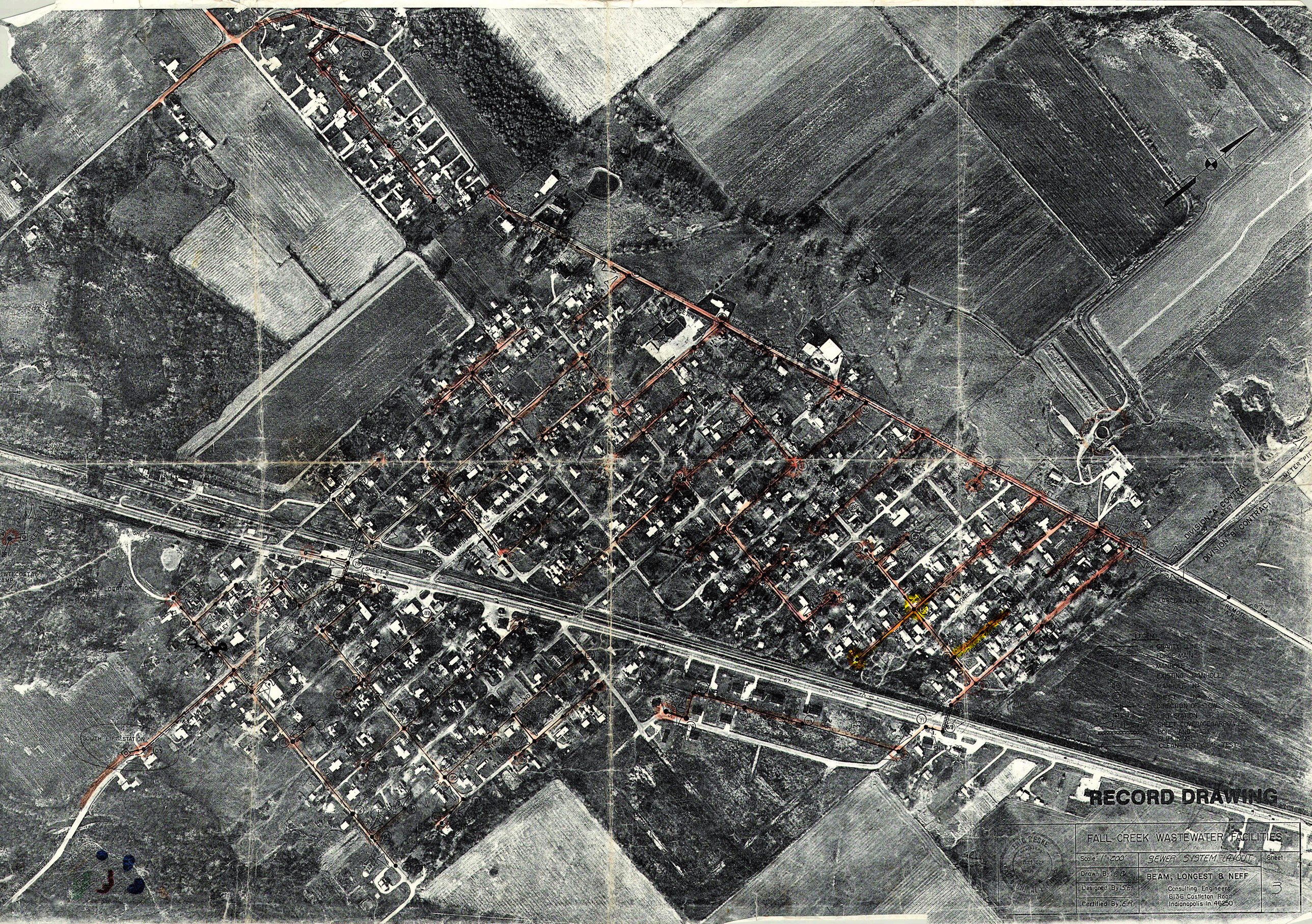
WEST GRINDER LIFT STATION (OFF MAP)
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SOUTH LIFT STATION
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DIVISION "B" CONTRACT
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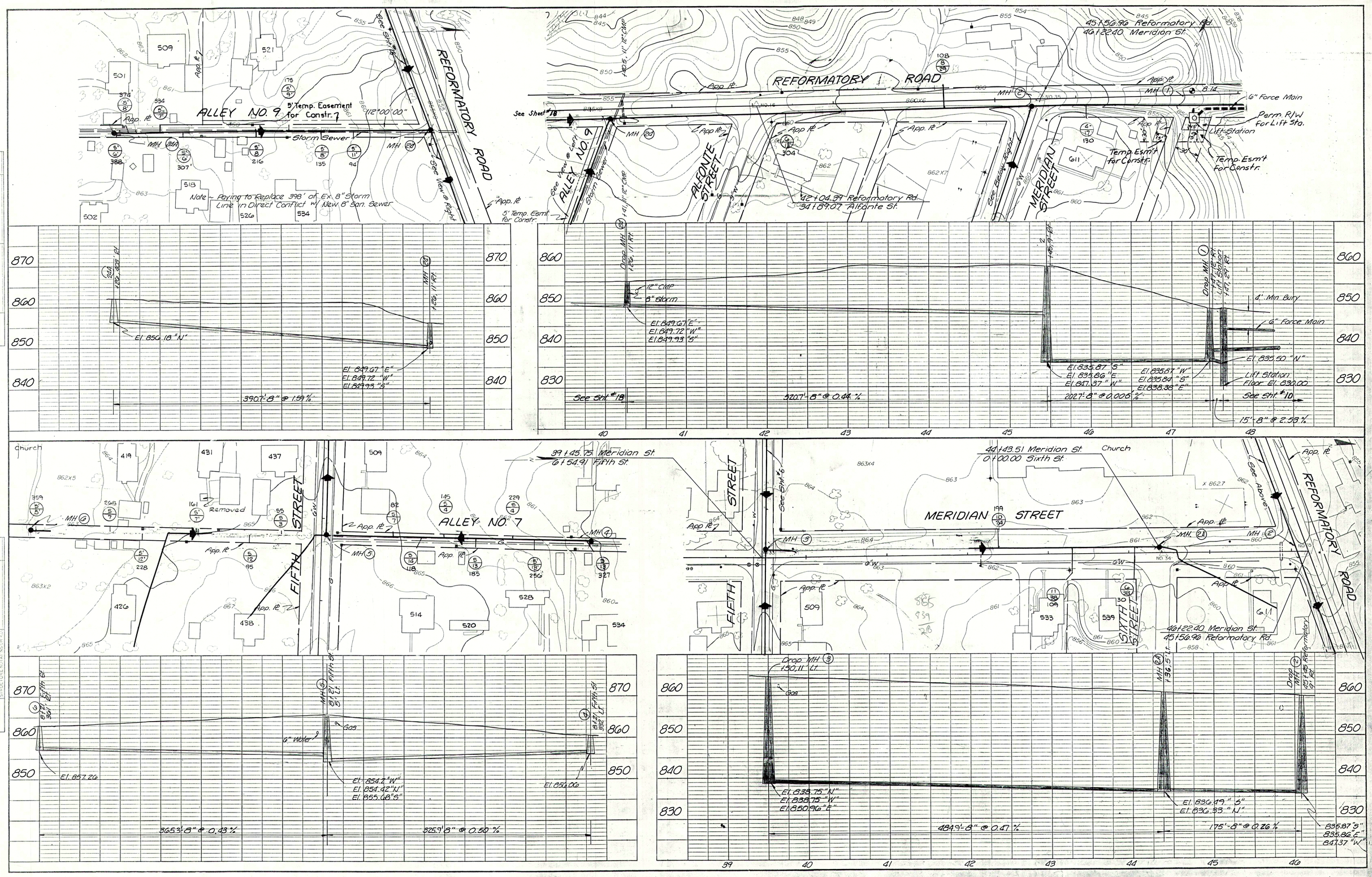
REMOTE AIR V.
LEGEND
GRAVITY LINES
FORCE MAIN
MANHOLE
EXISTING MANHOLE
MANHOLE NO.
SHEET NO.
DIRECTION OF FLOW
LIFT STATION
SHEET COVERAGE ARROW
FORE AND AFT
SLIP LINING
CLEAN, TEST, SEAL, TEST
RECORD DRAWING
FALL CREEK WASTEWATER FACILITIES
Scale: 1"=200'
SEWER SYSTEM LAYOUT
Sheet
3
Drawn By: G.D.
Designed By: S.E.
Certified By: G.R.
BEAM, LONGEST & NEFF
Consulting Engineers
8136 Castleton Road
Indianapolis In. 46250



PLAN

PROFILE

RECORD DRAWING

ERIC RESKE
REGISTERED
No. 13442
STATE OF INDIANA
PROFESSIONAL ENGINEER

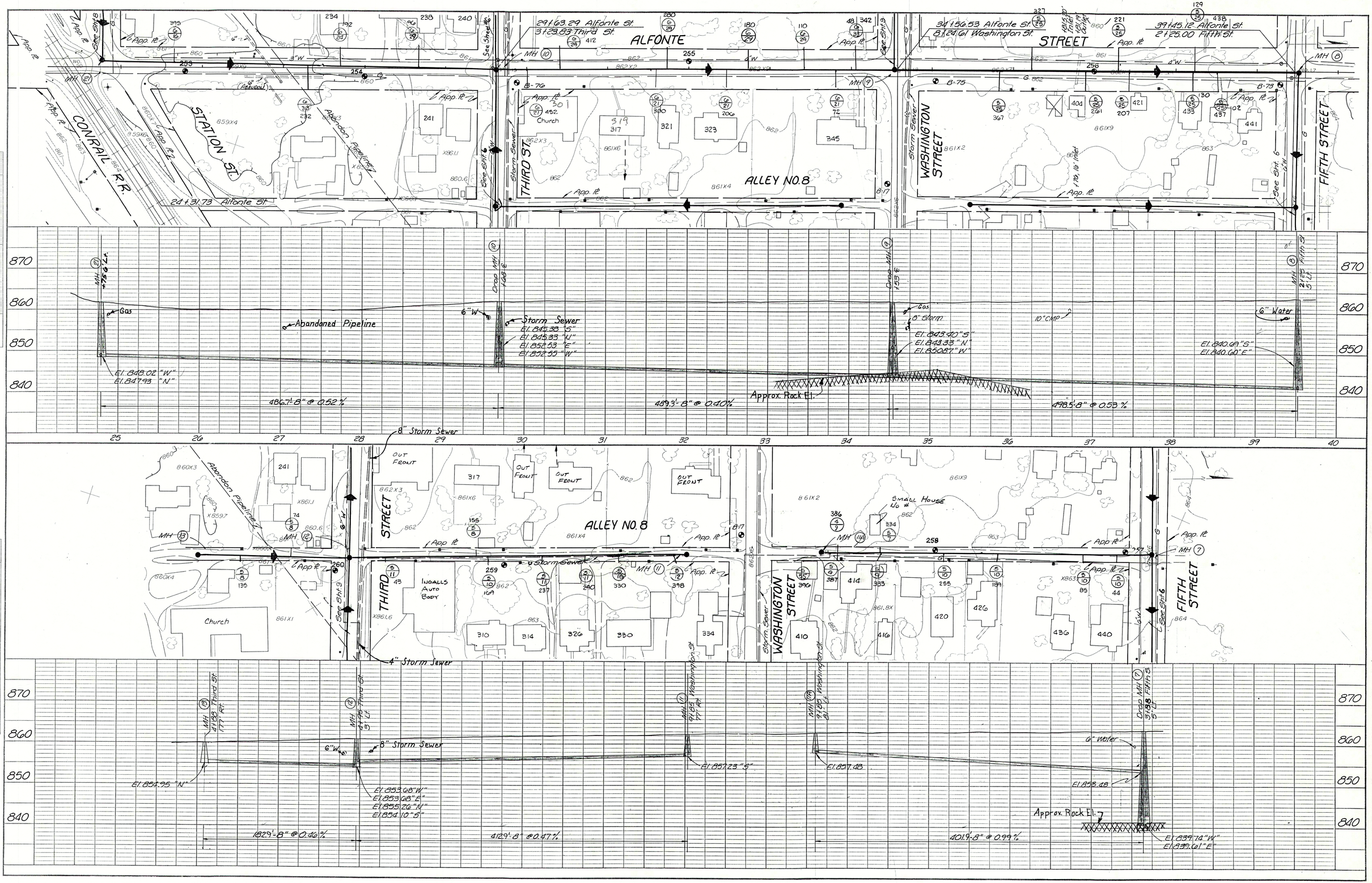
REFORMATORY RD. ALLEY #9	
ALLEY #7 MERIDIAN ST.	
FALL CREEK R.W.D. PLAN & PROFILE	SHEET
HORIZ. 1"=50'	BEAM, LONGEST & NEFF, INC.
VERT. 1"=10'	CONSULTING ENGINEERS
	INDIANAPOLIS, INDIANA

4

I-1

PLAN — SURVEYED / PLOTTED / GRADES CHECKED / ALIGNMENT CHECKED / R/W STAKED / STRUCTURE NOTATIONS CHKD. — NOTE BOOK — NO. — BY — DATE

PROFILE — SURVEYED / PLOTTED / GRADES CHECKED / ALIGNMENT CHECKED / R/W STAKED / STRUCTURE NOTATIONS CHKD. — NOTE BOOK — NO. — BY — DATE

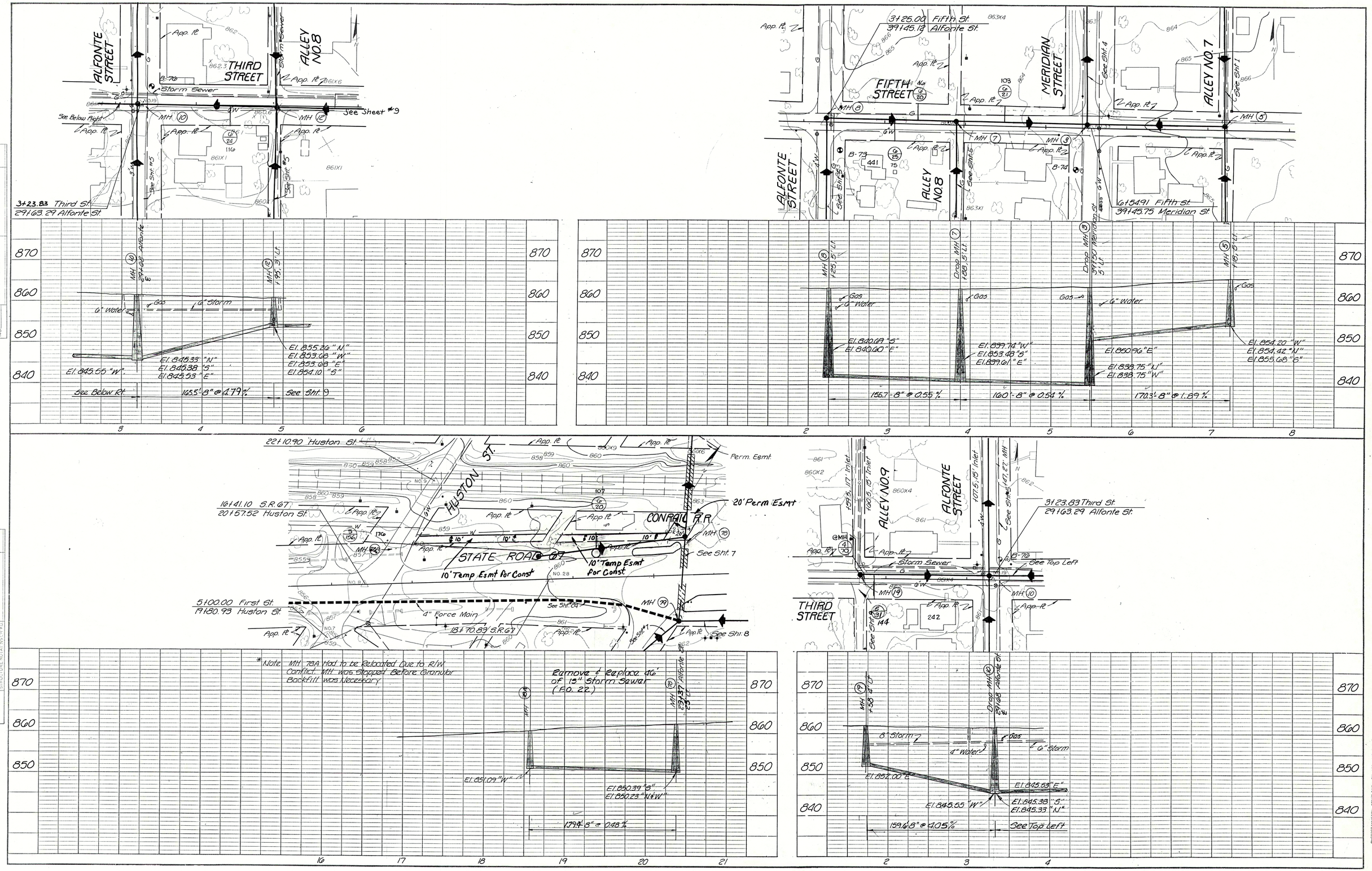


RECORD DRAWING

ERIC RESKE — REGISTERED — No. 13442 — 2-20-85 — STATE OF INDIANA — PROFESSIONAL ENGINEER

ALFONTE ST. ALLEY #8		1
FALL CREEK R.W.D. PLAN & PROFILE		SHEET 5
HORIZ. 1"=50'	BEAM, LONGEST & NEFF, INC.	
VERT. 1"=10'	CONSULTING ENGINEERS	
	INDIANAPOLIS, INDIANA	

PHOTOGRAMMETRIC COMPILATION BY ACCU-AIR SURVEYS, INC. SEYMOUR, INDIANA



PLAN

PROFILE

RECORD DRAWING

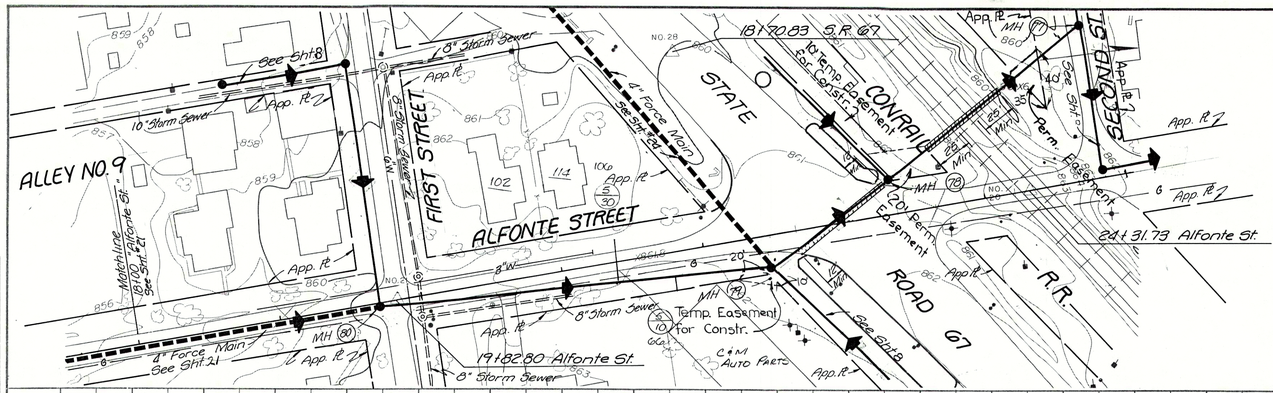
ERIC RESKE REGISTERED No. 13442 STATE OF INDIANA PROFESSIONAL ENGINEER

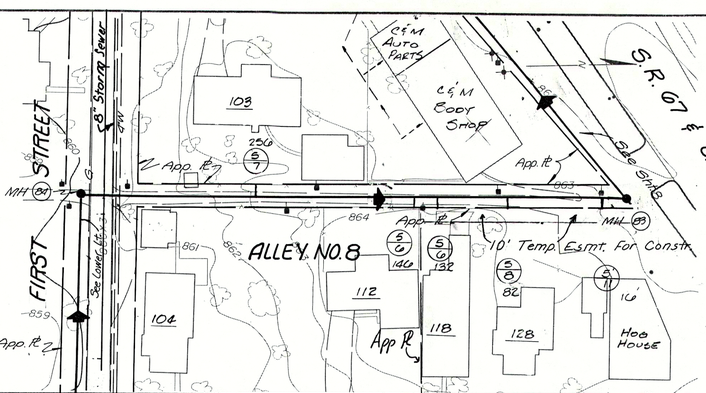
THIRD ST. & S.R. 67	FIFTH ST.	
FALL CREEK R.W.D. PLAN & PROFILE		SHEET
HORIZ. 1"=50'	BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA	6
VERT. 1"=10'		

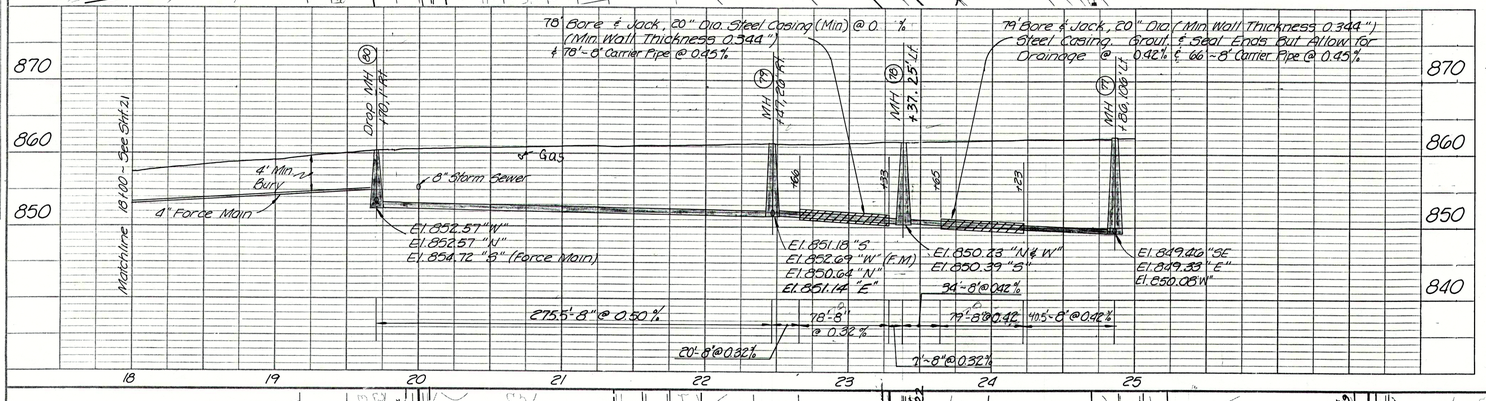
I-2A

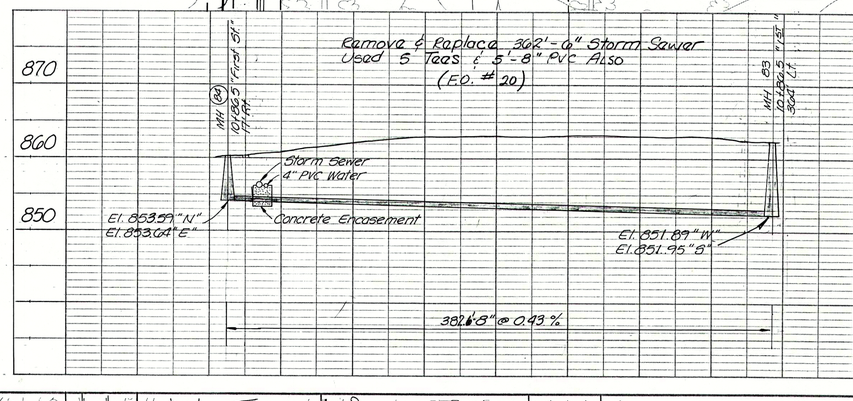
PLAN — SURVEYED / DRAWN / TRACED / GRADES CHECKED / ELEVATIONS CHKD. / RT. OF WAY CHECKED / NOTE BOOK / NO. / BY / DATE

