTAL FT.
A1	5	4	5-6	I	27-6 ✓
A2	2	4	3-0	I	6-0 ✓
A3	9	4	2-3	I	20-3 ✓
A4	5	4	3-9	I	18-9 ✓
A5	4	4	1-3	I	5-0 ✓
A6	4	4	2-6	I	10-0 ✓
A7	12	4	3-5	I	45-0 ✓

ITEM 13 CONCRETE REINFORC 3.4 C.Y.

**AS BUILT**  
10/2/92

DYKE CREEK WATERSHED PROJECT  
ALLEGANY COUNTY, NEW YORK  
**DRAIN DETAILS STA. 65+00**

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

Designed by <b>A. FEHER</b>	Date <b>11/89</b>	Approved by _____
Drawn by <b>W. ROUNDS</b>	Date <b>9/90</b>	Title _____
Traced by _____	Sheet No <b>17</b>	Drawing No. _____
Checked by <b>W. GRAJKO</b>	Date <b>2/90</b>	of <b>20</b>

**NY-4705-P**



# MATERIAL DESCRIPTIONS

- [A] Topsoil - contains roots and organic material; brown, moist, moderate permeability, soft, average thickness 1.0'. (NL)
- [B] Poorly graded, sandy gravel - mixture of gravel and sand with few fines; 14 inch maximum size, varied lithology, round to subround; approximately 1-3 percent + 6", 2-4 percent 3-6", 93-97 percent matrix (which is approximately 49-69 percent gravel, 24-37 percent sand, and 8-16 percent nonplastic fines); brown, moist to wet, moderate permeability, loose-dense N=7-45, stratified, glacial outwash; (GP-GM), (GM).

D.S. 1.1 GP-GM, 2.1 GM, 7.1 GP-GM, 51.7, 8.9 GM, 54.5, 6.7, 8 GM

- [C] Silt, clayey - mixture of silt and clay with some sand and little gravel; maximum size 10", varied lithology; approximately 0-1 percent + 6", 1 percent 3-6", 98-99 percent matrix (which is 1-3 percent gravel, 18-33 percent sand, and 64-82 percent non to slightly plastic fines (LL=18.8-22.4, PI=2.4-5.3)); brown, changing to gray with depth, moist, slight permeability, medium density N=13-20, homogenous, alluvium and fill; (CL-ML), (ML).

D.S. 101.1 CL-ML, 53.15, 16 ML

- [D] Silty or clayey gravel with sand - mixture of gravel, sand, silt and or clay; 18" maximum size, varied lithology, round to angular; approximately 1 percent + 6", 3 percent 3-6", 94 percent matrix (which is 46-50 percent gravel, 26-36 percent sand, and 18-27 percent fines); non-plastic, to moderately plastic LL=0-28, PI=0-9, brown to grayish brown, moist, slight permeability, loose to dense, stratified to non-stratified, glacial till on spl. 105.2 and 110.2 and glacial outwash on spl. 104.1; (GM), (GC).

D.S. 104.1 GM, 105.2 GM, 110.2 GC

- [E] Gravel, sandy, silty - mixture of gravel, sand and silt; 10" maximum size, varied lithology; approximately 3 percent + 6", 3 percent 3-6", 95 percent matrix (which is approximately 40 percent gravel, 30 percent sand, and 30 percent slightly plastic fines); gray, moist to saturated, slight permeability, loose, stratified, glacial outwash; (GM).

- [F] Silt, sandy - mixture of silt with some sand and little gravel; less than 3" maximum size, varied lithology; approximately 100 percent matrix (which is approximately 10 percent gravel, 20 percent sand, and 70 percent slightly plastic fines); brown, moist, slight permeability, soft, homogeneous, alluvium; (ML).

- [G] Gravel and sand with clayey silt - mixture of equal parts of gravel and sand and clayey silt; maximum size 21", varied lithology, subrounded to angular; sample is 100 percent matrix which is 31-35 percent gravel, 31-35 percent sand, and 30-38 percent fines; slightly plastic LL=22-24, PI=5-6, brown to yellowish brown, moist, slight permeability, medium to dense N=19-36, glacial till; (GC-GM or SC-SH).

D.S. 53.5, 6.7 GC-GM or SC-SH, 110.1 GC-GM or SC-SH

- [H] Sand, silty - mixture of sand and silt; with little gravel; less than 3" maximum size, varied lithology; sample is 100 percent matrix (which is 1-3 percent gravel, 72-77 percent sand, and 21 percent non-plastic fines); brown, moist to saturated, slight permeability, loose-medium density N=9-21, glacial outwash; (SM).