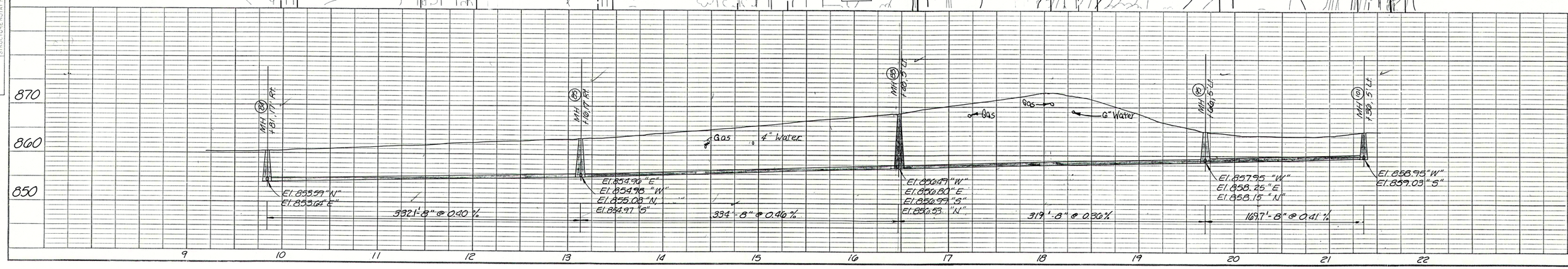
PROFILE — SURVEYED / DRAWN / TRACED / GRADES CHECKED / B. M. NOTED / STRUCTURES LOCATED / NOTE BOOK / NO. / BY / DATE











RECORD DRAWING

ERIC RESKE — REGISTERED — No. 13843 — STATE OF INDIANA — PROFESSIONAL ENGINEER

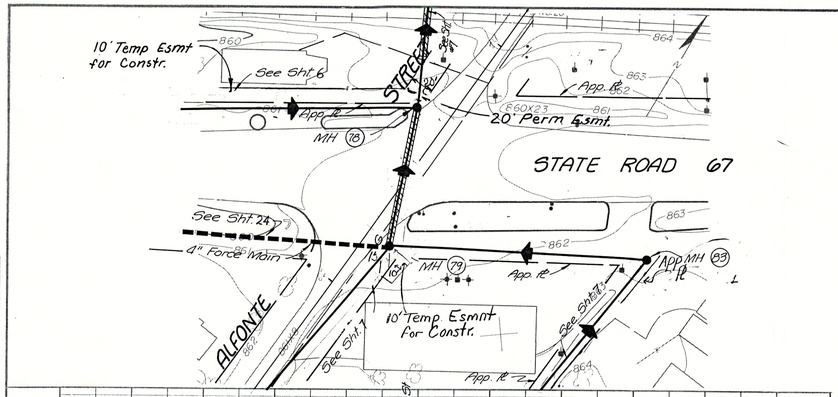
ALFONTE ST., ALLEY #8
FIRST ST.
FALL CREEK R.W.D. PLAN & PROFILE — SHEET 7
HORIZ. 1"=50' / VERT. 1"=10'
BEAM, LONGEST & NEFF, INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA

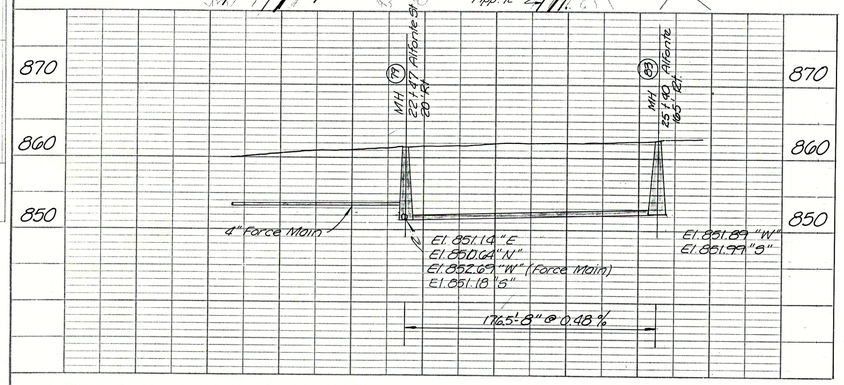
T-3

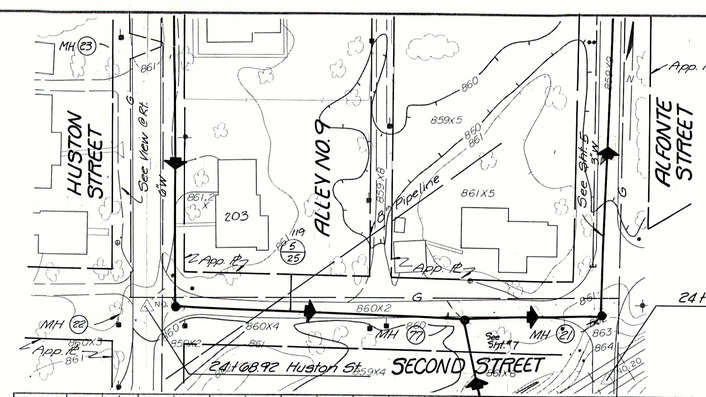
PHOTOGRAMMETRIC COMPILATION BY ACCU-AIR SURVEYING, SEYMOUR, INDIANA

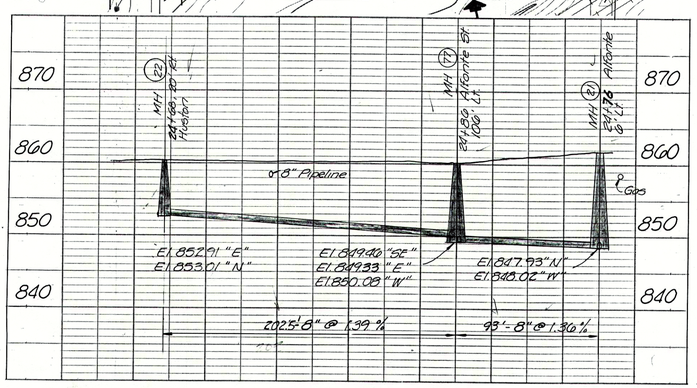
PLAN — SURVEYED, PLOTTED, GRADES CHECKED, ALIGNMENT CHECKED, STRUCTURE NOTATIONS CHECKED — BY — DATE — NOTE BOOK — NO.

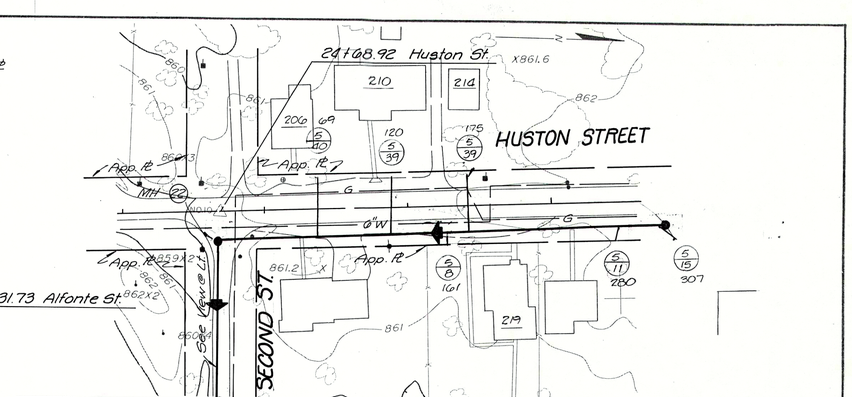
PROFILE — SURVEYED, PLOTTED, GRADES CHECKED, ALIGNMENT CHECKED, STRUCTURE NOTATIONS CHECKED — BY — DATE — NOTE BOOK — NO.

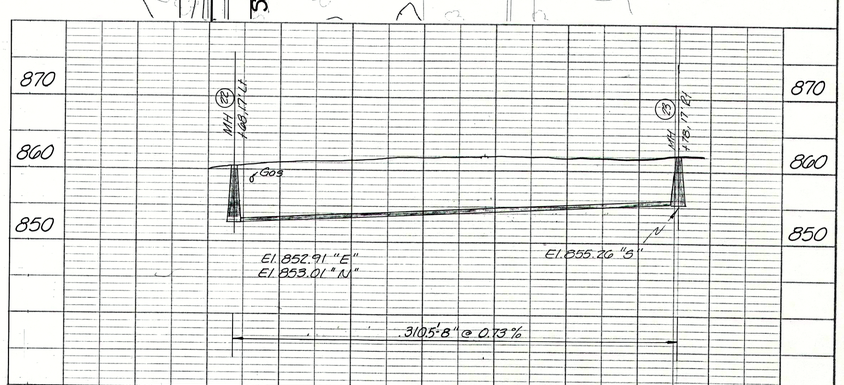




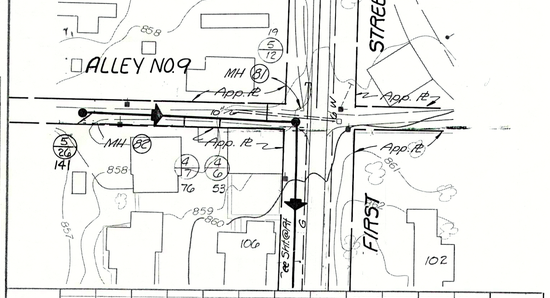


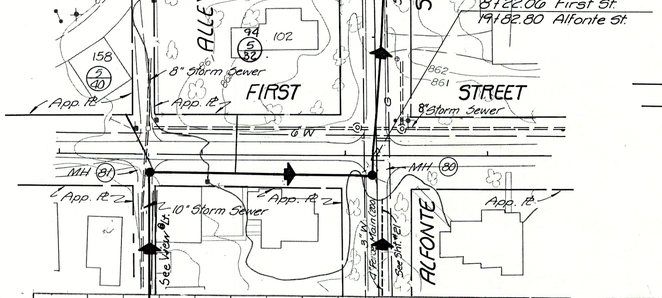


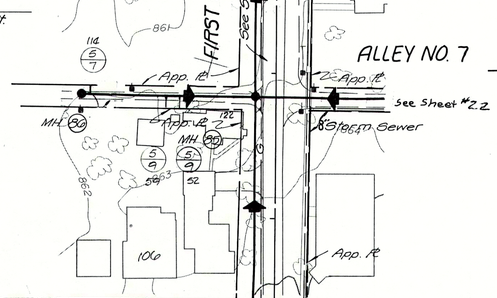


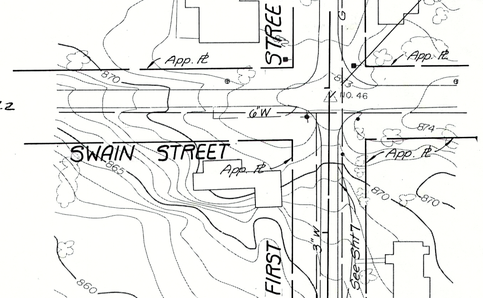


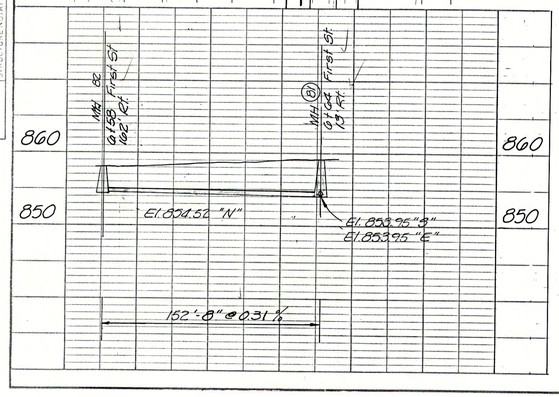
21 25 26 27

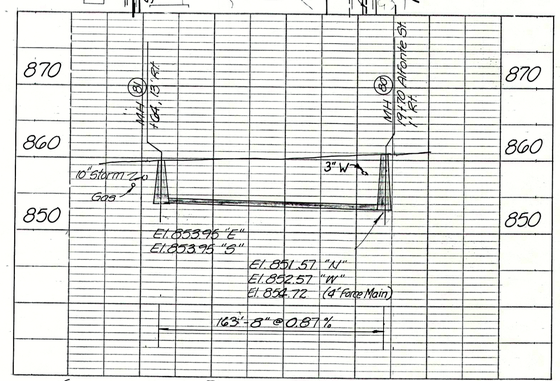


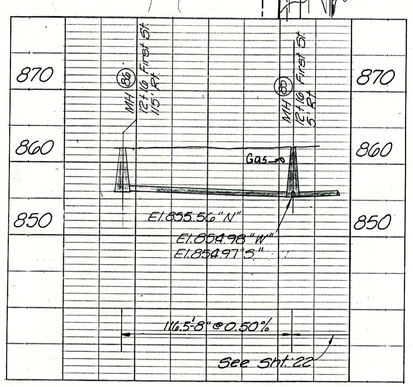


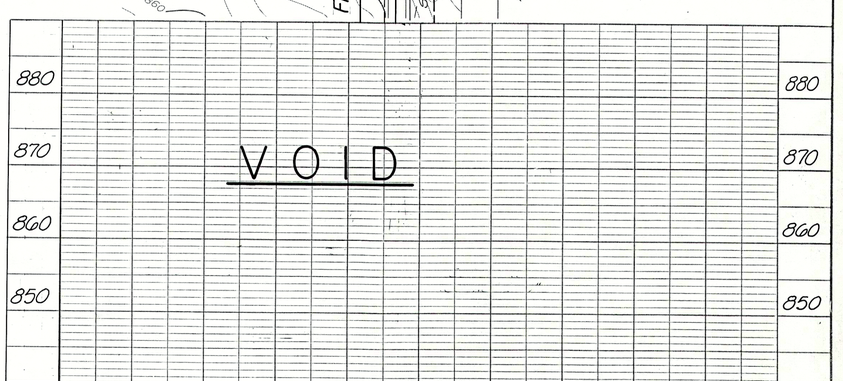












6 7 8

RECORD DRAWING

ERIC RESKE REGISTERED No. 13442 STATE OF INDIANA PROFESSIONAL ENGINEER 7-20-73

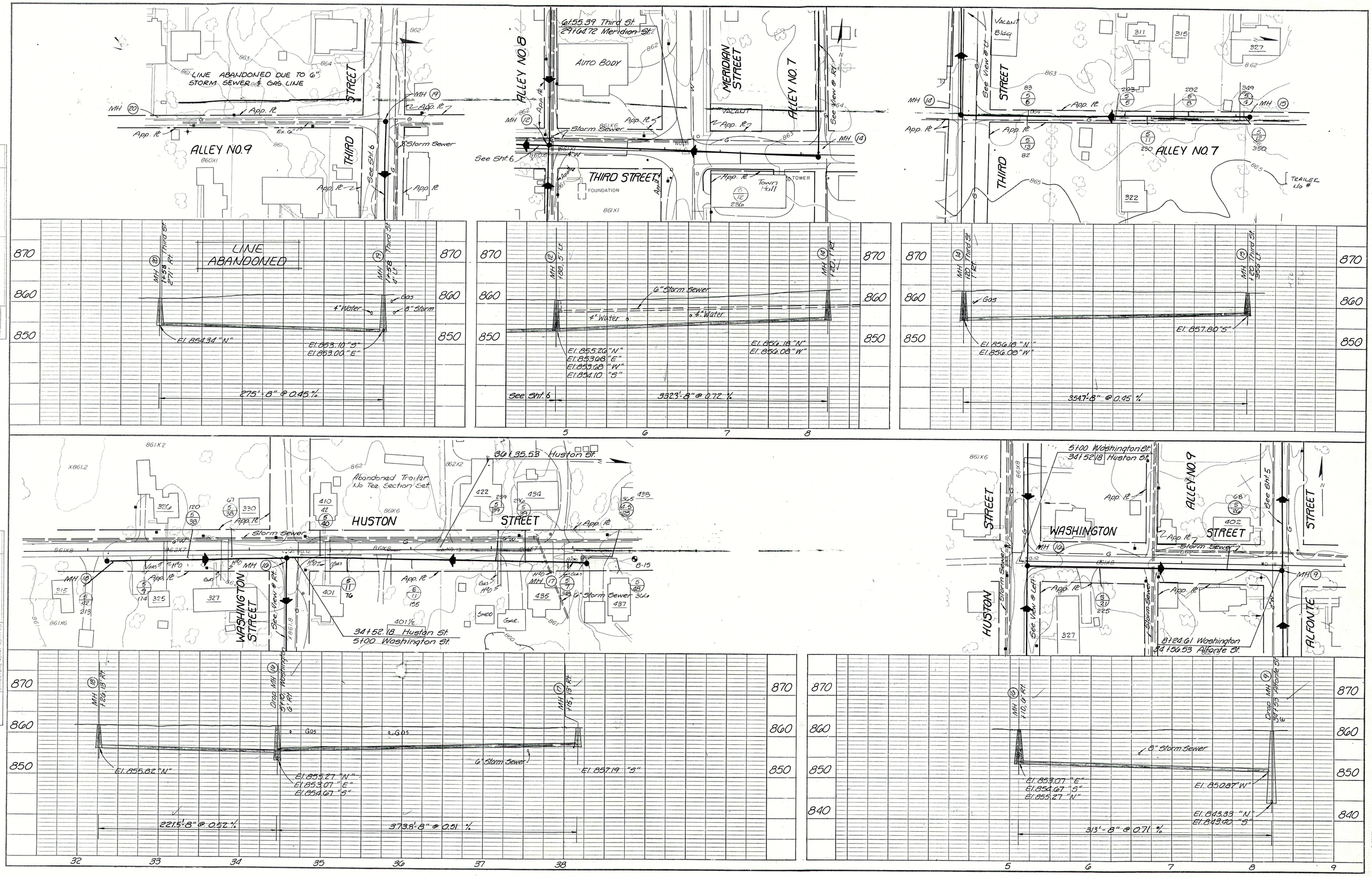
ALLEYS #7 & #9, HUSTON ST., FIRST ST., SECOND ST., S.R. 67

FALL CREEK R.W.D. PLAN & PROFILE — SHEET 8

HORIZ. 1"=50' VERT. 1"=10'

BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA

PHOTOGRAMMETRIC COMPILATION BY ACCU-MAP SURVEYS, INC. SEYMOUR, INDIANA



PLAN — NOTE BOOK NO. — SURVEYED, PLOTTED, ALIGNMENT CHECKED, RT. OF WAY CHECKED — BY — DATE

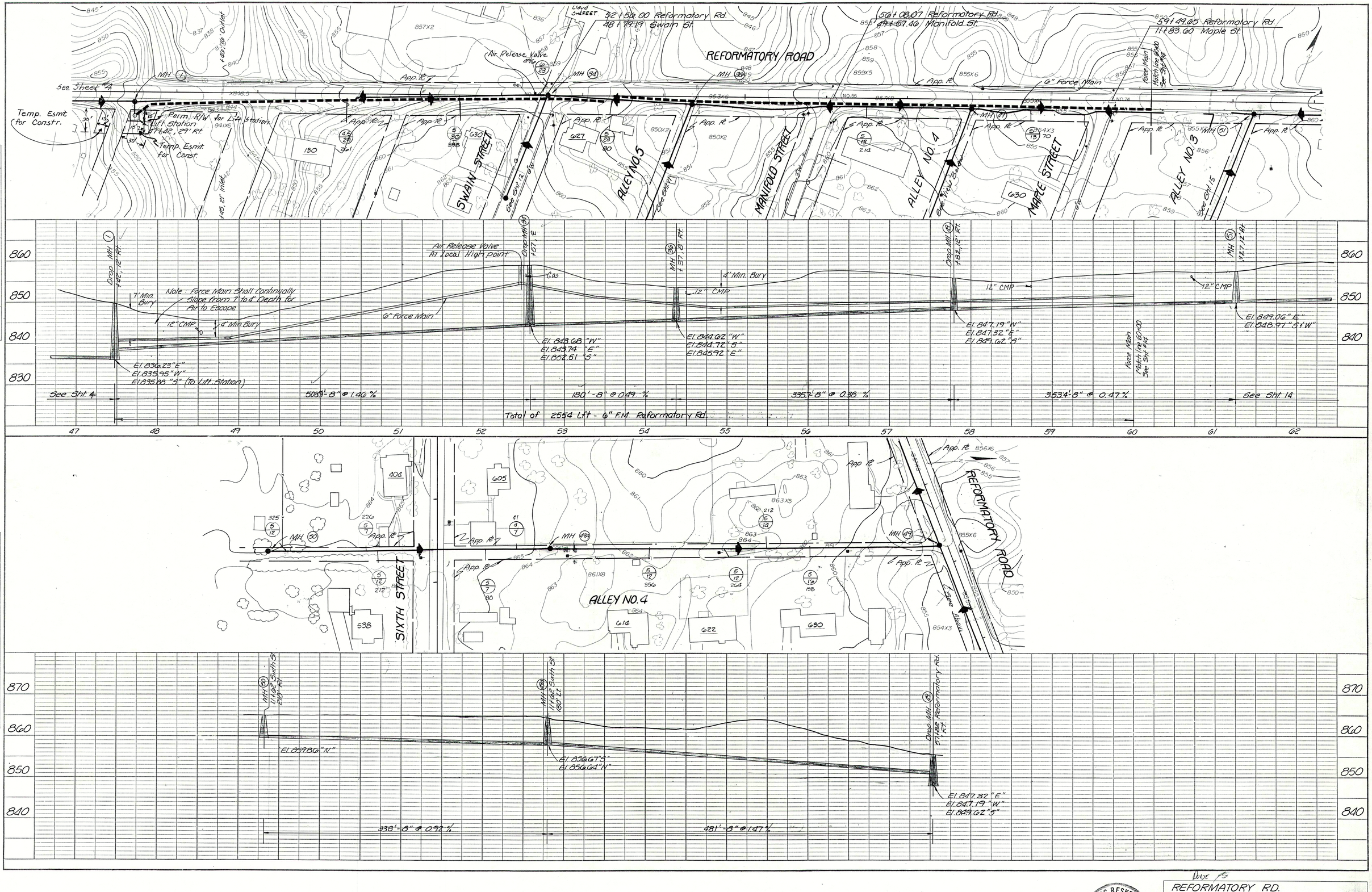
PROFILE — NOTE BOOK NO. — SURVEYED, PLOTTED, GRADES CHECKED, B. M. NOTED, STRUCTURE NOTATIONS CHK'D — BY — DATE

RECORD DRAWING

ERIC RESKE — REGISTERED — No. 13442 — STATE OF INDIANA — PROFESSIONAL ENGINEER

ALLEYS #7 & #9 WASHINGTON ST. HUSTON ST. THIRD ST.	
FALL CREEK R.W.D. PLAN & PROFILE	SHEET
HORIZ. 1"=50' VERT. 1"=10'	BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA
	9

PHOTOGRAMMETRIC COMPILATION BY ACCU-AIR SURVEYS, INC. SEYMOUR, INDIANA



PLAN

PROFILE

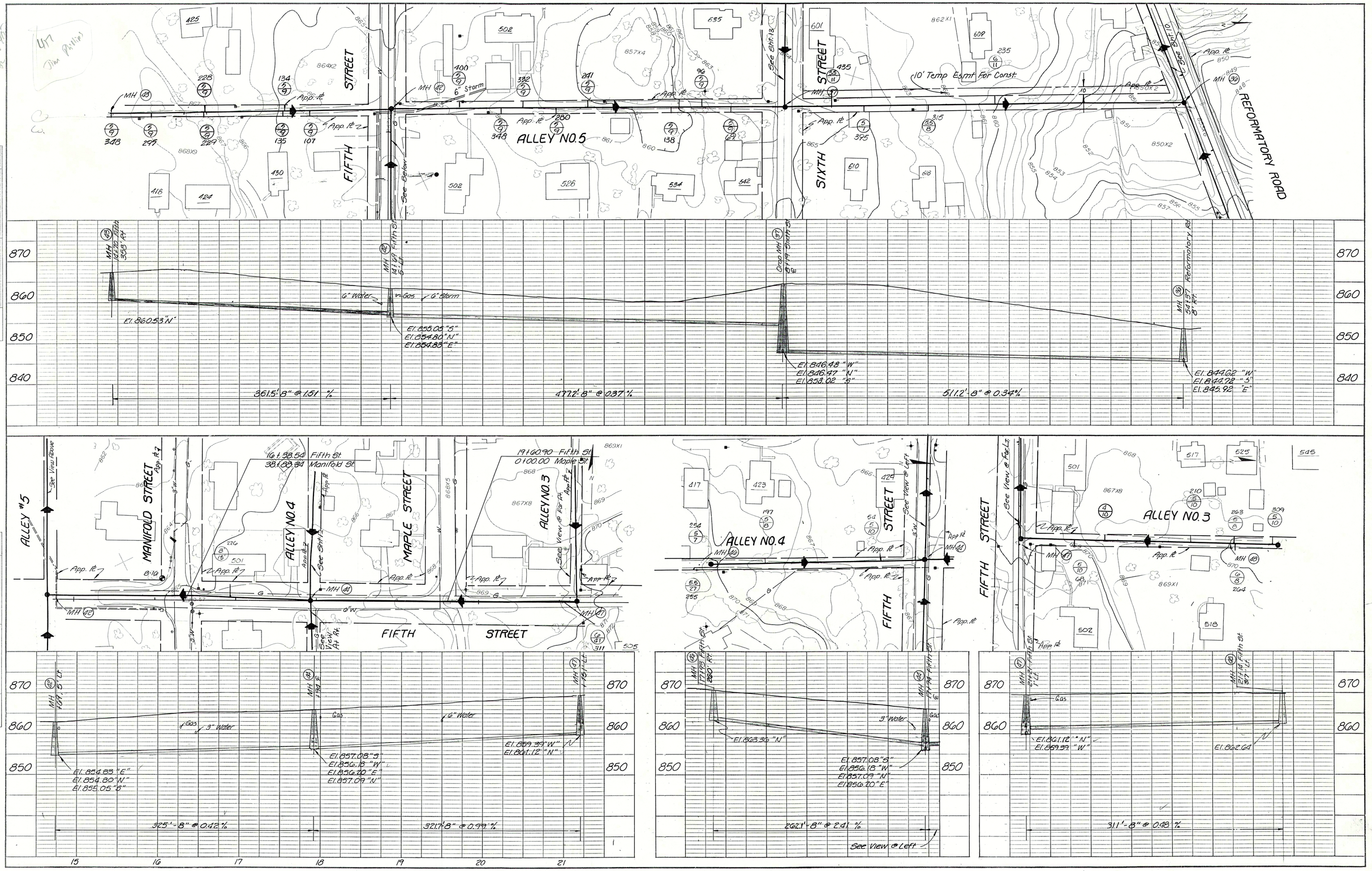
RECORD DRAWING

ERIC RESKE
REGISTERED
No. 13442
STATE OF INDIANA
PROFESSIONAL ENGINEER

REFORMATORY RD. ALLEY #4	
FALL CREEK R.W.D. PLAN & PROFILE	SHEET
HORIZ. 1"=50' VERT. 1"=10'	BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA
	10

PLAN
SURVEYED
DRAWN
NOTE BOOK
NO.
ALIGNMENT CHECKED
RT. OF WAY CHECKED
BY
DATE

PROFILE
SURVEYED
DRAWN
NOTE BOOK
NO.
GRADES CHECKED
STRUCTURE NOTATIONS CHKD
BY
DATE

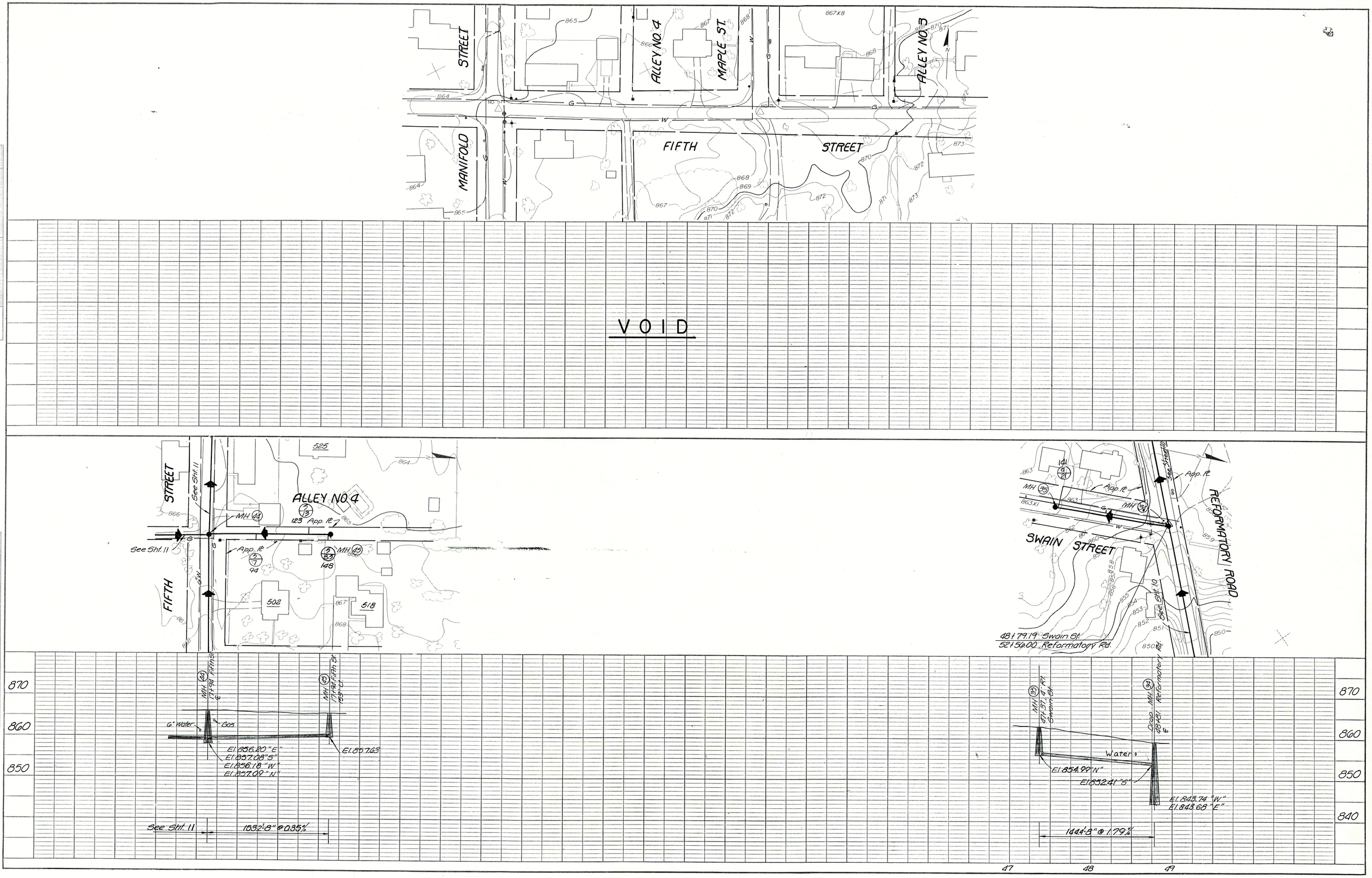


PHOTOGRAMMETRIC COMPILATION BY ACCU-AIR SURVEYS, INC. SEYMOUR, INDIANA

RECORD DRAWING

ERIC RESKE REGISTERED No. 13442 STATE OF INDIANA PROFESSIONAL ENGINEER
3-31-83

ALLEYS #3, #1, & #5
FIFTH ST.
FALL CREEK R.W.D. PLAN & PROFILE
HORIZ. 1"=50'
VERT. 1"=10'
BEAM, LONGEST & NEFF, INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA
SHEET 11



PLAN
NOTE BOOK
NO.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED

PROFILE
NOTE BOOK
NO.
SURVEYED
PLOTTED
GRADES CHECKED
B. M. & NOTED
STRUCTURE NOTATNS CH'KD

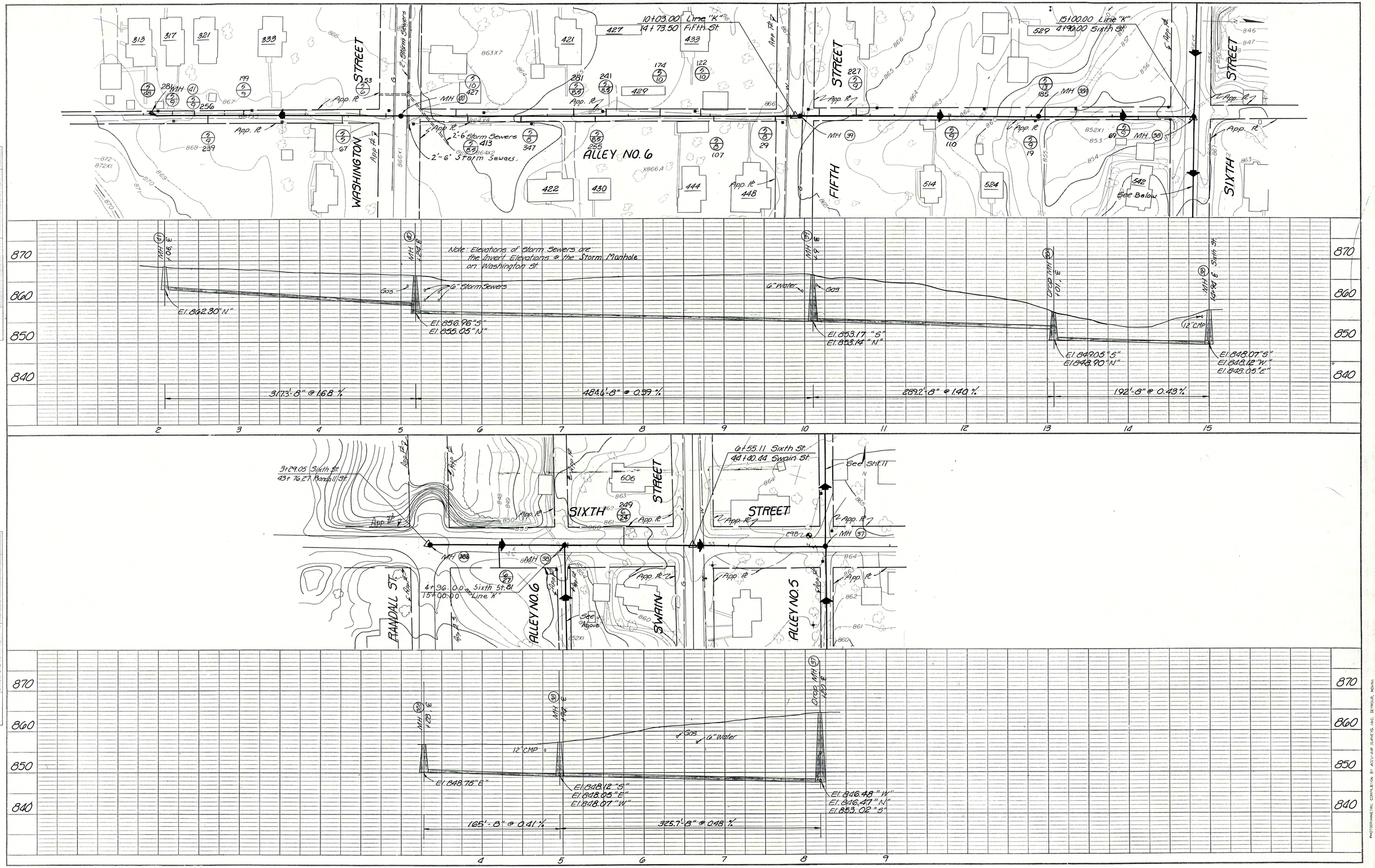
BY
DATE

RECORD DRAWING

ERIC RESKE
REGISTERED
No. 13442
3-30-83
STATE OF INDIANA
PROFESSIONAL ENGINEER

FIFTH ST.	ALLEY #4	SWAIN ST.
FALL CREEK R.W.D. PLAN & PROFILE		SHEET
HORIZ. 1"=50'	BEAM, LONGEST & NEFF, INC.	12
VERT. 1"=10'	CONSULTING ENGINEERS INDIANAPOLIS, INDIANA	

I-64



PLAN

PROFILE

ALLEY #6, SIXTH ST.

FALL CREEK R.W.D. PLAN & PROFILE

HORIZ. 1"=50'

VERT. 1"=10'

BEAM, LONGEST & NEFF, INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA

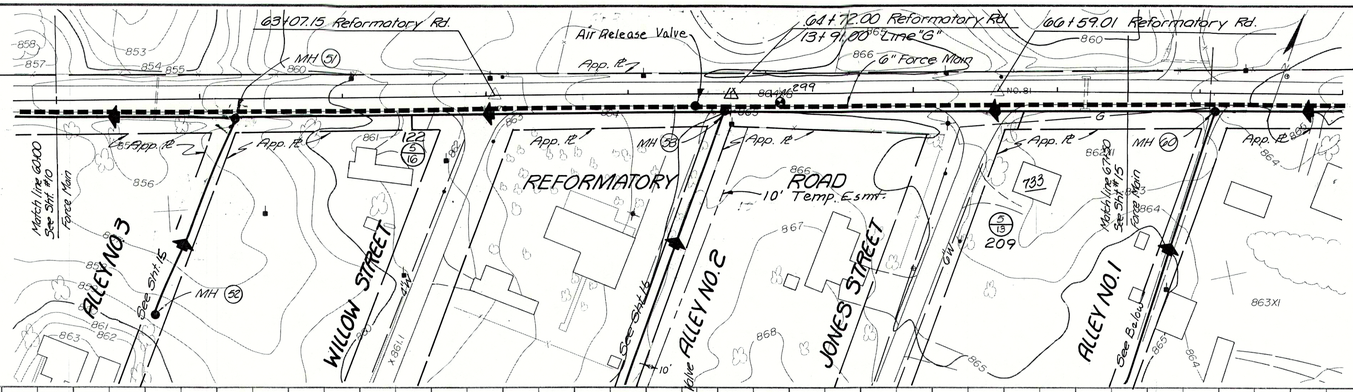
SHEET 13

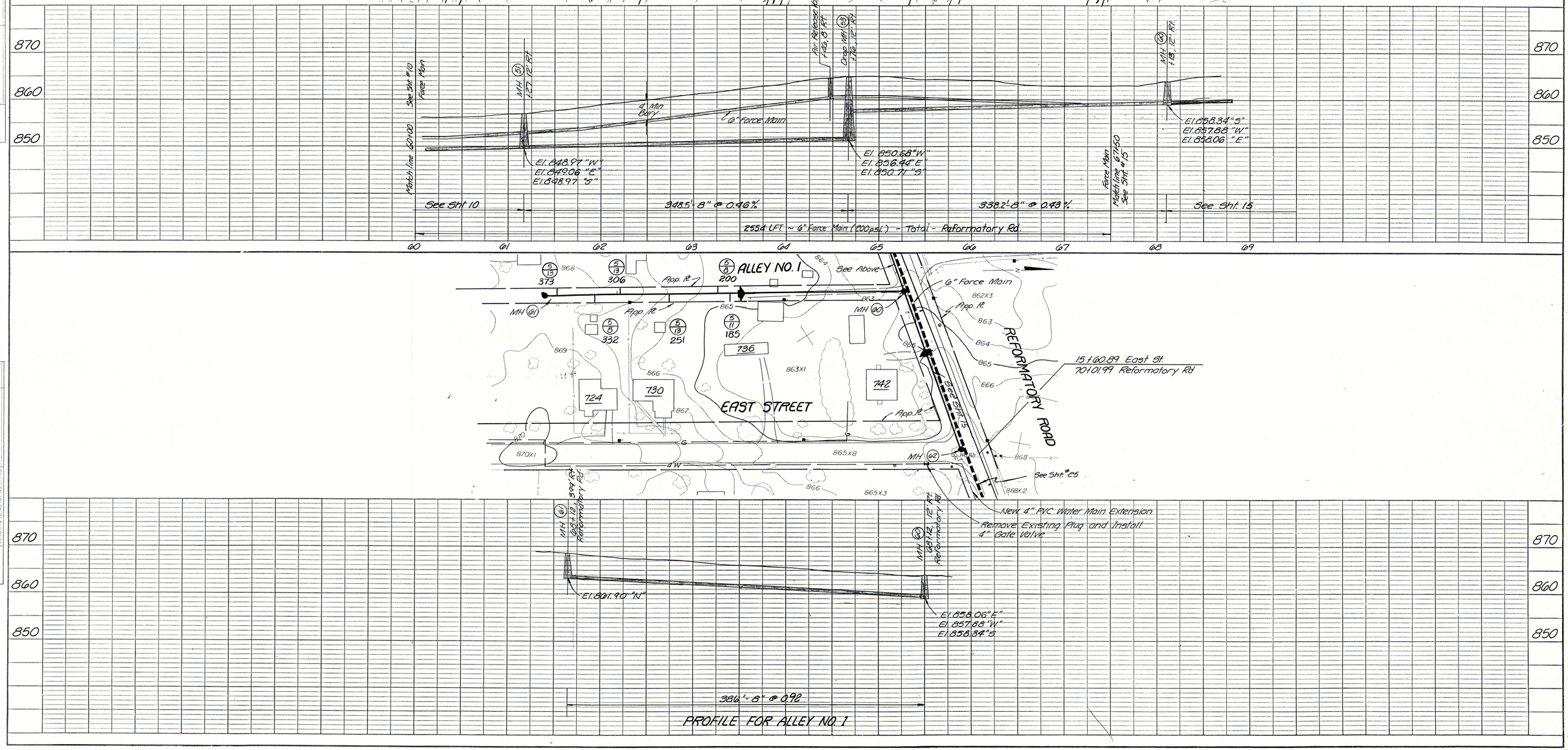
RECORD DRAWING

ERIC RESKE
REGISTERED
No. 13442
3-30-83
STATE OF INDIANA
PROFESSIONAL ENGINEER

PLAN — SURVEYED, PLOTTED, GRADES CHECKED, ALIGNMENT CHECKED, RT. OF WAY CHECKED. NOTE BOOK ____ NO. ____ BY ____ DATE ____

PROFILE — SURVEYED, PLOTTED, GRADES CHECKED, ALIGNMENT CHECKED, STRUCTURE NOTATIONS CHKD. NOTE BOOK ____ NO. ____ BY ____ DATE ____





PROFILE FOR ALLEY NO. 1

RECORD DRAWING

ERIC RESKE REGISTERED No. 13442 STATE OF INDIANA PROFESSIONAL ENGINEER

REFORMATORY RD.
ALLEY # 1

FALL CREEK R.W.D. PLAN & PROFILE — SHEET 14

HORIZ. 1"=50' VERT. 1"=10'

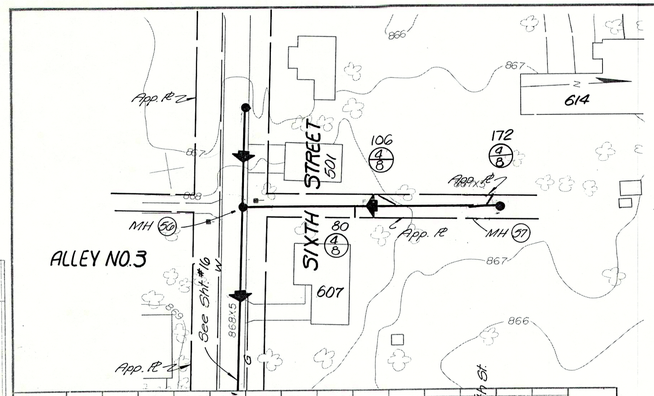
BEAM, LONGEST & NEFF, INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA

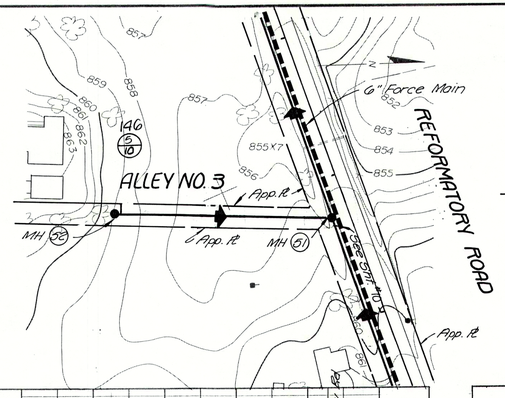
PHOTOGRAMMETRIC COMPILATION BY ACCU-AIR SURVEYS, INC. SEYMOUR, INDIANA

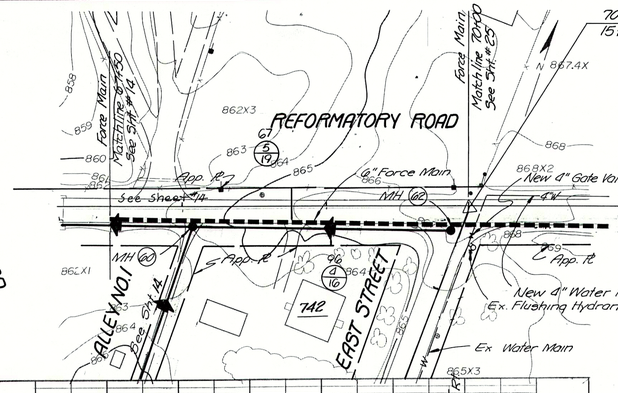
I-9

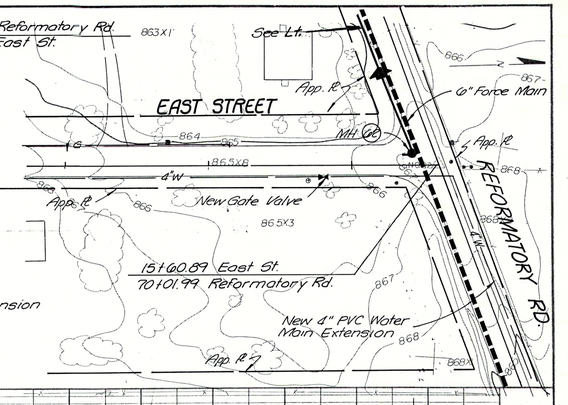
PLAN — SURVEYED, PLOTTED, GRADES CHECKED, ALIGNMENT CHECKED, ST. OF WAY CHECKED, STRUCTURE LOCATIONS CHECKED — NOTE BOOK — NO. — BY — DATE

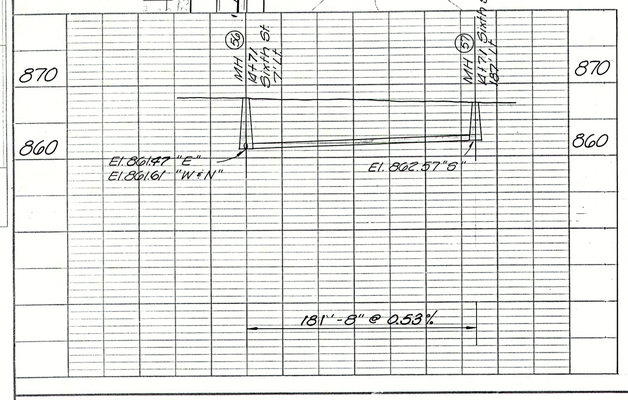
PROFILE — SURVEYED, PLOTTED, GRADES CHECKED, ALIGNMENT CHECKED, STRUCTURE LOCATIONS CHECKED — NOTE BOOK — NO. — BY — DATE