D.S. 51.14, 15 SM, 51.20, 21 SM, 51.22, 23 SM

- [I] Silty, clayey gravel and sand - gravel, sand, silt and clay mixtures; 8" maximum size, varied lithology, subrounded to angular; approximately 1 percent + 6", 5 percent 3-6", and 94 percent <3", matrix consists of 27-30 percent gravel, 25-28 percent sand, and 44-46 percent fines; very slight to slightly plastic LL=21-26, PI=2-5, grayish to yellowish brown, moist, slight permeability, dense, non-stratified, glacial till; (GM), (SC-SH or GC-GM).

D.S. 105.1 SC-SH or GC-GM, 108.1 GM, 108.2 SC-SH or GC-GM

- [J] Lean clay with sand and gravel - silty clay with some sand and gravel; 6" maximum size, varied lithology, subrounded to angular; approximately 1 percent + 6", 5 percent 3-6", 94 percent <3", matrix consists of 13-15 percent gravel, 13-18 percent sand, and 66-74 percent fines; moderately plastic LL=21-32, PI=12, brown to grayish brown, moist, very slight permeability, firm to very stiff, non-stratified, glacial till; (CL).

D.S. 107.1 CL, 109.1 CL

Man-made, fill material - sandy gravels excavated from old channel bottom, parts of metal barrels, steel rods, reinforcing steel, pieces of concrete, woody material; basically (GM) material.

## TEST PIT LOGS

TP#1 C/L DIKE 9/2/81 H.M. 1514.3

- 0.0'-1.0' [A] Topsoil - contains roots and organic material; brown, moist, moderate permeability, soft, average thickness 1.0'. (NL)
- 1.0'-10.0' [B] Poorly graded, sandy gravel - mixture of gravel and sand with few fines; 14 inch maximum size, varied lithology, round to subround; approximately 1-3 percent + 6", 2-4 percent 3-6", 93-97 percent matrix (which is approximately 49-69 percent gravel, 24-37 percent sand, and 8-16 percent nonplastic fines); brown, moist to wet, moderate permeability, loose-dense N=7-45, stratified, glacial outwash; (GP-GM)

D.S. 1.1 @ 8.0' GP-GM

NOTE: Black, oily substance on gravel @ 8.0'; Mat'l caves from 7.0'-10.0'.

TP#2 C/L DIKE 9/2/81 H.M. 1511.8

- 0.0'-1.0' [A] Topsoil - contains roots and organic material; brown, moist, moderate permeability, soft, average thickness 1.0'. (NL)
- 1.0'-10.0' [B] Poorly graded, sandy gravel - mixture of gravel and sand with few fines; 14 inch maximum size, varied lithology, round to subround; approximately 1-3 percent + 6", 2-4 percent 3-6", 93-97 percent matrix (which is approximately 49-69 percent gravel, 24-37 percent sand, and 8-16 percent nonplastic fines); brown, moist to wet, moderate permeability, loose-dense N=7-45, stratified, glacial outwash; (GP-GM)

D.S. 2.1 @ 8.0' GM

NOTE: Some black, oily material on gravel; pit walls cave from 5.5' on even though no water observed.

TP#3 C/L DIKE 9/2/81 H.M. 1511.3

- 0.0'-1.0' [A] Topsoil - contains roots and organic material; brown, moist, moderate permeability, soft, average thickness 1.0'. (NL)
- 1.0'-10.0' [B] Poorly graded, sandy gravel - mixture of gravel and sand with few fines; 14 inch maximum size, varied lithology, round to subround; approximately 1-3 percent + 6", 2-4 percent 3-6", 93-97 percent matrix (which is approximately 49-69 percent gravel, 24-37 percent sand, and 8-16 percent nonplastic fines); brown, moist to wet, moderate permeability, loose-dense N=7-45, stratified, glacial outwash; (GP-GM)

NOTE: Some black substance on gravel; pit walls cave from 4.0 on, no water observed.