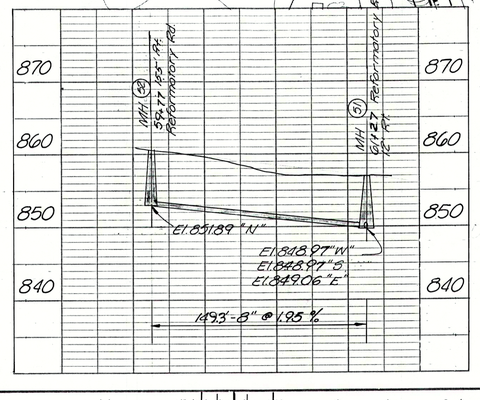


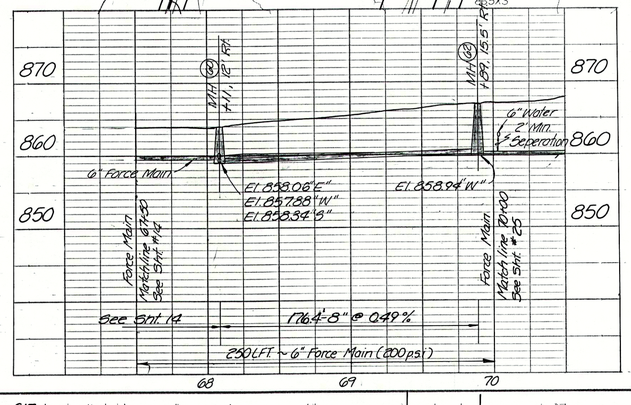


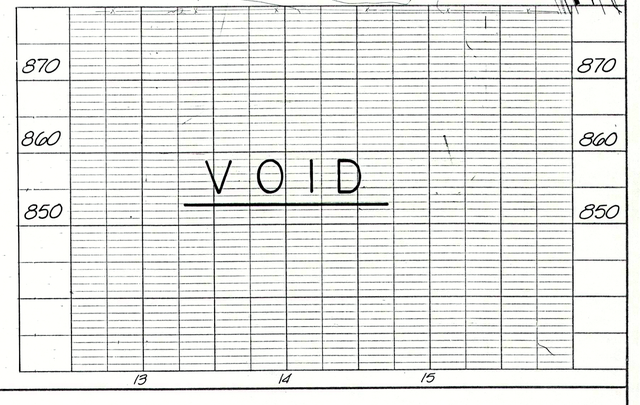


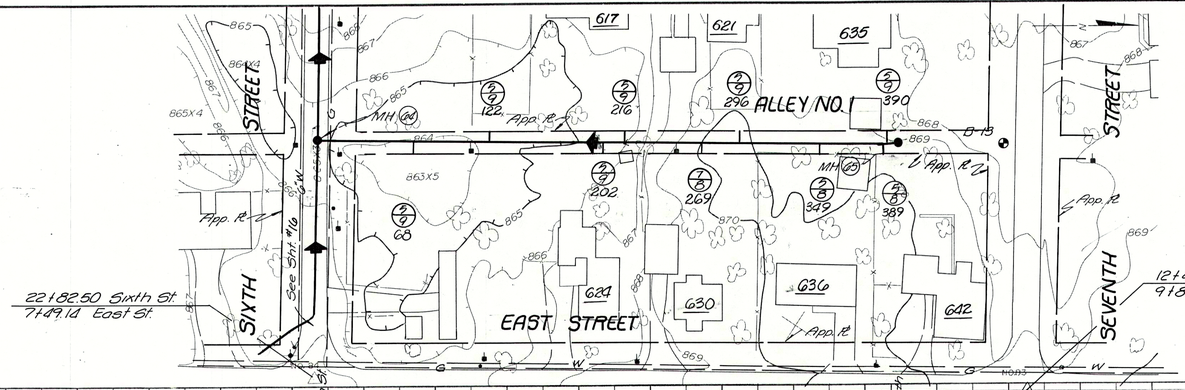


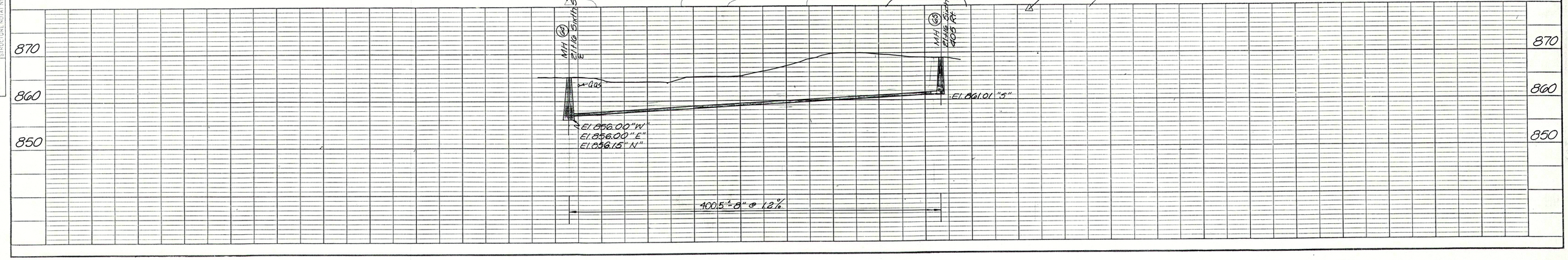












RECORD DRAWING

ERIC RESKE REGISTERED No. 13442 STATE INDIANA PROFESSIONAL ENGINEER

ALLEY #3 REFORMATORY RD. EAST ST. ALLEY #1

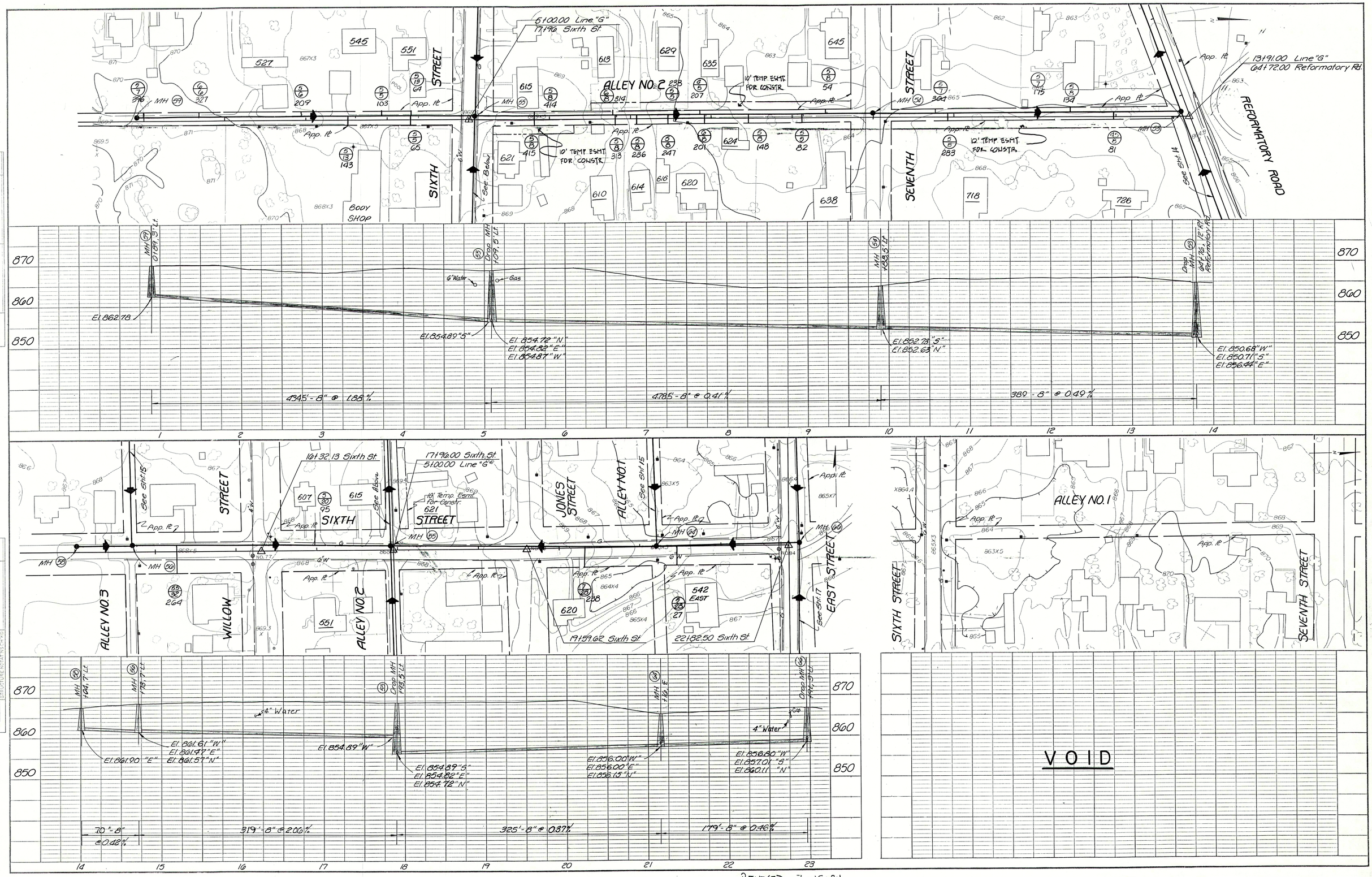
FALL CREEK R.W.D. PLAN & PROFILE — SHEET 15

HORIZ. 1"=50' VERT. 1"=10'

BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA

PHOTOGRAMMETRIC COMPILATION BY ACCU-AIR SURVEYS, INC. SEYMOUR, INDIANA

I-94



REVISED 3-19-84
CHANGED APP.

RECORD DRAWING

ERIC RESKE
REGISTERED
No. 13442
3-30-83
STATE OF INDIANA
PROFESSIONAL ENGINEER

ALLEYS #2	SIXTH ST.	
FALL CREEK R.W.D. PLAN & PROFILE		SHEET
HORIZ. 1"=50'	BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA	16
VERT. 1"=10'		

PLAN
NOTE BOOK
NO.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
BY
DATE

PROFILE
NOTE BOOK
NO.
SURVEYED
PLOTTED
GRADES CHECKED
B.M. NOTED
STRUCTURE NOTATNS CHK'D
BY
DATE

PHOTOGRAMMETRIC COMPILATION BY ACCU-AIR SURVEYS, INC., SEYMOUR, INDIANA

PLAN — SURVEYED, PLOTTED, GRADES CHECKED, ALIGNMENT CHECKED, R/W OR EASEMENTS CHK'D, STRUCTURE NOTATNS CHK'D. NOTE BOOK ALIGNMENT CHECKED. RT. OF WAY CHECKED. NO. BY DATE

PROFILE — SURVEYED, PLOTTED, GRADES CHECKED, ALIGNMENT CHECKED, STRUCTURE NOTATNS CHK'D. NOTE BOOK NO. BY DATE

F-10

250 350 476 784 748 506 "H" LINE 46

8 238 55 282 189 369 124

Ex. 75' Utility Easement 873X1 — App. ft — MH 75 — 10' Perm. Esmt. — MH 76A — Existing 75' Utility Easement — 882X3 — App. ft — App. ft

Pre-fab Sheet Metal Shed — MH 78 — Ex. 15' Utility Esmt. — Lot Line — 7.5' Perm. Easement — Existing 10' Utility Easement — 5' Temp. Easement for Constr. — See Sht. # 22

MH 79 — 7.5' Perm. Easement — EXISTING 15' UTILITY ESMT. — MH 73 — Bury Power Cable (P.S.I.) App. 3' of Cover — Buried Tele. Cable General Telephone — 7.5' Perm Easement 869X1 — EXISTING 10' UTILITY ESMT. — 870X4

MH 72 — 10' PERM. ESMT — 10' TEMP. ESMT FOR CONSTR. — 124' 15" — See Sht. #1 for 4"W — App. ft — App. ft — EAST STREET

15+54.00 Line "H" 019300 East St.

MH 75 — 410.7' LT — El. 877.13 "E"

Drop MH 76A — 447.11' LT — El. 872.74 "W" El. 872.78 "E" El. 872.78 "S"

MH 77 — 448.29' LT — El. 871.49 "W" El. 871.40 "E"

MH 78 — 448.35' LT — El. 867.04 "E" El. 866.50 "W"

MH 72 — 14+78.20 LT East St. — El. 861.83 "N" El. 863.38 "W"

DELETED

270'-8" @ 0.45 % — 264'-8" @ 0.46 % — 351'-8" @ 1.68 % — 481.16'-8" @ 0.76 %

2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

880 870 860

3+60.52 East St. 51+98.49 S.R. 67

See Above Rt. — STATE — MH 72 — MH 71 — App. ft — 92 — Buried Tele Cable General Telephone — 139 — TAILER — LIQUOR STORE — ROAD 67 — See Sht. #22 — 0+93.00 East St. 15+54.00 Line "H"

CONRAIL — 44+35.22 East St. — 133 — SIXTH STREET — See Sht. #6 — RAILROAD — State Hwy R/W — MH 69 — MH 68 — MH 67 — MH 66 — 295 — 624 — 630 — 636 — 642 — 392 — EAST STREET — SEVENTH STREET — 611 — 182 — 629 — 262 — 641 — 350 — 95

617+44.44 East St. 221+82.50 Sixth St. — 861+72.35 East St. 948+81.09 Seventh St.

MH 74 — 180.20' LT — 4" Water — Tele Cable — El. 863.38 "W" El. 861.85 "N" — El. 860.97 "E" El. 860.80 "S"

MH 73 — 122.27' LT — El. 860.36 "NW" El. 860.32 "SW"

MH 69 — 136.82' LT — 144' — 100'

MH 68 — 196.76' LT — El. 858.82 "SE" El. 858.78 "N"

Drop MH 67 — 341.96' Sixth St. — El. 857.01 "S" El. 856.80 "W" El. 860.11 "N"

MH 66 — 178.73' LT — El. 862.92 "S"

Bore & Jack, 171.5' of 20"Dia & 171.5'-8" Carrier Pipe @ 0.56% (0.394" Min. Wall Thickness) Fill w/ Grout & Seal Ends But Allow for Drainage

168.5'-8" @ 1.5 % — See Sht. #22 — 33.7'-8" @ 0.56 % (Exclusive of Bore & Jack) — 171.5'-8" (Total) — 149.5'-8" @ 1.20 % — 400'-8" @ 0.70 %

1 2 3 4 5 6 7 8 9 10 11 12

870 860 850

REVISED 3-19-84
MOVED APP FOR STATE HWY R/W

RECORD DRAWING

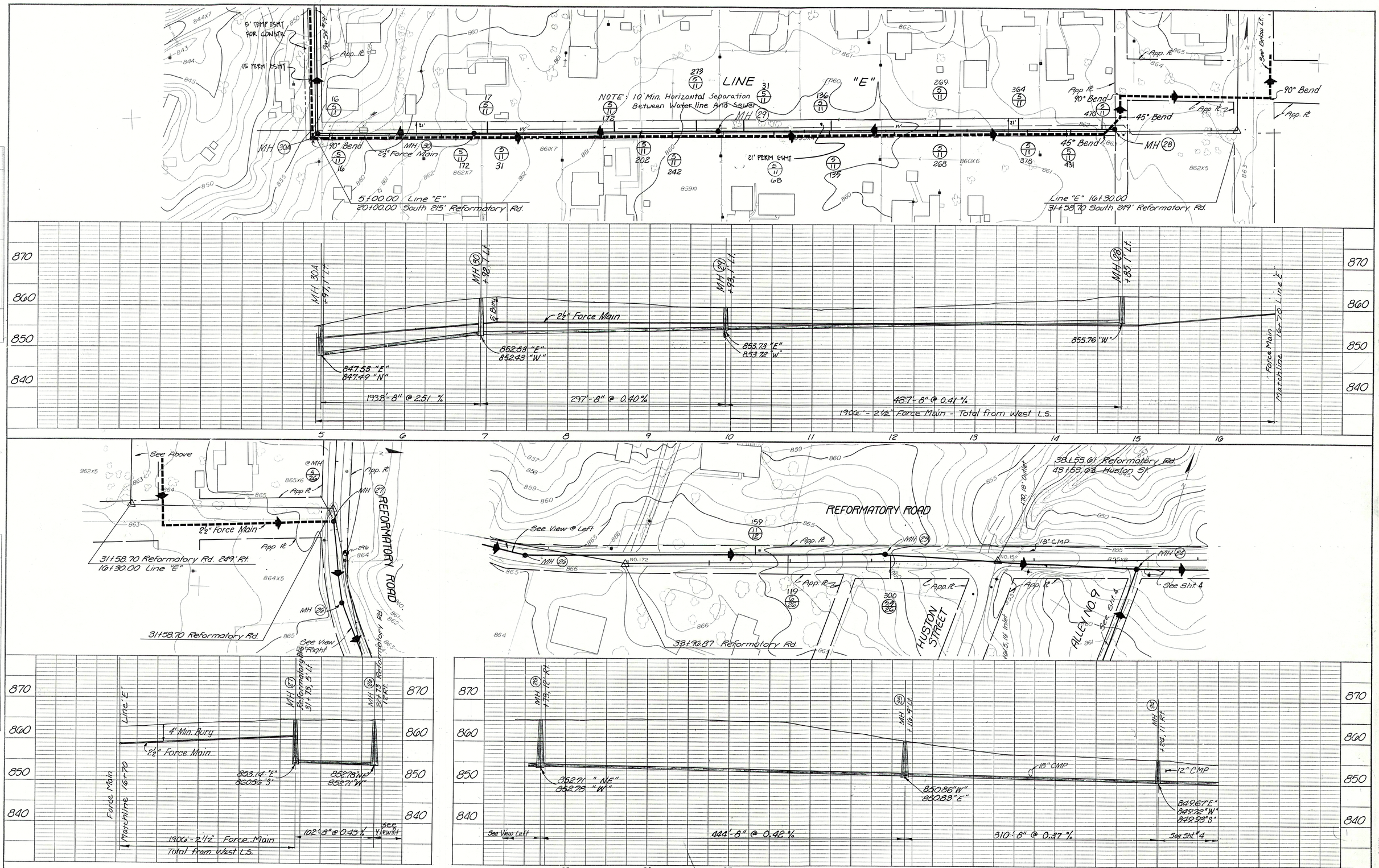
ERIC RESKE — REGISTERED — No. 13442 — 3-19-84 — STATE OF INDIANA — PROFESSIONAL ENGINEER

EAST ST. LINE "H"

FALL CREEK R.W.D. PLAN & PROFILE — SHEET 17

HORIZ. 1"=50' VERT. 1"=10'

BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA



PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
NOTE BOOK
NO.
BY
DATE

PROFILE
SURVEYED
PLOTTED
GRADES CHECKED
B. M. NOTED
STRUCTURE NOTATNS CHK'D
NOTE BOOK
NO.
BY
DATE

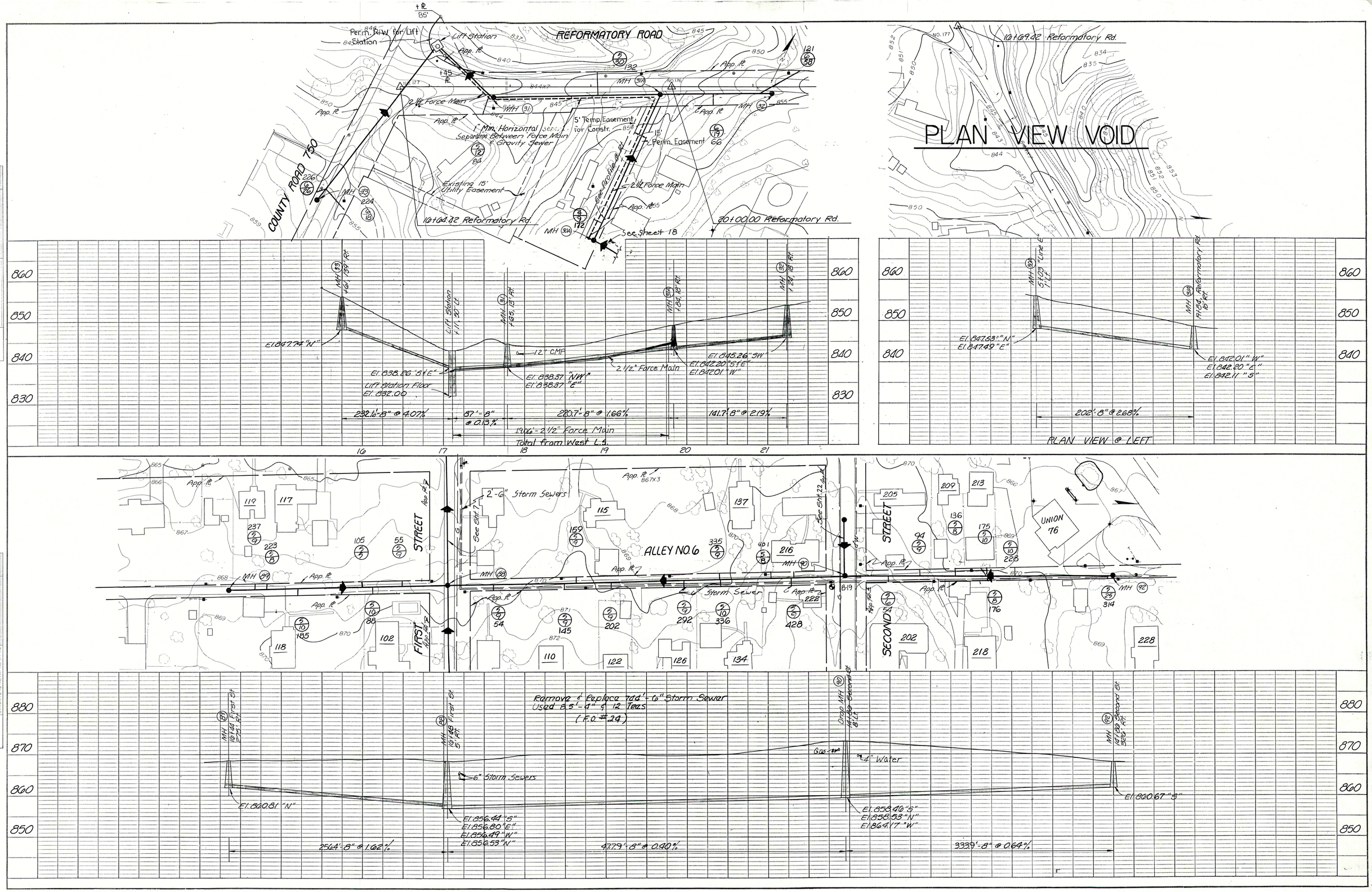
RECORD DRAWING

ERIC RESKE
REGISTERED
No. 13442
3-30-83
STATE OF INDIANA
PROFESSIONAL ENGINEER

REFORMATORY RD. LINE "E"		
FALL CREEK R.W.D. PLAN & PROFILE		SHEET
HORIZ. 1"=50'	BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA	18
VERT. 1"=10'		

PHOTOGRAMMETRIC COMPILATION BY ACCU-AIR SURVEYS, INC. SEYMOUR, INDIANA

I-11



PLAN

PROFILE

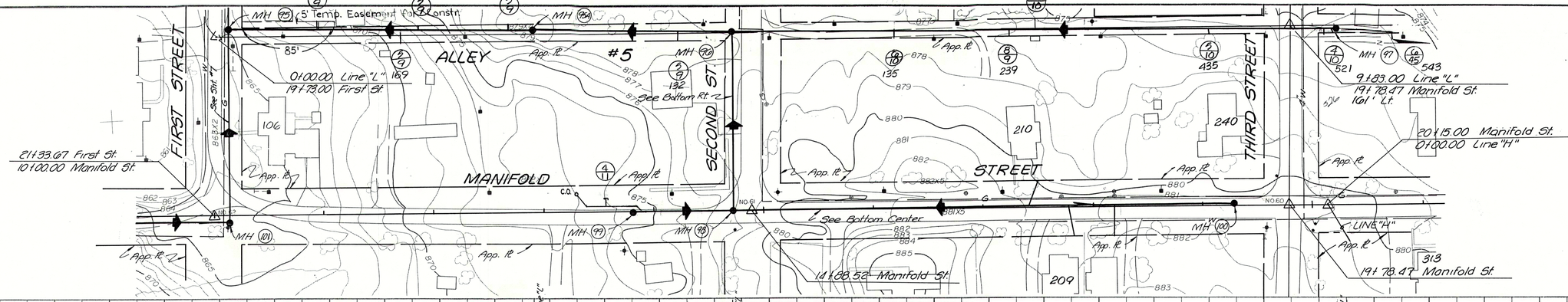
RECORD DRAWING

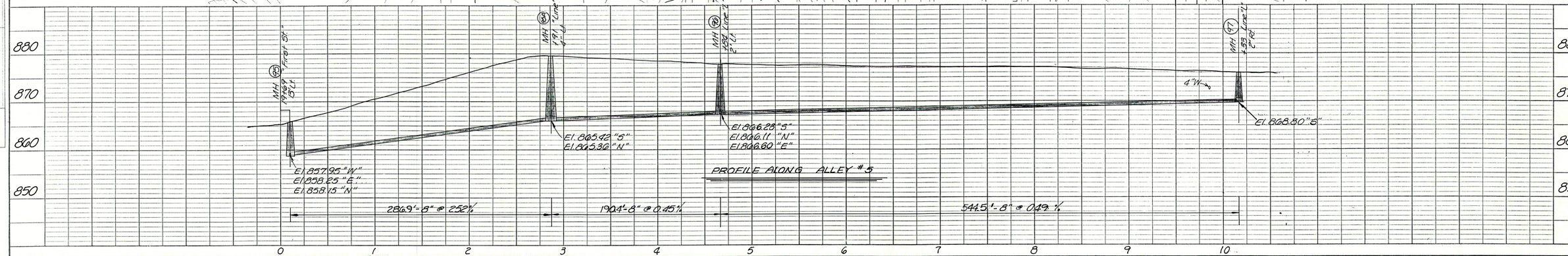
ERIC RESKE REGISTERED No. 13442 STATE OF INDIANA PROFESSIONAL ENGINEER

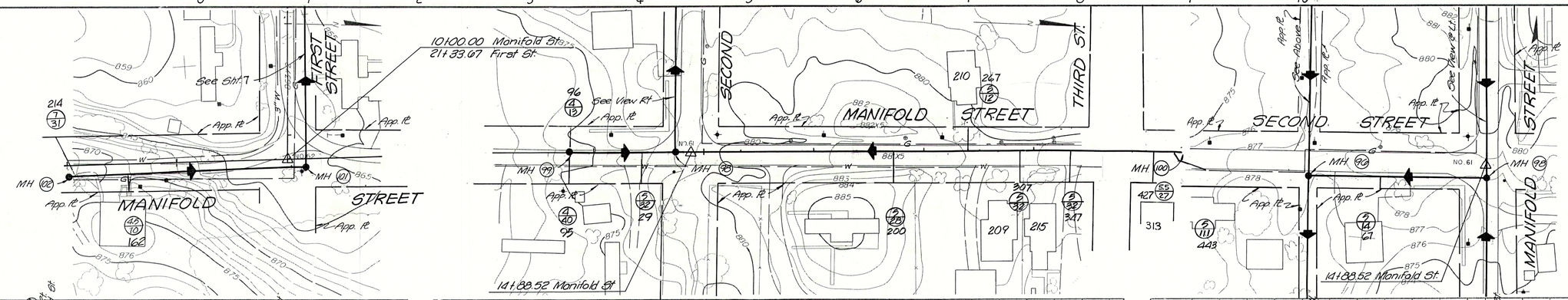
REFORMATORY RD.	ALLEY #6	
FALL CREEK R.W.D. PLAN & PROFILE		SHEET
HORIZ. 1"=50'	BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA	19
VERT. 1"=10'		

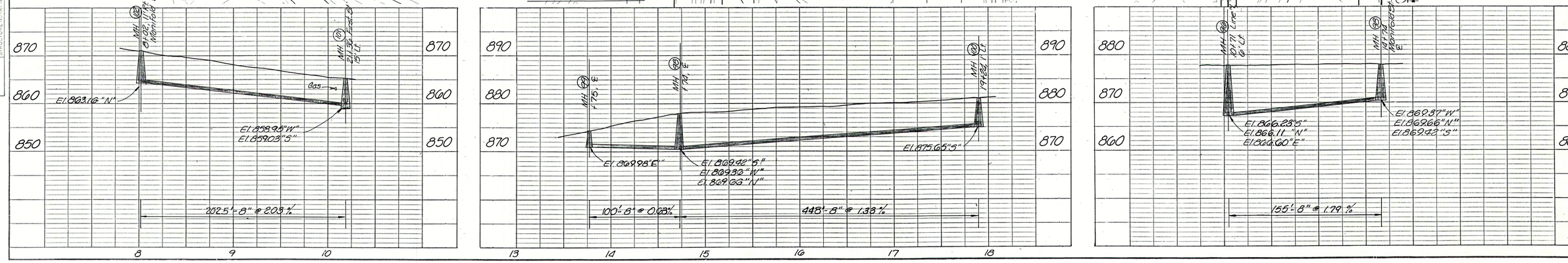
I-21

PLAN — SURVEYED, PLOTTED, ALIGNMENTS CHECKED, ELEVATIONS CHECKED, NOTE BOOK, NO. — BY, DATE









PROFILE — SURVEYED, PLOTTED, ALIGNMENTS CHECKED, ELEVATIONS CHECKED, NOTE BOOK, NO. — BY, DATE, STRUCTURE NOTATIONS CHKD.

RECORD DRAWING

ERIC RESKE — REGISTERED — No. 13142 — STATE OF INDIANA — PROFESSIONAL ENGINEER

MANIFOLD ST. SECOND ST.

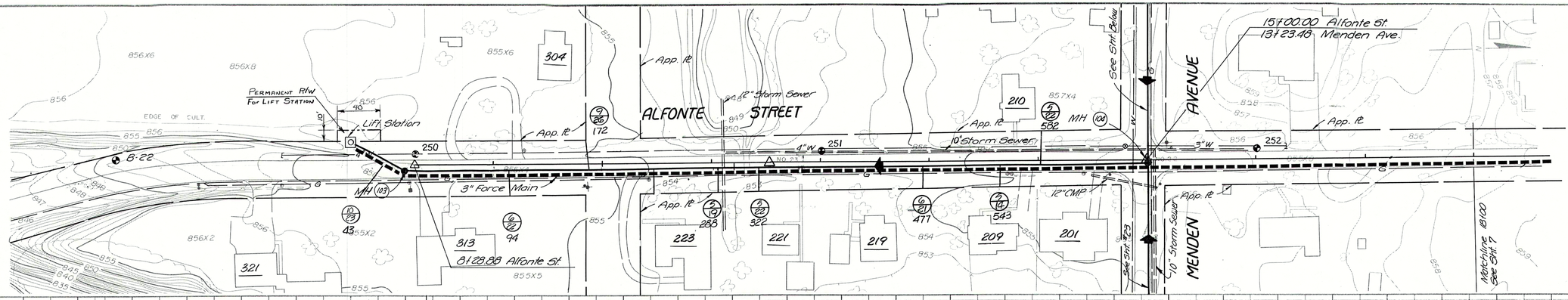
FALL CREEK R.W.D. PLAN & PROFILE — SHEET 20

HORIZ. 1"=50' VERT. 1"=10'

BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA

F-13

PLAN — SURVEYED, PLOTTED, GRADES CHECKED, ALIGNMENT CHECKED, PT. OF MAT'L CHECKED, STRUCTURE NOTATIONS CHK'D. — NOTE BOOK — NO. — BY — DATE



PROFILE — SURVEYED, PLOTTED, GRADES CHECKED, ALIGNMENT CHECKED, PT. OF MAT'L CHECKED, STRUCTURE NOTATIONS CHK'D. — NOTE BOOK — NO. — BY — DATE

RECORD DRAWING

ERIC RESKE — REGISTERED — No. 13442 — 3-30-93 — STATE OF INDIANA — PROFESSIONAL ENGINEER

ALFONTE ST. MENDEN AVE. HUSTON ST.

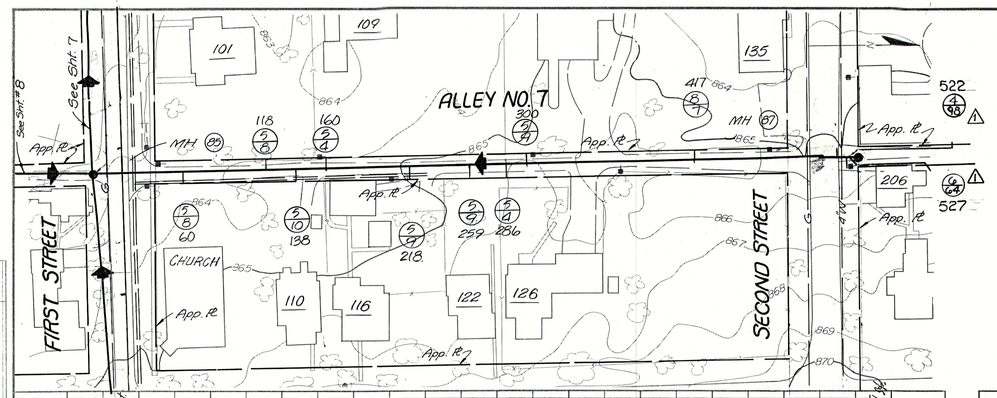
FALL CREEK R.W.D. PLAN & PROFILE — SHEET 21

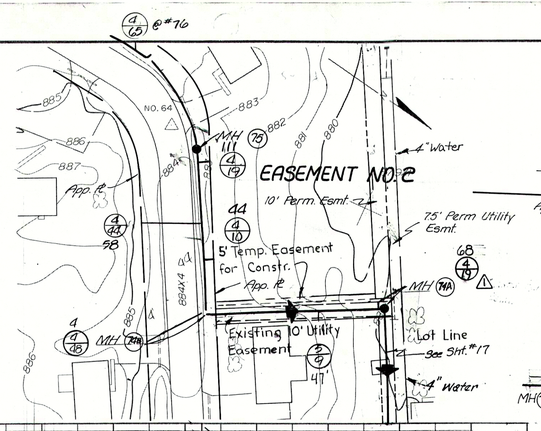
HORIZ. 1"=50' — VERT. 1"=10'

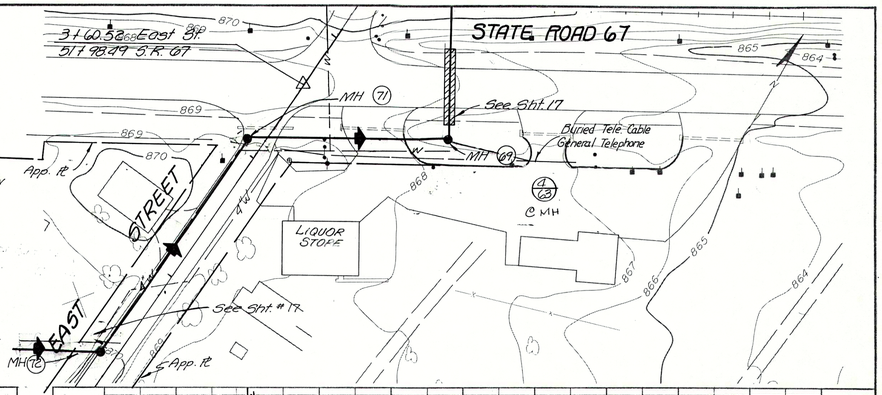
BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA

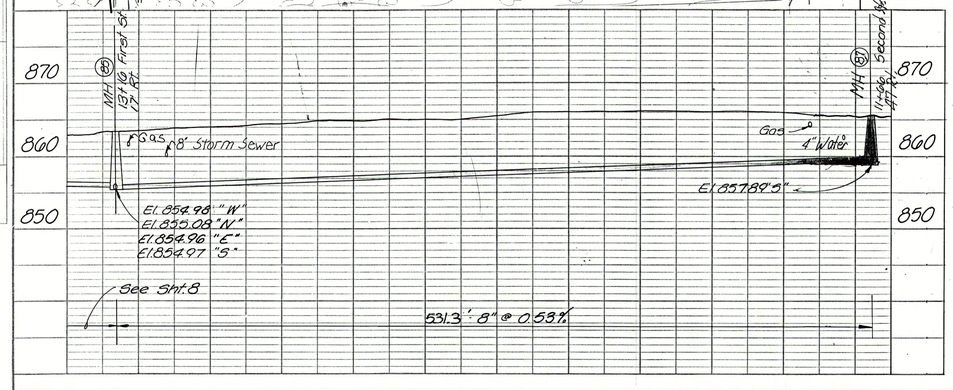
I-14

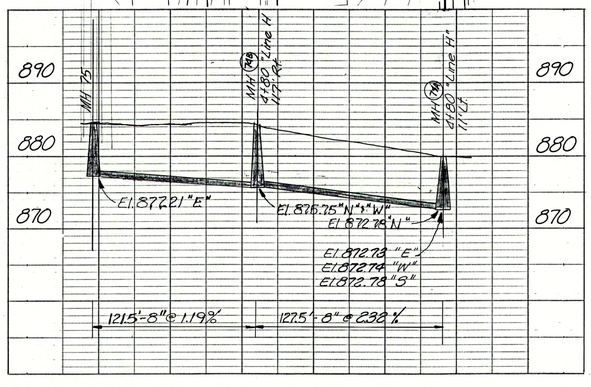
PLAN — SURVEYED, PLOTTED, NOTE BOOK, NO., GRADES CHECKED, ALIGNMENT CHECKED, R/T. OF WAY CHECKED, STRUCTURE LOCATIONS CHECKED, BY, DATE

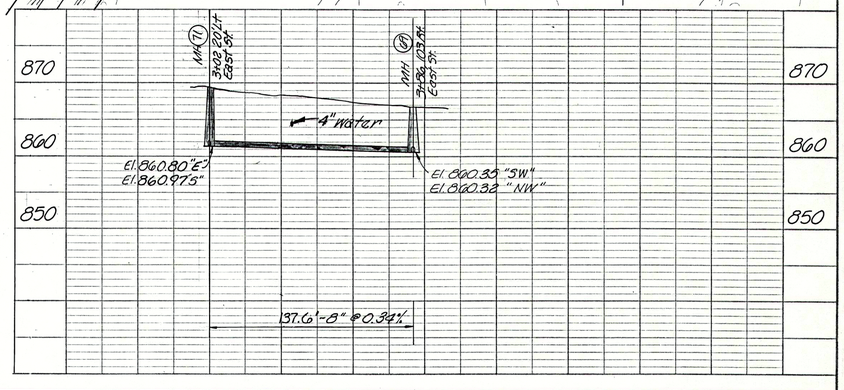




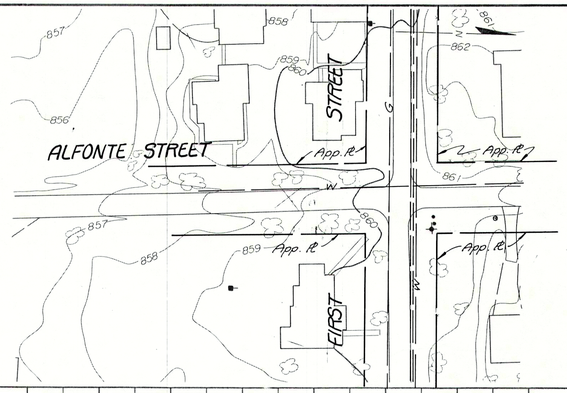


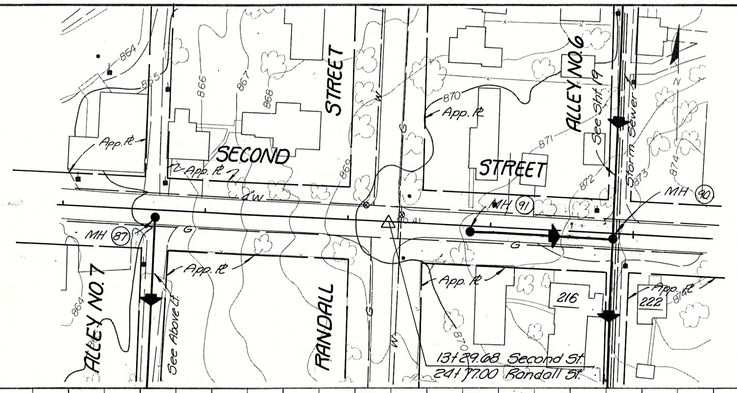


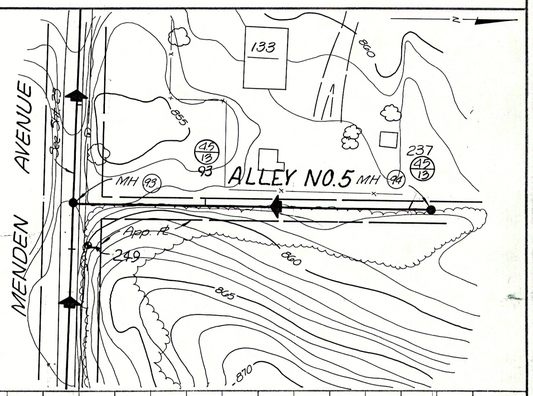




PROFILE — SURVEYED, PLOTTED, NOTE BOOK, NO., GRADES CHECKED, ALIGNMENT CHECKED, R/T. OF WAY CHECKED, STRUCTURE LOCATIONS CHECKED, BY, DATE







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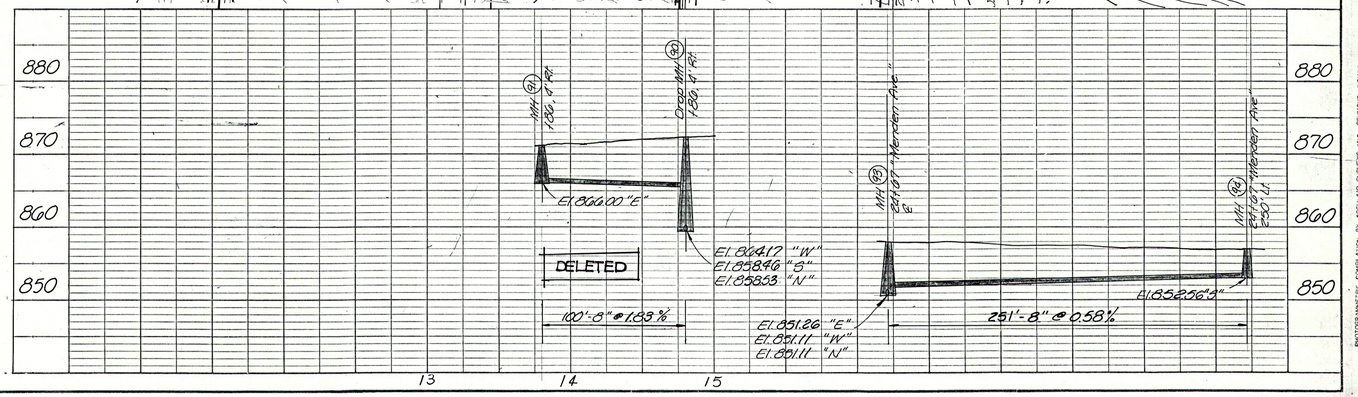


13 14 15

RECORD DRAWING

ERIC RESKE REGISTERED No. 13442 STATE OF INDIANA PROFESSIONAL ENGINEER

ALLEY #7, EAST ST. & S.R. 67
ALFONTE ST. SECOND ST.

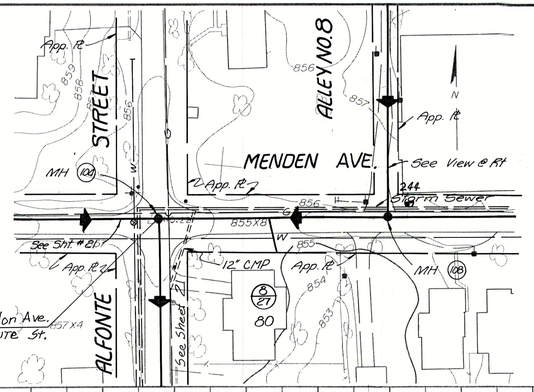
FALL CREEK R.W.D. PLAN & PROFILE — SHEET 22

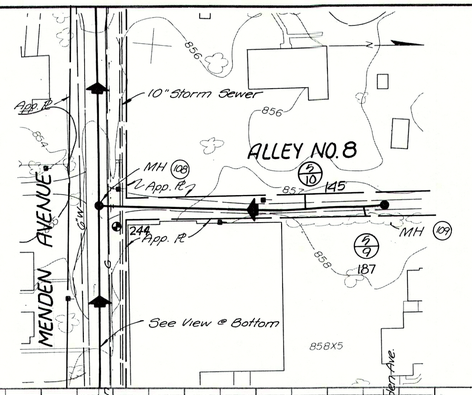
HORIZ. 1"=50' VERT. 1"=10'

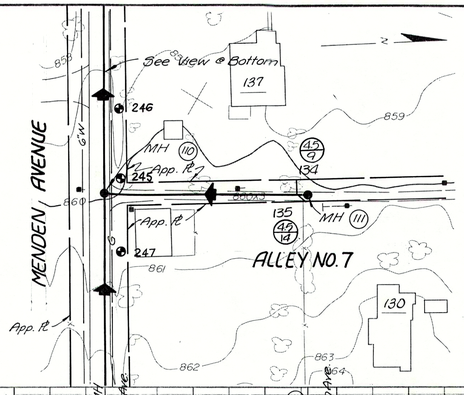
BEAM, LONGEST & NEFF, INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA

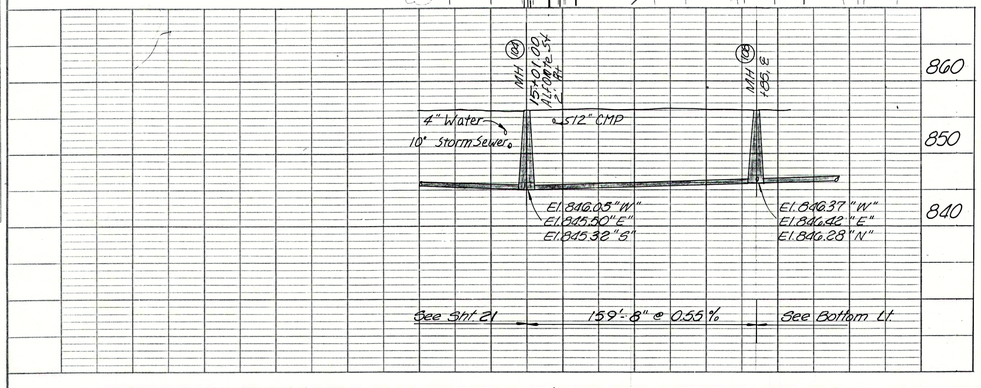
PHOTOGRAMMETRIC COMPILATION BY ACCU-AIR SURVEYS, INC. SEYMOUR, INDIANA

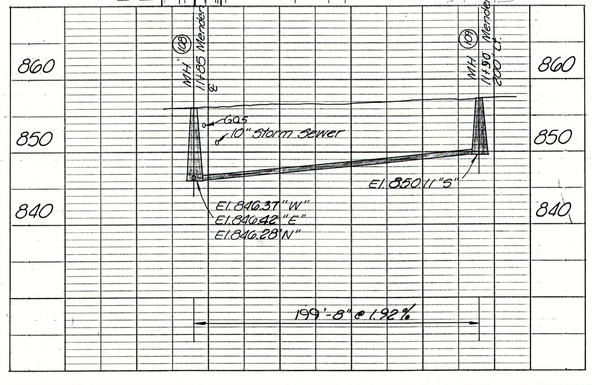
PLAN — SURVEYED, PLOTTED, GRADES CHECKED, ALIGNMENT CHECKED, RT. OF WAY CHECKED, STRUCTURE NOTATIONS CHKD. — NOTE BOOK — NO. — BY — DATE