TP#4 C/L DIKE 9/3/81 H.M. 1504.5

- 0.0'-1.0' [A] Topsoil - contains roots and organic material; brown, moist, moderate permeability, soft, average thickness 1.0'. (NL)
- 1.0'-10.0' [B] Poorly graded, sandy gravel - mixture of gravel and sand with few fines; 14 inch maximum size, varied lithology, round to subround; approximately 1-3 percent + 6", 2-4 percent 3-6", 93-97 percent matrix (which is approximately 49-69 percent gravel, 24-37 percent sand, and 8-16 percent nonplastic fines); brown, moist to wet, moderate permeability, loose-dense N=7-45, stratified, glacial outwash; (GP-GM)

NOTE: Inflow of water @ 8.5'

TP#5 C/L DIKE 9/3/81 H.M. 1504.9

- 0.0'-1.0' [A] Topsoil - contains roots and organic material; brown, moist, moderate permeability, soft, average thickness 1.0'. (NL)
- 1.0'-3.0' [F] Silt, sandy - mixture of silt with some sand and little gravel; less than 3" maximum size, varied lithology; approximately 100 percent matrix (which is approximately 10 percent gravel, 20 percent sand, and 70 percent slightly plastic fines); brown, moist, slight permeability, soft, homogeneous, alluvium; (ML)
- 3.0'-10.0' [C] Poorly graded, sandy gravel - mixture of gravel and sand with few fines; 14 inch maximum size, varied lithology, round to subround; approximately 1-3 percent + 6", 2-4 percent 3-6", 93-97 percent matrix (which is approximately 49-69 percent gravel, 24-37 percent sand, and 8-16 percent nonplastic fines); brown, moist to wet, moderate permeability, loose-dense N=7-45, stratified, glacial outwash; (GP-GM)

NOTE: Inflow of water @ 10.0'; last bucket contained a gray GM outwash with approximately 30 percent slightly plastic fines; only about 2 inches shading in bottom of pit.

TP#6 C/L DIKE 9/3/81 H.M. 1504.3

- 0.0'-1.0' [A] Topsoil - contains roots and organic material; brown, moist, moderate permeability, soft, average thickness 1.0'. (NL)
- 1.0'-2.5' [F] Silt, sandy - mixture of silt with some sand and little gravel; less than 3" maximum size, varied lithology; approximately 100 percent matrix (which is approximately 10 percent gravel, 20 percent sand, and 70 percent slightly plastic fines); brown, moist, slight permeability, soft, homogeneous, alluvium; (ML)
- 2.5'-8.5' [B] Poorly graded, sandy gravel - mixture of gravel and sand with few fines; 14 inch maximum size, varied lithology, round to subround; approximately 1-3 percent + 6", 2-4 percent 3-6", 93-97 percent matrix (which is approximately 49-69 percent gravel, 24-37 percent sand, and 8-16 percent nonplastic fines); brown, moist to wet, moderate permeability, loose-dense N=7-45, stratified, glacial outwash; (GP-GM)

NOTE: Pit walls cave from 2.5' on.

TP#7 C/L DIKE 9/3/81 H.M. 1498.8

- 0.0'-10.0' [B] Poorly graded, sandy gravel - mixture of gravel and sand with few fines; 14 inch maximum size, varied lithology, round to subround; approximately 1-3 percent + 6", 2-4 percent 3-6", 93-97 percent matrix (which is approximately 49-69 percent gravel, 24-37 percent sand, and 8-16 percent nonplastic fines); brown, moist to wet, moderate permeability, loose-dense N=7-45, stratified, glacial outwash; (GP-GM)

D.S. 7.1 @ 6.0' GI-GC

NOTE: Inflow of water @ 10.0'; color changes to gray brown below water table.

TP#101 BORROW AREA 9/3/81 H.M. 1514.9

- 0.0'-10.0' [C] Silt, clayey - mixture of silt and clay with some sand and little gravel; maximum size 10", varied lithology; approximately 0-1 percent + 6", 1 percent 3-6", 98-99 percent matrix (which is approximately 1-3 percent gravel, 18-33 percent sand, and 64-82 percent non to slightly plastic fines (LL=18.8-22.4, PI=2.4-5.3)); brown, changing to gray with depth, moist, slight permeability, medium density N=13-20, homogeneous, alluvium and fill; (ML)

D.S. 101.1 @ 4.0' CL-ML

NOTE: Organic material throughout 10.0' of excavation.

TP#102 BORROW AREA 9/3/81 H.M. 1514.0

- 0.0'-9.0' [C] Silt, clayey - mixture of silt and clay with some sand and little gravel; maximum size 10", varied lithology; approximately 0-1 percent + 6", 1 percent 3-6", 98-99 percent matrix (which is approximately 1-3 percent gravel, 18-33 percent sand, and 64-82 percent non to slightly plastic fines (LL=18.8-22.4, PI=2.4-5.3)); brown, changing to gray with depth, moist, slight permeability, medium density N=13-20, homogeneous, alluvium and fill; (ML)

NOTE: Layers in pit alternate in color from gray to brown; Mat'l is similar in each layer.