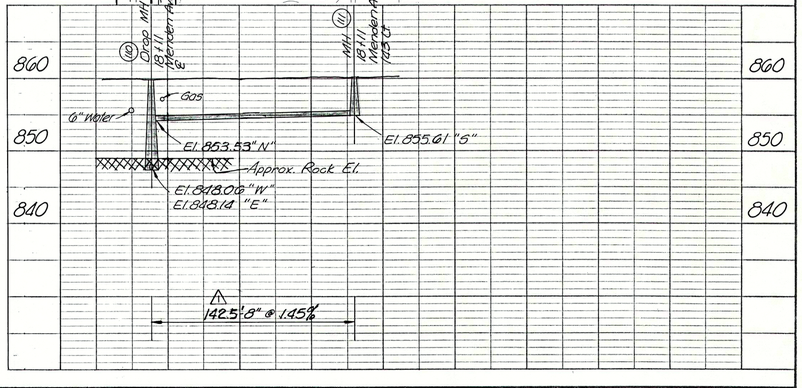




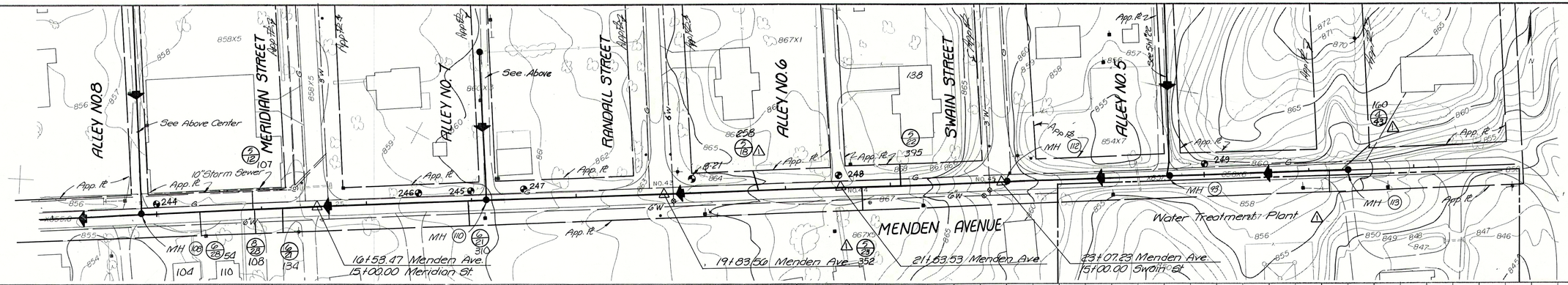


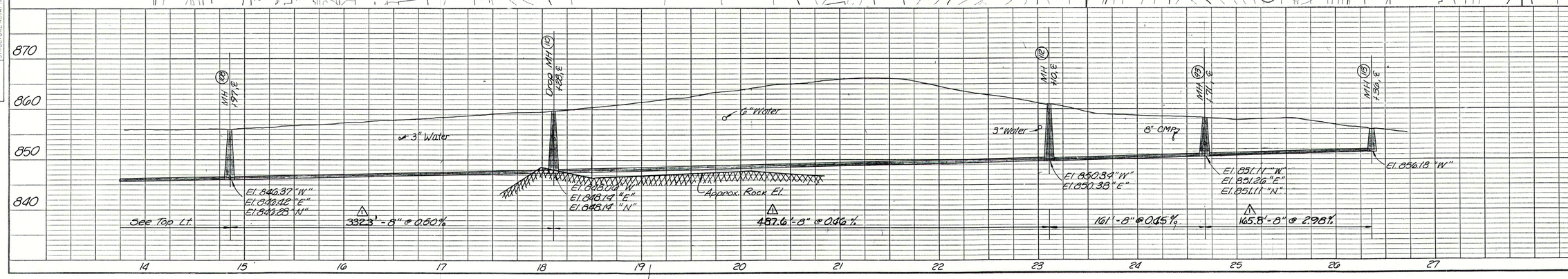






PROFILE — SURVEYED, PLOTTED, GRADES CHECKED, ALIGNMENT CHECKED, RT. OF WAY CHECKED, STRUCTURE NOTATIONS CHKD. — NOTE BOOK — NO. — BY — DATE





RECORD DRAWING

△ Revised 4-17-86

ERIC RESKE — REGISTERED — No. 13442 — STATE OF INDIANA — PROFESSIONAL ENGINEER

ALLEY #7 & 8 MENDEN AVE.

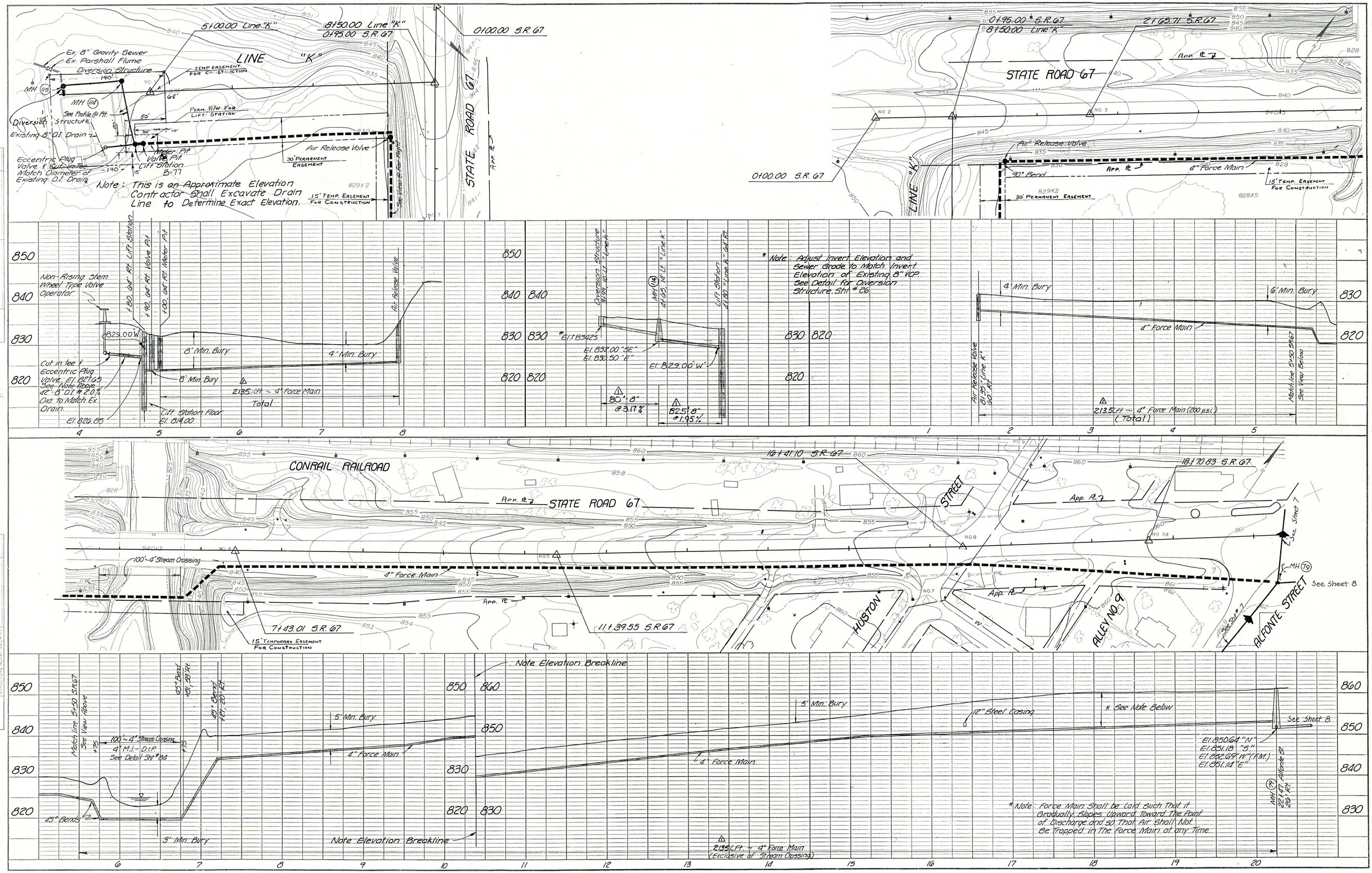
FALL CREEK R.W.D. PLAN & PROFILE — SHEET 23

HORIZ. 1"=50' — VERT. 1"=10'

BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA

PHOTOGRAMMETRIC COMPILATION BY ACCU-MAP SURVEYS, INC. SEYMOUR, INDIANA

I-15



PLAN — SURVEYED, PLOTTED, ALIGNMENT CHECKED, RT. OF WAY CHECKED, NOTE BOOK, NO.

PROFILE — SURVEYED, PLOTTED, GRADES CHECKED, B. M's NOTED, STRUCTURE NOTATIONS CHECKED, NOTE BOOK, NO.

△ TOTAL ALL 4" F.M. THIS SEC. 2135'

RECORD DRAWING

△ REVISED 4-17-86

ERIC RESKE — REGISTERED — No. 13442 — STATE OF INDIANA — PROFESSIONAL ENGINEER

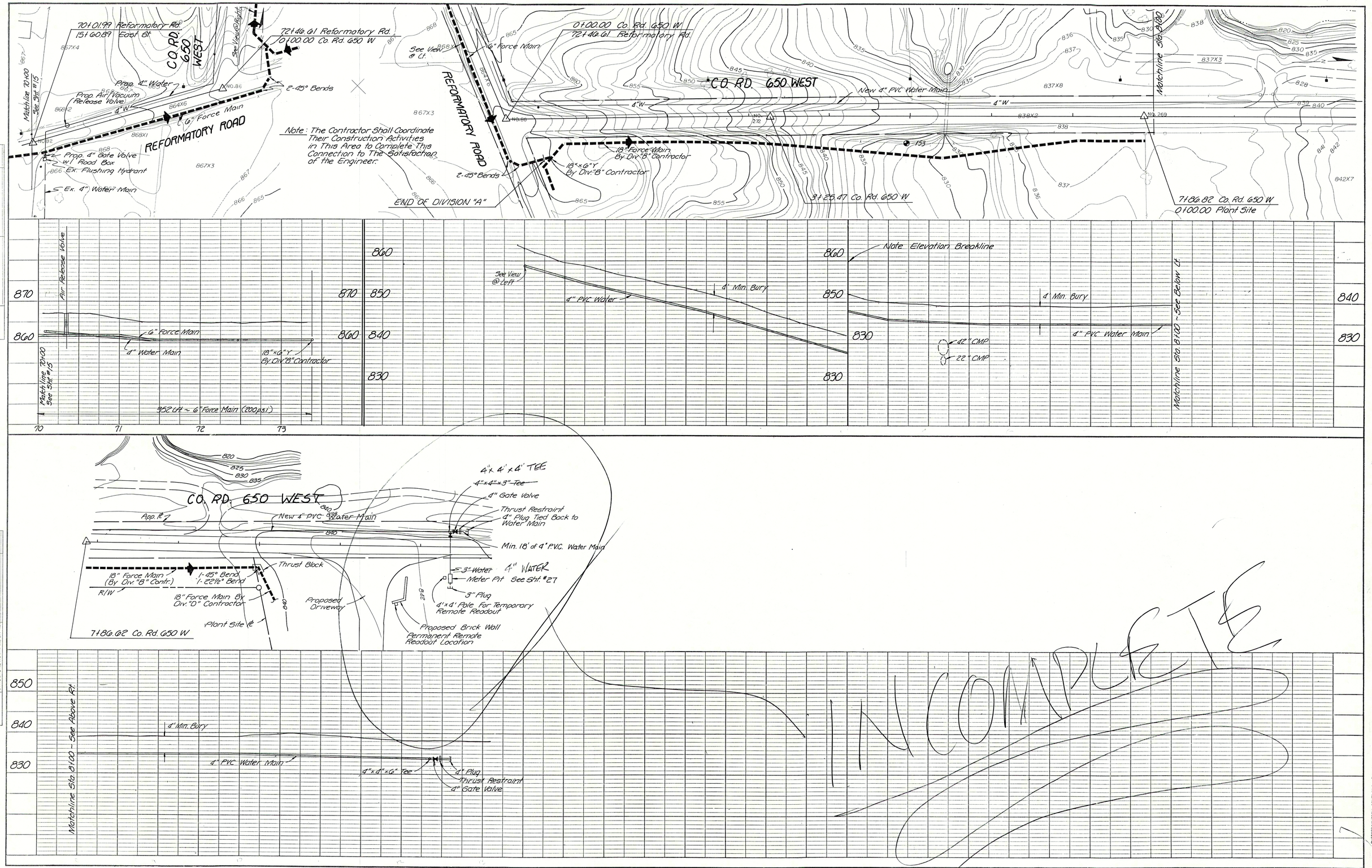
STATE ROAD 67 & LINE "K"

FALL CREEK R.W.D. PLAN & PROFILE

HORIZ. 1" = 50'
VERT. 1" = 10'

BEAM, LONGEST & NEFF, INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA

SHEET 24



PLAN
NOTE BOOK NO.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
BY
DATE

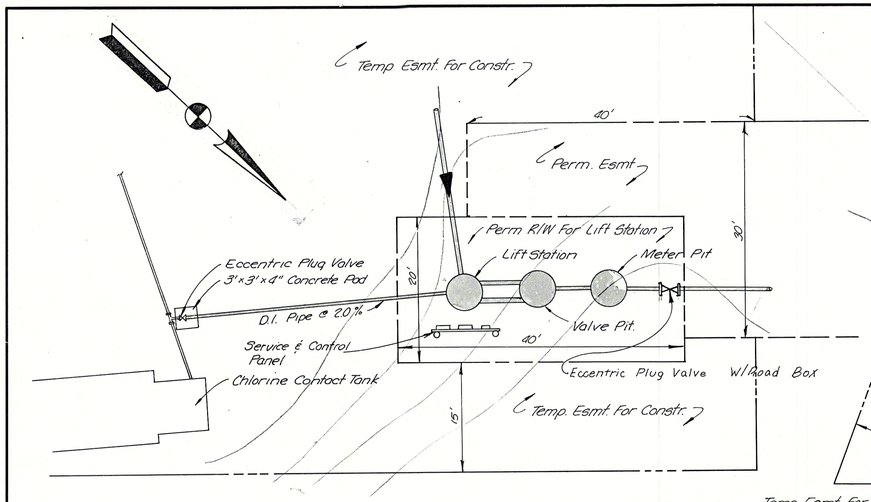
PROFILE
NOTE BOOK NO.
SURVEYED
PLOTTED
GRADES CHECKED
B.M.'s NOTED
STRUCTURE NOTATIONS CH'KD
BY
DATE

RECORD DRAWING

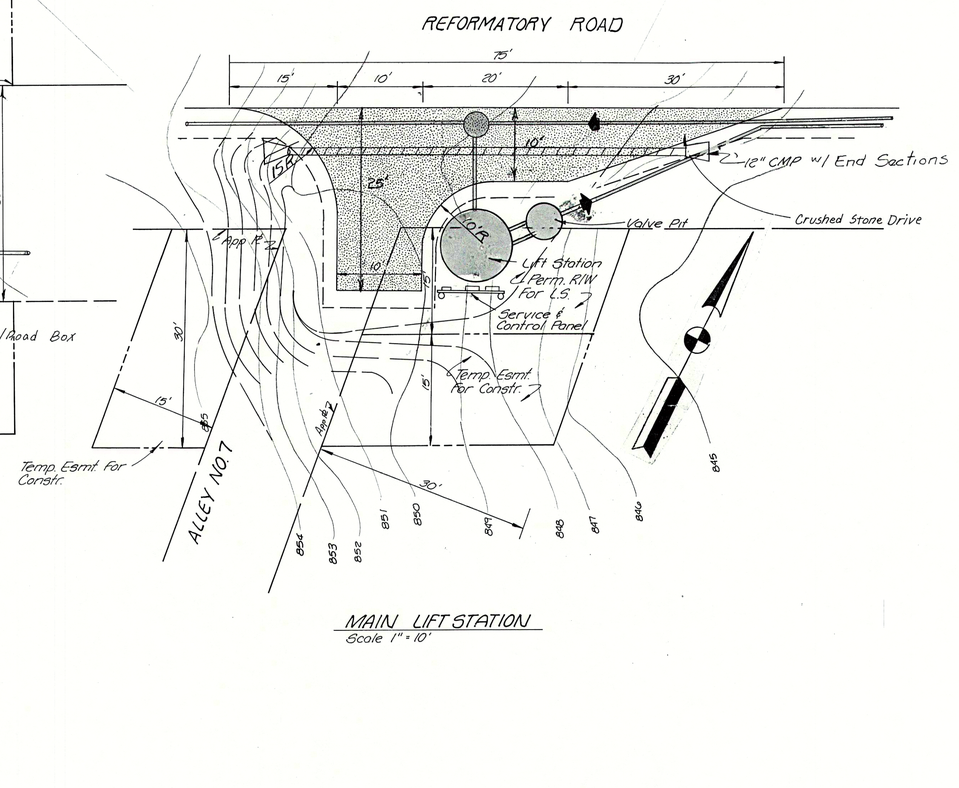
ERIC RESKE
REGISTERED
No. 13442
5-30-83
STATE OF INDIANA
PROFESSIONAL ENGINEER

REFORMATORY RD./Co. Rd 650 W		
FALL CREEK R.W.D. PLAN & PROFILE		SHEET
HORIZ. 1"=50'	BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA	25
VERT. 1"=10'		

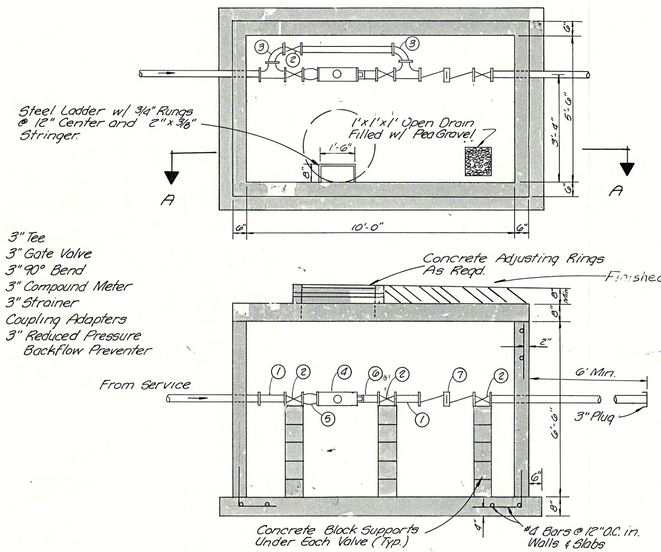
PHOTOGRAMMETRIC COMPILATION BY ACCU-AIR SURVEYS, INC. SEYMOUR, INDIANA



PENTECOSTAL CAMP LIFT STATION
Scale 1" = 10'



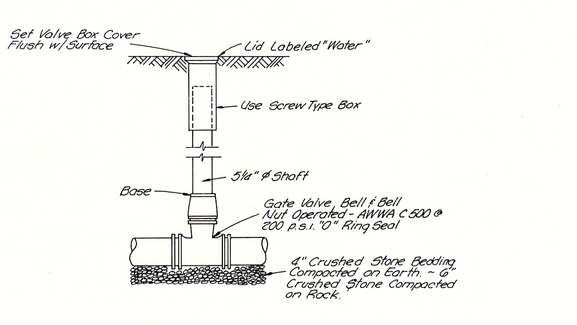
MAIN LIFT STATION
Scale 1" = 10'



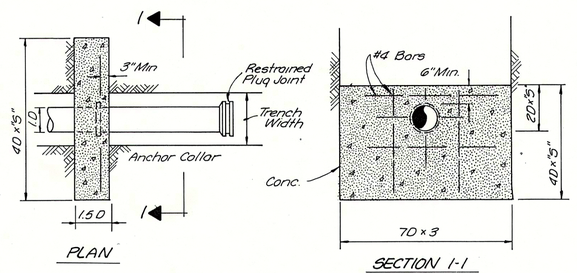
① 3" Tee
② 3" Gate Valve
③ 3" 90° Bend
④ 3" Compound Meter
⑤ 3" Strainer
⑥ Coupling Adapters
⑦ 3" Reduced Pressure Backflow Preventer

SECTION A-A

WATER METER PIT
Scale 3/8" = 1'-0"



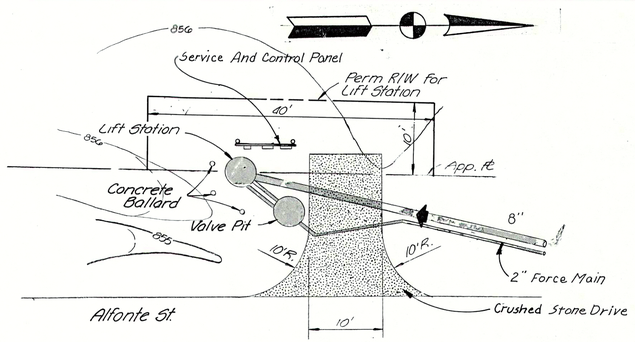
GATE VALVE & VALVE BOX
No Scale



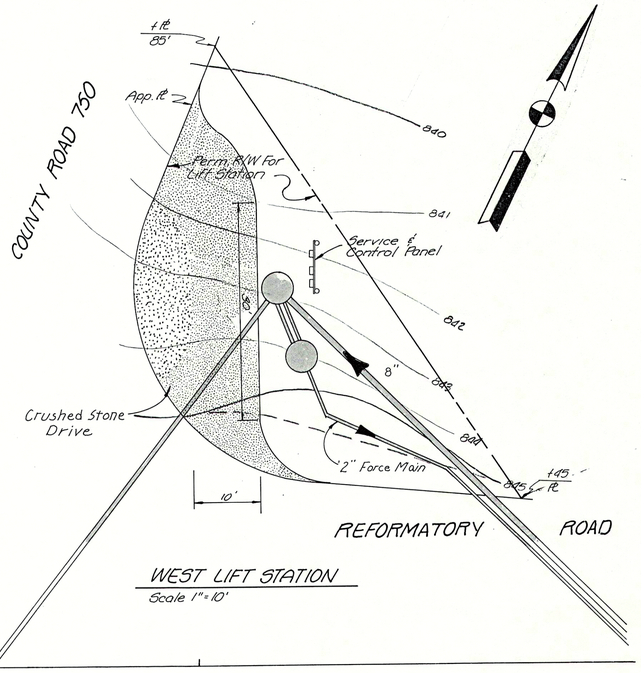
"S" FACTORS

Soft Clay	1.
Stiff Clay	.58
Hard Clay	.41
Loose Sand	.58
Medium, Compacted Sand	.50
Loose Gravel, Sand Mix	.41

ANCHOR BLOCK DETAILS
No Scale



SOUTH LIFT STATION
Scale 1" = 10'



WEST LIFT STATION
Scale 1" = 10'

RECORD DRAWING

ERIC RESKE REGISTERED No. 13442 STATE OF INDIANA PROFESSIONAL ENGINEER

INGALLS LIFT STATIONS / DETAILS

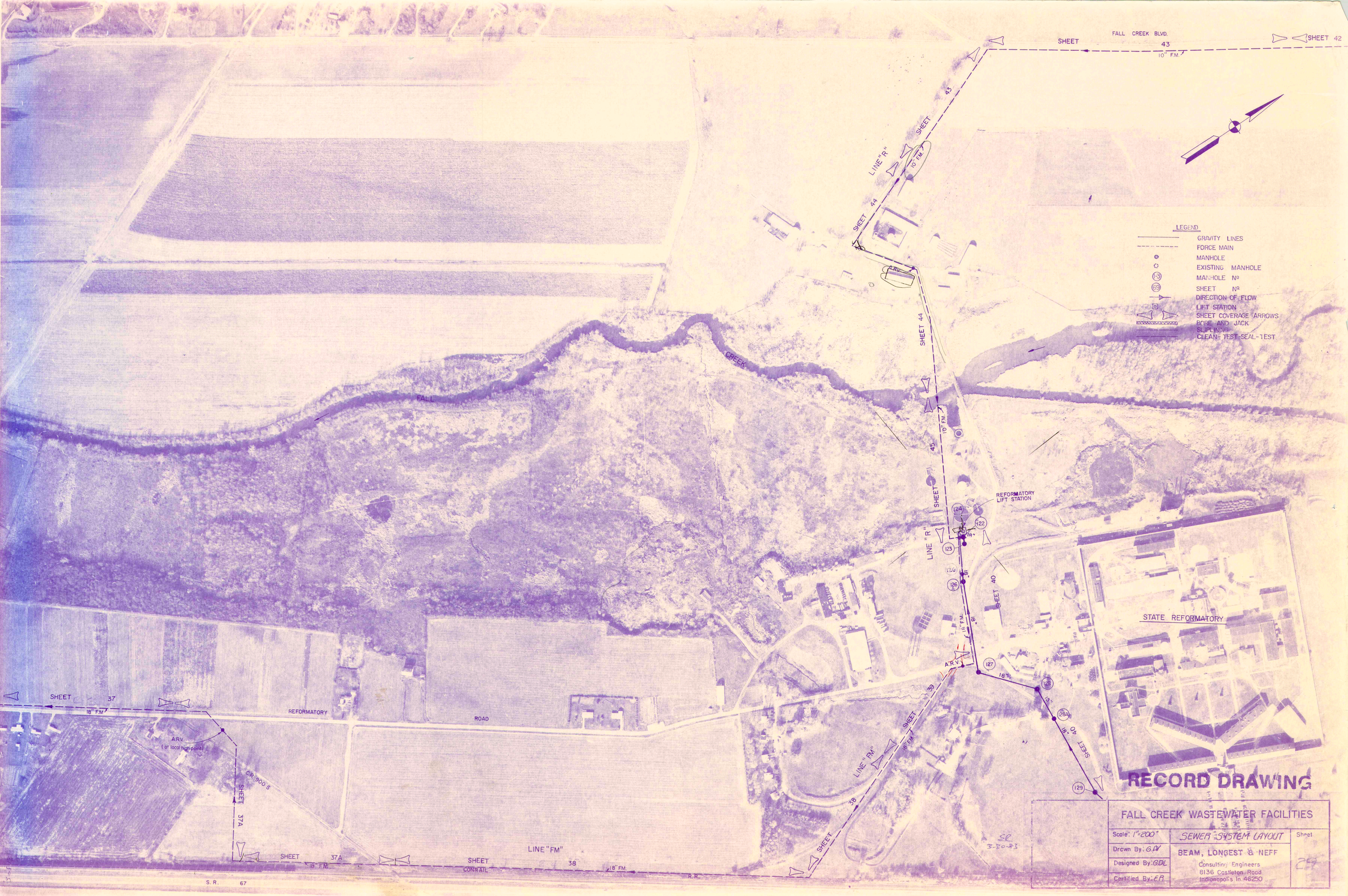
Scale: As Noted	FALL CREEK REGIONAL WASTEWATER DIST.	Sheet 27
Drawn By: J.B.	BEAM, LONGEST & NEFF	
Designed By: S.E.	Consulting Engineers	
Certified By: E.R.	8136 Castleton Road Indianapolis In. 46250	

MAXBAUGH N26508

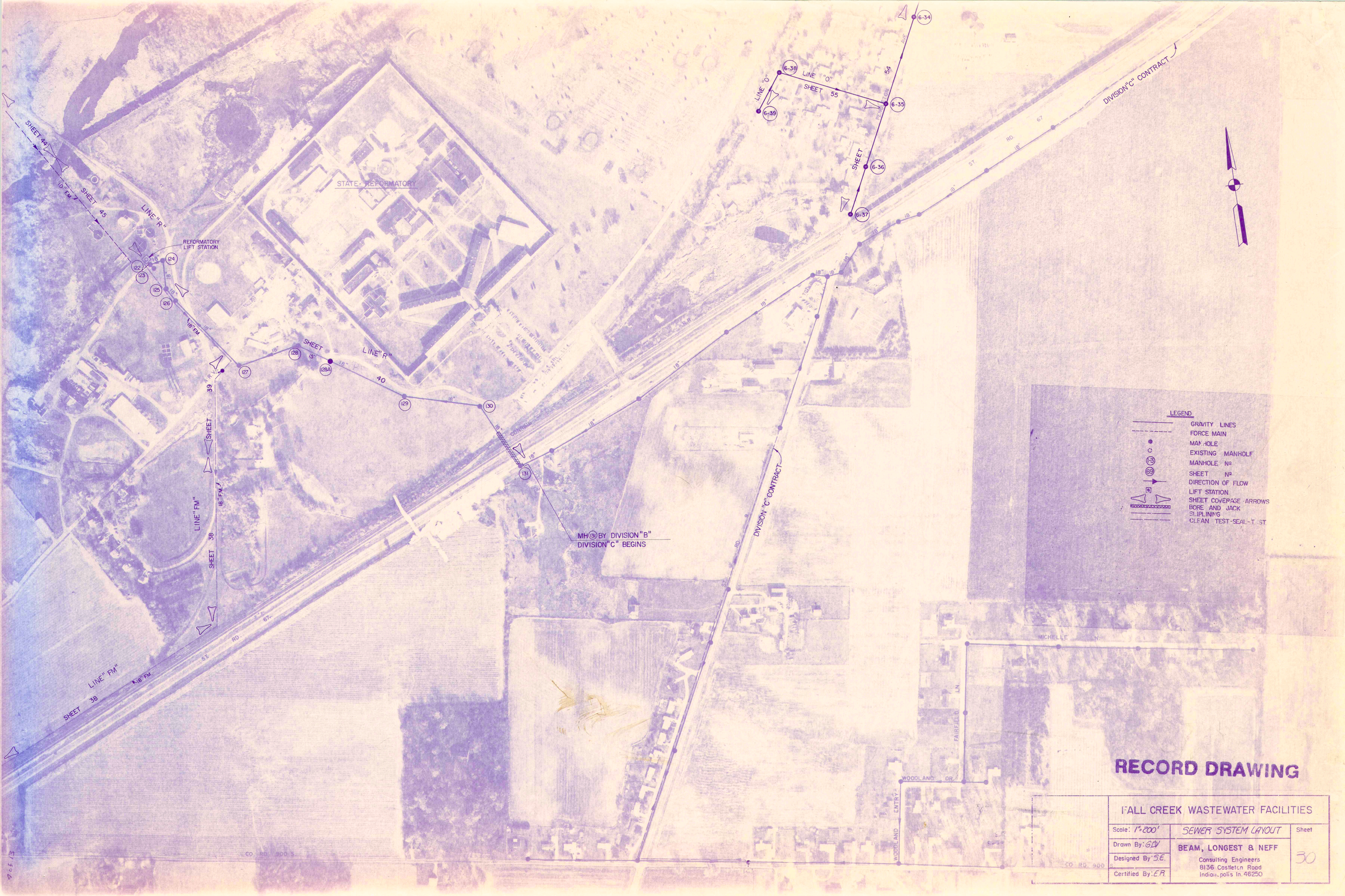


RECORD DRAWING

FALL CREEK WASTEWATER FACILITIES		
Scale: 1"=200'	SEWER SYSTEM LAYOUT	Sheet
Drawn By: G.D.V.	BEAM, LONGEST & NEFF	28
Designed By: J.P.	Consulting Engineers 8136 Castleton Road Indianapolis In. 46250	
Certified By: E.R.		

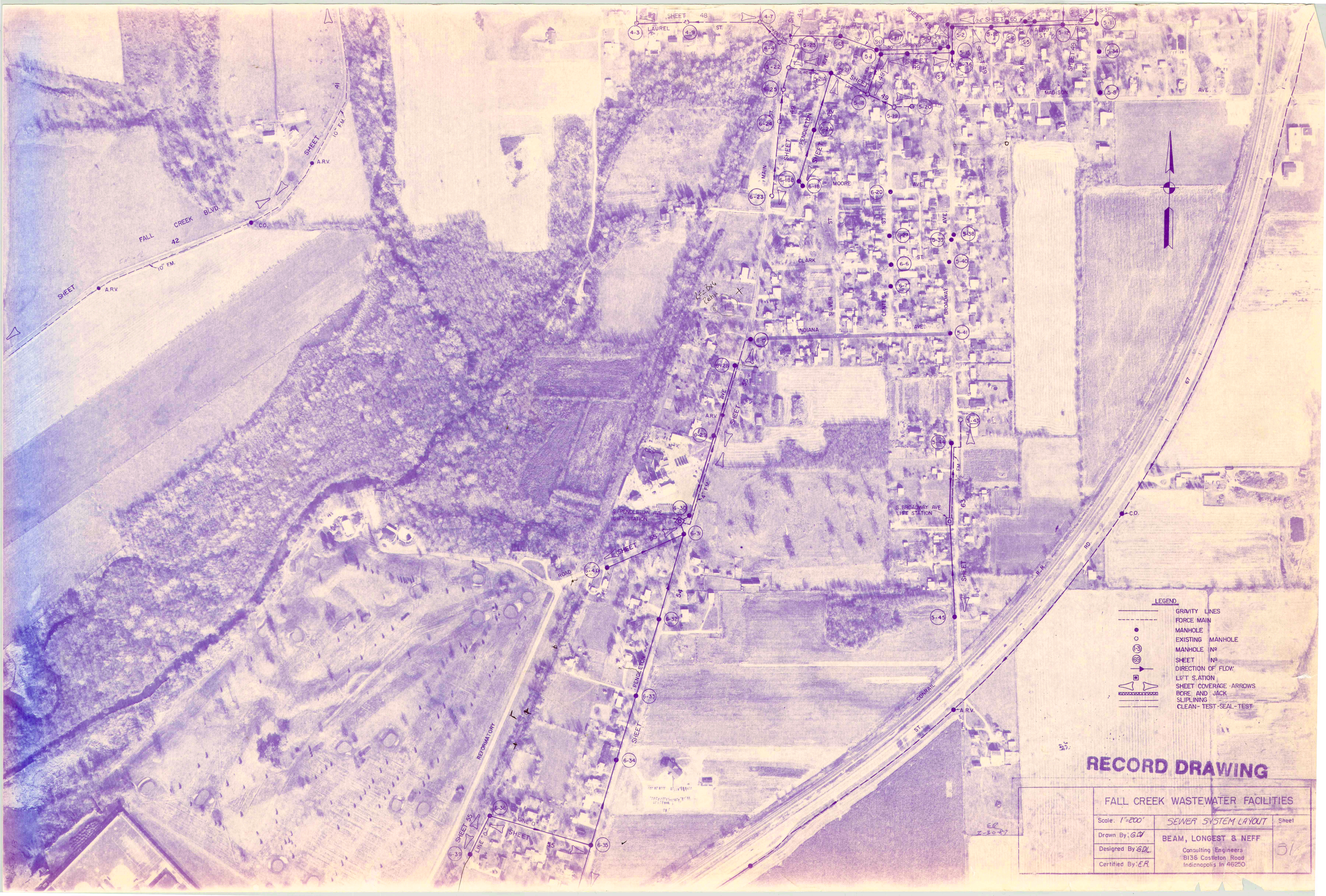


FALL CREEK BLVD.
SHEET 43
SHEET 42
10" F.M.
LINE "R"
SHEET 44
SHEET 43
LEGEND
GRAVITY LINES
FORCE MAIN
MANHOLE
EXISTING MANHOLE
MANHOLE Nº
SHEET Nº
DIRECTION OF FLOW
LIFT STATION
SHEET COVERAGE ARROWS
BORE AND JACK
SLIPLINING
CLEAN-TEST-SEAL-TEST
FALL
CREEK
REFORMATORY LIFT STATION
STATE REFORMATORY
A.R.V.
SHEET 40
SHEET 39
SHEET 38
SHEET 37
SHEET 37A
18" F.M.
REFORMATORY
ROAD
A.R.V. (at local high point)
C.R. 900 S
LINE "FM"
CONRAIL
R.R.
S.R. 67
RECORD DRAWING
FALL CREEK WASTEWATER FACILITIES
Scale: 1"=200'
Drawn By: G.P.
Designed By: GDL
Certified By: ER
SEWER SYSTEM LAYOUT
BEAM, LONGEST & NEFF
Consulting Engineers
8136 Castleton Road
Indianapolis In. 46250
Sheet
29

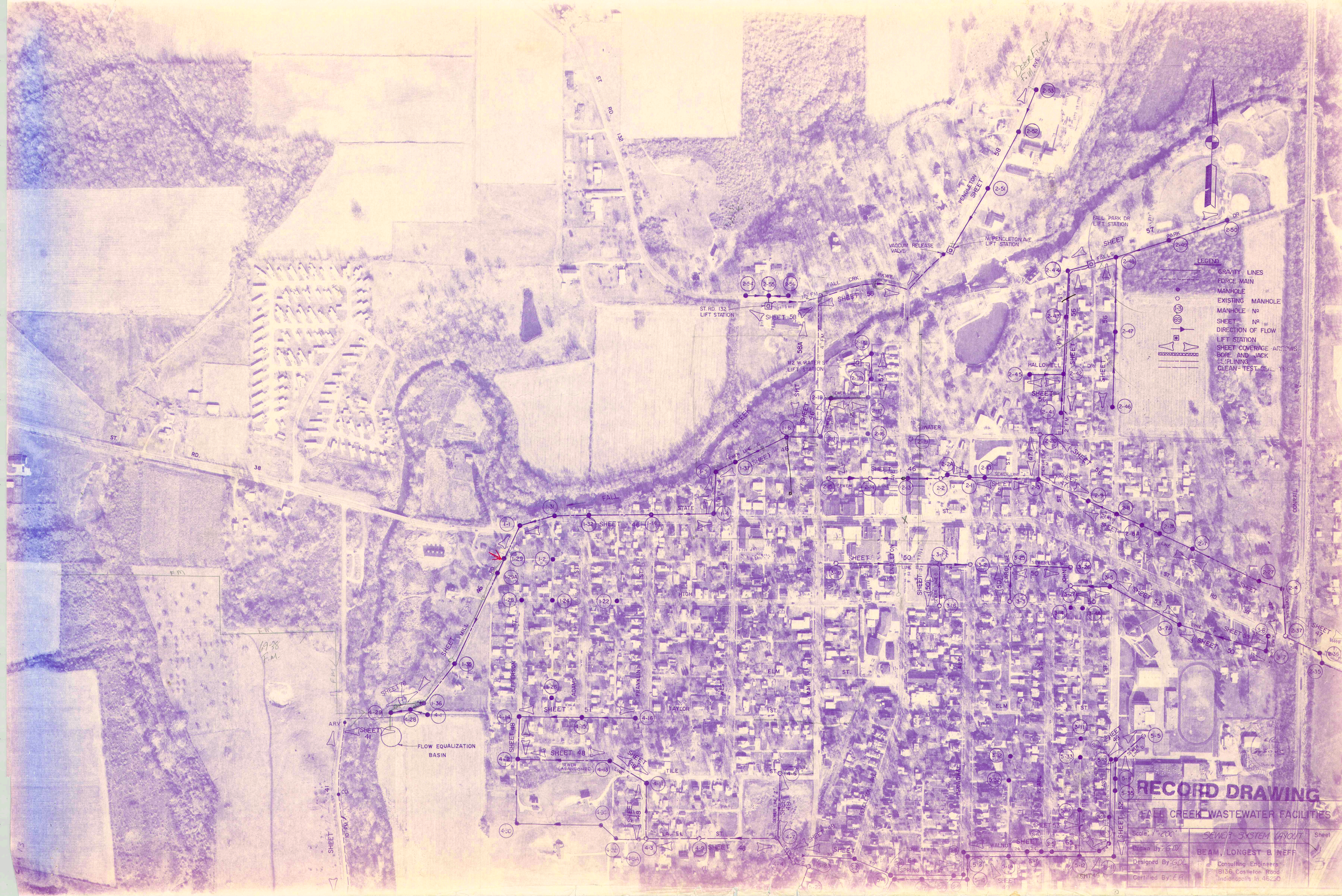


RECORD DRAWING

FALL CREEK WASTEWATER FACILITIES		
Scale: 1"=200'	SEWER SYSTEM LAYOUT	Sheet
Drawn By: GDV	BEAM, LONGEST & NEFF	30
Designed By: S.E.	Consulting Engineers 8136 Castleton Road Indianapolis In. 46250	
Certified By: E.R.		



LEGEND
GRAVITY LINES
FORCE MAIN
MANHOLE
EXISTING MANHOLE
MANHOLE Nº
SHEET Nº
DIRECTION OF FLOW
LIFT STATION
SHEET COVERAGE ARROWS
BORE AND JACK
SLIPLINING
CLEAN-TEST-SEAL-TEST
RECORD DRAWING
FALL CREEK WASTEWATER FACILITIES
Scale: 1"=200'
SEWER SYSTEM LAYOUT
Sheet
Drawn By: G.D.
Designed By: G.D.L.
Certified By: E.R.
BEAM, LONGEST & NEFF
Consulting Engineers
8136 Castleton Road
Indianapolis In 46250
S. PENDLETON AVE. LIFT STATION
S. BROADWAY AVE. LIFT STATION
FALL CREEK BLVD.
REFORMATORY ROAD
CONRAIL
R.R.
MAIN ST.
PENDLETON AVE.
MOORE AVE.
CLARK ST.
INDIANA AVE.
SILVER ST.
CENTER ST.
BROADWAY AVE.
LAUREL ST.
SPRING ST.
WALNUT ST.
MADISON AVE.
A.R.V.
C.O.


ST. RD. 132
ST. RD. 38
FALL CRK.
FALL CREEK
CREEK
PKWY.
ST. RD. 132 LIFT STATION
SHEET 58
4" F.M.
VACUUM RELEASE VALVE
N. PENDLETON AVE LIFT STATION
PENDLETON
SHEET 51
58
Pendleton Ave F.M.
FALL PARK DR LIFT STATION
PARK DR
SHEET 57
FALLS
SHEET 56
56
HALLOWELL
SHEET 55
2" F.M.
112 W. WATER ST. LIFT STATION
58A
SHEET 46
SEWER LINE "A"
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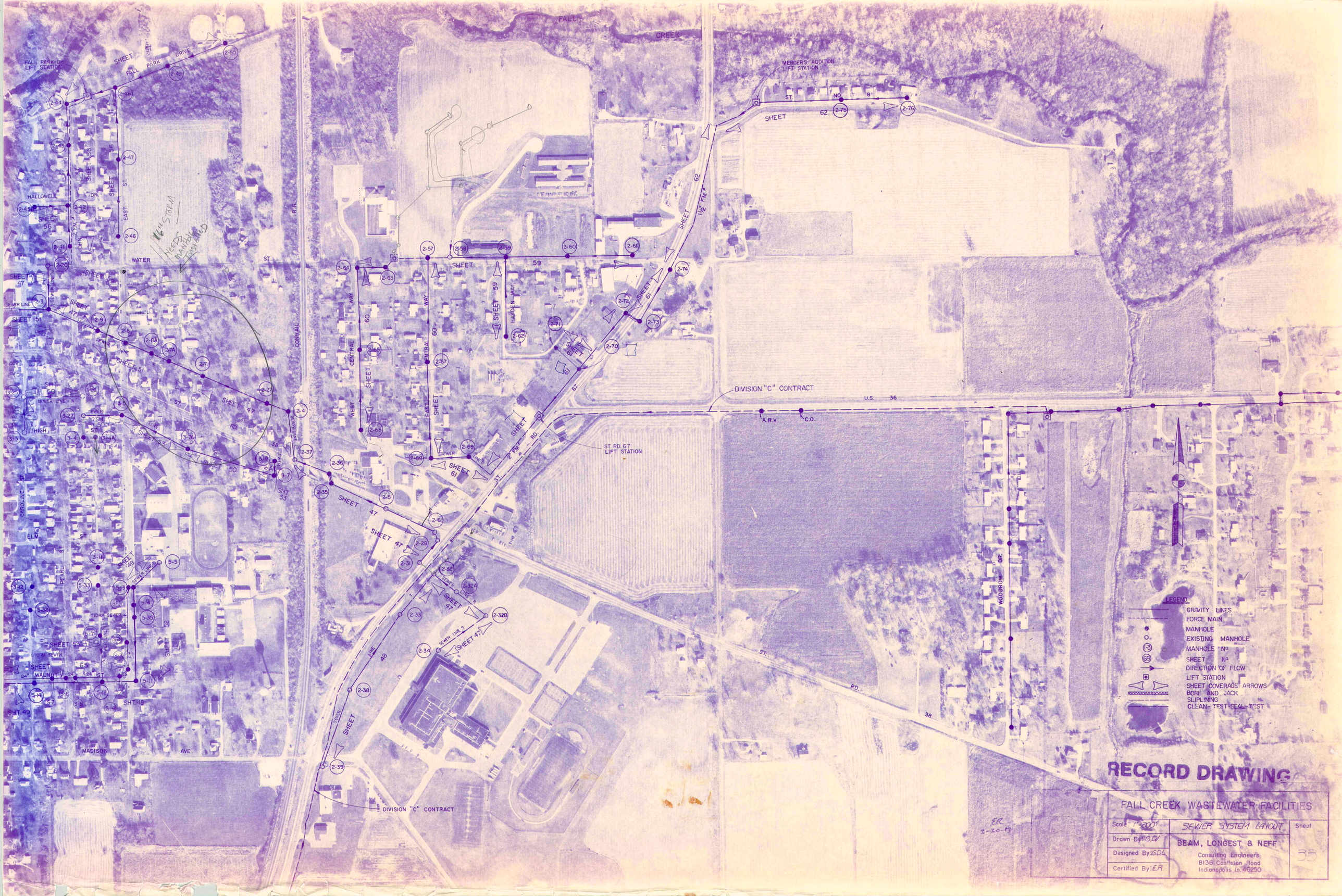
SEWER LINE "QQQQQQQQQQQQQQQQQQQQQQ"
SEWER LINE "RRRRRRRRRRRRRRRRRRRRRR"
SEWER LINE "SSSSSSSSSSSSSSSSSSSSSS"
SEWER LINE "TTTTTTTTTTTTTTTTTTTTTT"
SEWER LINE "UUUUUUUUUUUUUUUUUUUUUU"
SEWER LINE "VVVVVVVVVVVVVVVVVVVVVV"
SEWER LINE "WWWWWWWWWWWWWWWWWWWWWW"
SEWER LINE "XXXXXXXXXXXXXXXXXXXXXX"
SEWER LINE "YYYYYYYYYYYYYYYYYYYYYY"
SEWER LINE "Z


FALL CREEK
FALL PARK DR LIFT STATION
MERCERS ADDITION LIFT STATION
DIVISION "C" CONTRACT
ST. RD. 67 LIFT STATION
U.S. 36
A.R.V.
C.O.
WATER ST
HALLOWELL DR
EAST ST
CONRAIL R.R.
WEST CENTRAL WAY
EAST CENTRAL WAY
HAYDEN WAY
WOODROW DR
MADISON AVE
ELM ST
PEARL ST
CAROLINE ST
WALNUT ST
SEWER LINE
STORM SEWER
SHEET 47
SHEET 48
SHEET 49
SHEET 50
SHEET 51
SHEET 52
SHEET 53
SHEET 56
SHEET 59
SHEET 60
SHEET 61
SHEET 62
SHEET 67
SHT 49
SHT 50
SHT 53
LEGEND
GRAVITY LINES
FORCE MAIN
MANHOLE
EXISTING MANHOLE
MANHOLE Nº
SHEET Nº
DIRECTION OF FLOW
LIFT STATION
SHEET COVERAGE ARROWS
BORE AND JACK
SLIPLINING
CLEAN-TEST-SEAL-TEST
RECORD DRAWING
FALL CREEK WASTEWATER FACILITIES
Scale 1"=200'
SEWER SYSTEM LAYOUT
Sheet
Drawn By: G.D.
Designed By: G.D.L.
Certified By: E.R.
BEAM, LONGEST & NEFF
Consulting Engineers
8136 Castleton Road
Indianapolis In. 46250
33

Note

The contractors shall coordinate the construction activities in this area to complete all connections to the satisfaction of Engineer

REFORMATORY ROAD

72+86.61 Reformatory Rd = 20+00.00 Co. Rd 650 W

6" Force Main From Ingalls See Sht. 25 (Div. A)

COUNTY ROAD 650 W

P.O.T. 23+25.47 Co. Rd 650 W

Existing Dual Drainage Pipes (42" Top & 21" Bottom)

Rdwy. Constr. Limits

P.I. 27+86.82 Co. Rd. 650 W Bk. = P.O.T. 0+00 CC Co. Rd. 650 W Ah., 5.00' Lt. Δ = 0° 07' 10.9" Rt.