TP#103 BORROW AREA 9/3/81 H.M. 1515.9

- 0.0'-9.0' [C] Silt, clayey - mixture of silt and clay with some sand and little gravel; maximum size 10", varied lithology; approximately 0-1 percent + 6", 1 percent 3-6", 98-99 percent matrix (which is approximately 1-3 percent gravel, 18-33 percent sand, and 64-82 percent non to slightly plastic fines (LL=18.8-22.4, PI=2.4-5.3)); brown, changing to gray with depth, moist, slight permeability, medium density N=13-20, homogeneous, alluvium and fill; (ML)

NOTE: Alternating layers of brown and gray Mat'l throughout pit.

TP#104 BORROW AREA 9/3/81 H.M.

- 0.0'-9.0' [D] Gravel, silty - mixture of gravel, sand, and silt; 18" maximum size, varied lithology, round to subround; approximately 1 percent + 6", 5 percent 3-6", 94 percent matrix (which is approximately 46 percent gravel, 36 percent sand, and 18 percent nonplastic fines); brown, moist, slight permeability, loose, stratified, glacial outwash; (GM)

D.S. 104.1 @ 4.5' GH

NOTE: Pit dug on crest of gravel pit area about one mile from dike.

## DRILL HOLE LOGS

DN#51 C/L DIKE 8/24/81 H.M. 1506.1

- 14 [A] Topsoil - contains roots and organic material; brown, moist, moderate permeability, soft, average thickness 1.0'. (NL)
- 13 [B] Poorly graded, sandy gravel - mixture of gravel and sand with few fines; 14 inch maximum size, varied lithology, round to subround; approximately 1-3 percent + 6", 2-4 percent 3-6", 93-97 percent matrix (which is approximately 49-69 percent gravel, 24-37 percent sand, and 8-16 percent nonplastic fines); brown, moist to wet, moderate permeability, loose-dense N=7-45, stratified, glacial outwash; (GP-GM)
- 22 [H] Sand, silty - mixture of sand and silt; with little gravel; less than 3" maximum size, varied lithology; sample is 100 percent matrix (which is approximately 1-7 percent gravel, 72-77 percent sand, and 21 percent non-plastic fines); brown, moist to saturated, slight permeability, loose-medium density N=9-21, glacial outwash; (SM)
- 15 D.S. 1.1 GP-GM, 2.1 GM, 7.1 GP-GM, Composite #1 GM, Composite #2 SM, Composite #3 SM, Composite #4 SM
- 12 18.0
- 15 35.0

DN#52 C/L DIKE 8/25/81 H.M. 1506.6

- 27 [A] Topsoil - contains roots and organic material; brown, moist, moderate permeability, soft, average thickness 1.0'. (NL)
- 16 [B] Poorly graded, sandy gravel - mixture of gravel and sand with few fines; 14 inch maximum size, varied lithology, round to subround; approximately 1-3 percent + 6", 2-4 percent 3-6", 93-97 percent matrix (which is approximately 49-69 percent gravel, 24-37 percent sand, and 8-16 percent nonplastic fines); brown, moist to wet, moderate permeability, loose-dense N=7-45, stratified, glacial outwash; (GP-GM)
- 19 [C] Gravel and sand, silty - mixture of equal parts gravel and sand, and silt; maximum size 21", varied lithology; sample is 100 percent matrix (which is approximately 31 percent gravel, 31 percent sand, and 38 percent slightly plastic fines LL=23.6, PI=6.4; brown, moist, slight permeability, medium-dense N=19-36, glacial till, (GC-GM or SC-SH).
- 22 [D] Sand, silty - mixture of sand and silt; with little gravel; less than 3" maximum size, varied lithology; sample is 100 percent matrix (which is approximately 1-7 percent gravel, 72-77 percent sand, and 21 percent non-plastic fines); brown, moist to saturated, slight permeability, loose-medium density N=9-21, glacial outwash; (SM)
- 15 19.5
- 14 24.0

DYKE CREEK WATERSHED

ALLEGANY COUNTY, NY

LOGS OF TEST HOLES

U. S. DEPARTMENT OF AGRICULTURE  
SOIL CONSERVATION SERVICE

LOGGERS	H. MOOREN	8-9/81	Approved by	
Drawn			Title	
TYPED	TONI	4/82	Title	
Checked	B. ELLIS	4/82	Sheet	1 of 2
			Drawing No	NY-4705-P