Priv. Dr. Req'd W=14' L=18

Sta. 3+50 "PR" Public Rd. Approach Type "A" Req'd. Rt.

150' Incidental Constr. Match exist. pvmt., shlds., ditches, etc.

P.O.T. 72+52.06 Ref. Rd. = P.O.T. 20+01.96 "PR" ℄ = 110° 52' 46.8" Rt.

6" Force Main (By Div. "A" Contractor)

Matchline 72+20

45° Bend

Thrust Block

18" x 6" Y (By Div. "B" Contractor)

22½° Bend

Perm Esmt

Temp Esmt for Constr.

96' of 48" Group "A" Pipe & 2-Pipe End Anchors Req'd.

Temp R/W for Constr.

18" Force Main

P.I. 27+86.82 "PR" Bk. = P.I. 0+00.00 "PR" Ah. Δ = 0° 18' 43.6" Rt.

Plug End

18" Force Main By Div. "D" Contractor

975' ± - 18" Force Main

Matchline 23+20 Reformatory Rd. See Sht. 35

22½° 45° Bend 20+35 Co. Rd 650 W

Sta. 20+15 Co. Rd. 650 W 45° Bend

18" Force Main

Exist. Gd. - Line "PR"

Prop. Gd. - Line

3' Min Bury

5' Min Bury

27+86.82 Bk. = EQUATION 0+00.00 Ah.

22½° 45° Bend Sta. 21+05 DP

Division B End

Notes:

Div. B Contractor Is Responsible For 18" Force Main As Shown Above.

Div. D Contractor Is Responsible For Construction Of The Road.

125+29.52 Reformatory Rd

See Sht. #67 For Details of L.S. Layout

Top 2" Force Main Into New 18" Force Main

10' Temp Esmt For Constr.

2" Force Main Pipe By Others

NE-MHP Lift Station

Perm R/W

Existing Sewers

See Sht. #36

Temp Esmt for Constr.

18" Force Main

REFORMATORY RD.

El. 851.00 "SE" Stub Out 5" ø Gravity Sewer and Plug

18" Force Main

2" Force Main

Lift Station Floor El. 845.00

Lift Station 125+61.23 Ref. Reformatory Rd

RECORD DRAWING

COUNTY ROAD 650 W.

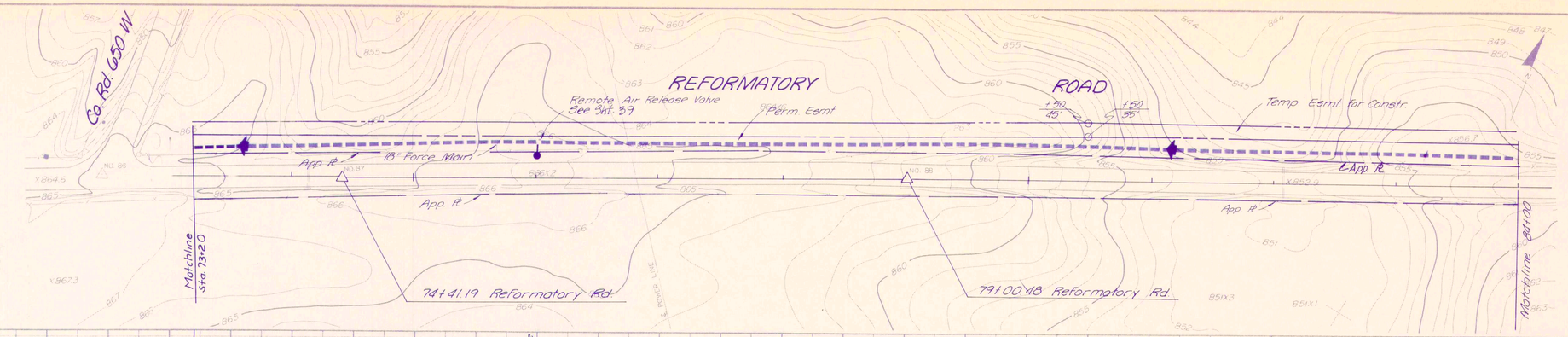
FALL CREEK R.W.D. PLAN & PROFILE

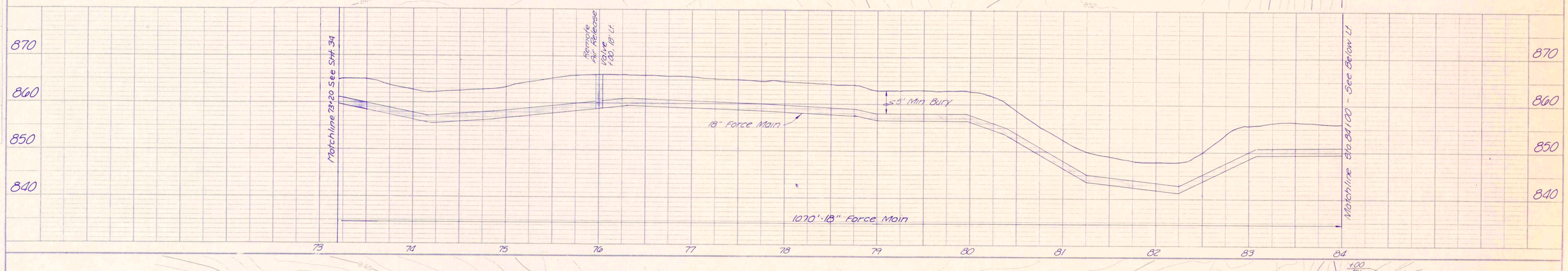
HORIZ. 1"=50'

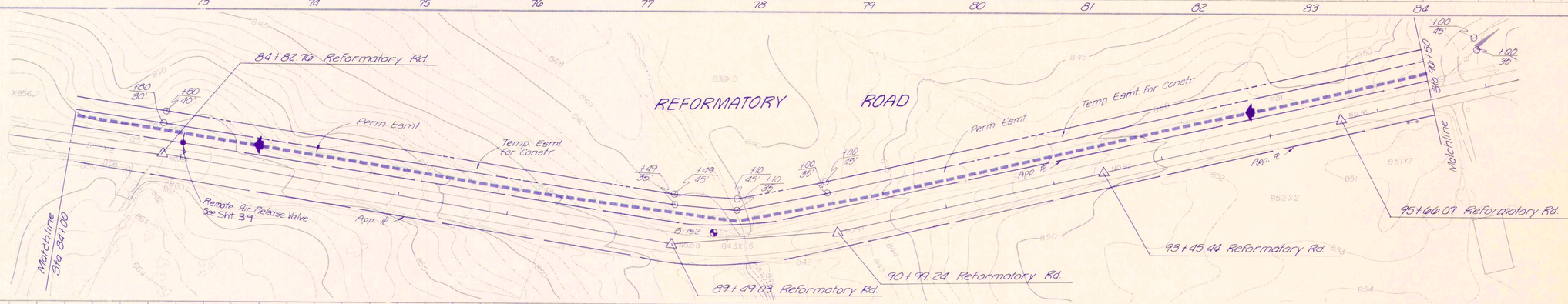
VERT. 1"=10'

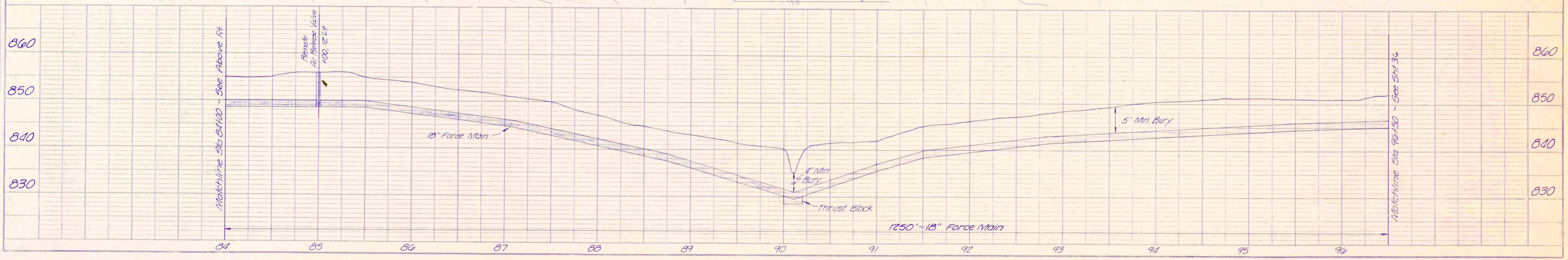
BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA

SHEET 36



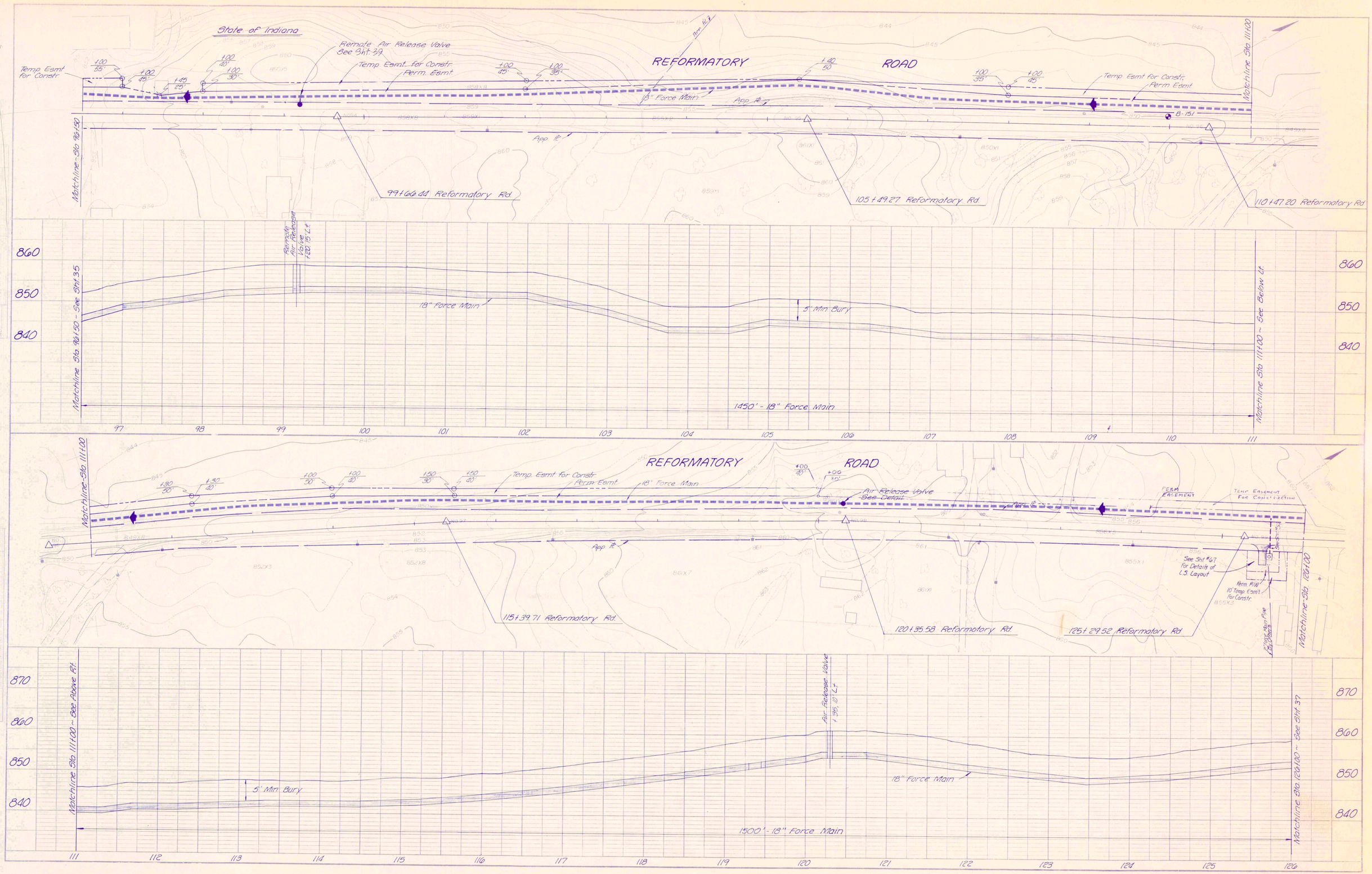






RECORD DRAWING

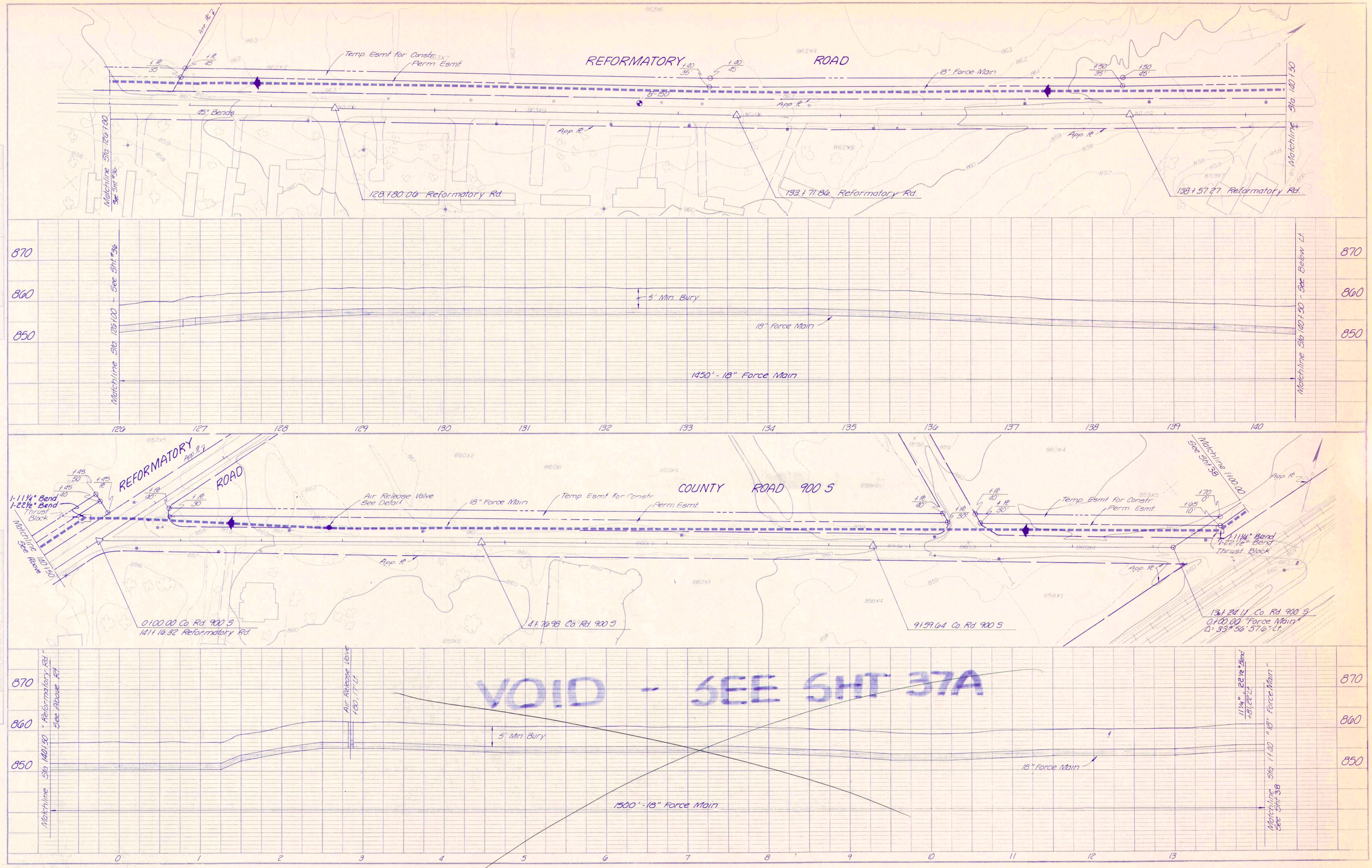
18" FORCE MAIN - REFORMATORY RD.	
FALL CREEK R.W.D. PLAN & PROFILE	SHEET 35
HORIZ. 1"=50'	BEAM, LONGEST & NEFF, INC.
VERT. 1"=10'	CONSULTING ENGINEERS
	INDIANAPOLIS, INDIANA



RECORD DRAWING

18" FORCE MAIN - REFORMATORY RD

FALL CREEK R.W.D. PLAN & PROFILE		SHEET
HORIZ. 1"=50'	BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA	36
VERT. 1"=10'		



PLAN

PROFILE

RECORD DRAWING

18" FORCE MAIN - 900 S & REFORMATORY RD.		
FALL CREEK R.W.D. PLAN & PROFILE		SHEET
HORIZ. 1"=50'	BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA	37
VERT. 1"=10'		

+45 (Ref. Rd.)
40'

+45 (Ref. Rd.)
50'

+71.75 (Ref. Rd.)
50'

+67.61 (Ref. Rd.)
40'

0+00.00 Co. Rd. 900 S.
141+16.32 Reformatory Rd.

PB-1MM

Temp. Esm't. For Constr.

Exist. Temp. Esm't. For Constr.

REFORMATORY ROAD

Match line 140+50
See Sht. 37

1-45° Bend w/ Thrust Block App. ℄

Perm. Esm't.

10' Temp. Esm't For Constr.

178'

273'
A.R.V.
(At local High Pt.)

9' A.R.V.

Exist. Perm. Esm't.

+45 (Ref. Rd.)
℄

15' Perm. Esm't.

PB-1LL

+64.89 (Ref. Rd.)
℄

1-45° Bend w/ Thrust Block

4+76.98 Co. Rd. 900 S.

COUNTY ROAD 900 S.

9+59.64 Co. Rd. 900 S.

10' Temp. Esm't. For Constr.

15' Perm. Esm't.

1LL

1MM

PROPOSED COUNTY ROAD 900 S.

595'

STATE OF INDIANA

13+24.11 Co. Rd. 900 S.
0+00.00 "Force Main"
Δ = 33°56'57.6" Lt.

Match line 11+00
See Sht. 38

10' Temp. Esm't. For Constr.

20' Perm. Esm't.

1-90° Bend w/ Thrust Block

18" Force Main

App. ℄

95'

Exist. Temp. Esm't For Constr.

Exist. Perm. Esm't.

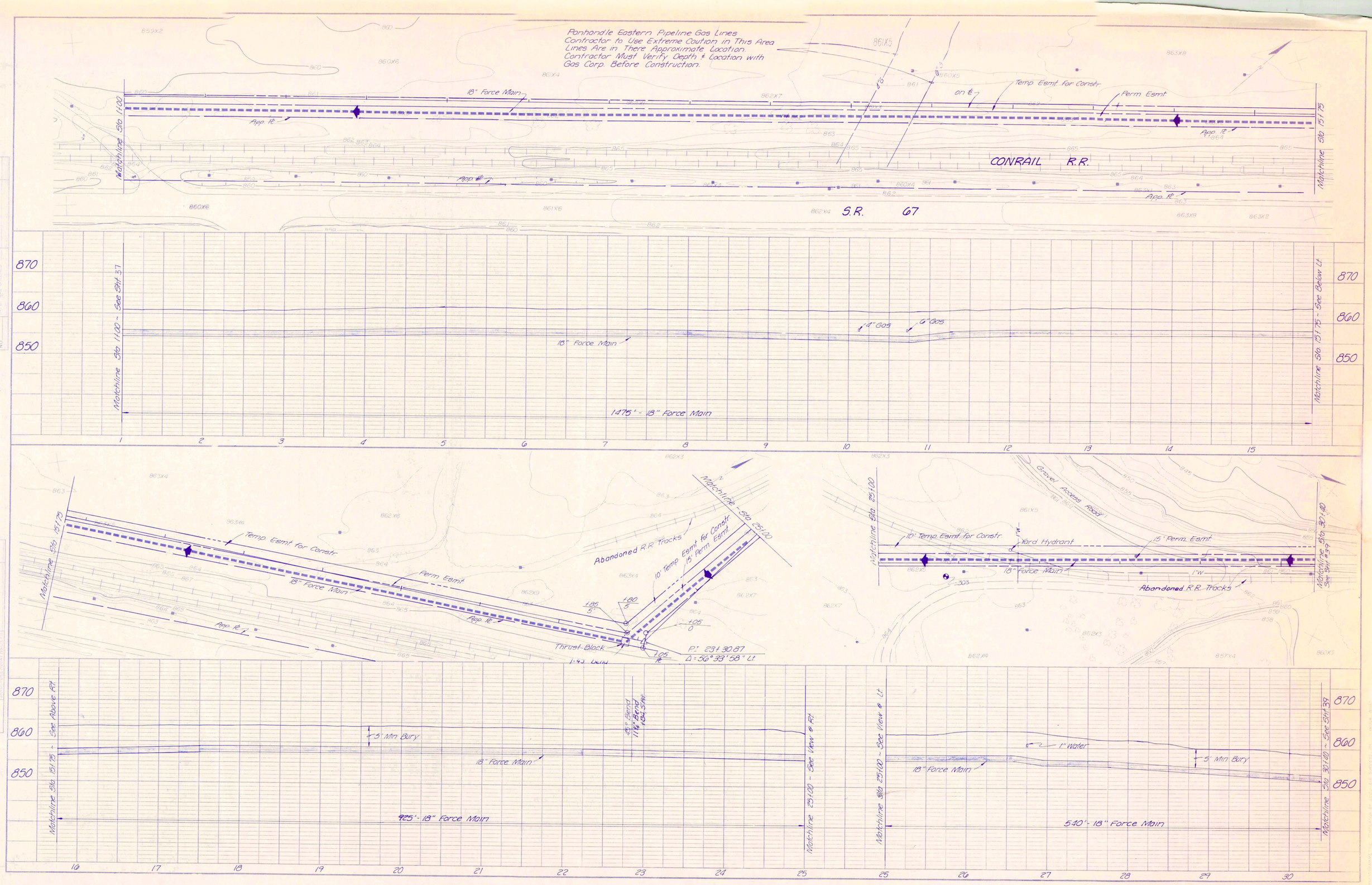
CONRAIL R.R.

STATE ROAD 67

RECORD DRAWING

COUNTY ROAD 900 S.

Scale 1"=50'	FALL CREEK	Sheet
Drawn By G.W.	BEAM, LONGEST & NEFF	37A
Designed By D.N.	Consulting Engineers	
Checked By E.R.	8136 Castleton Road	



PLAN

PROFILE

RECORD DRAWING

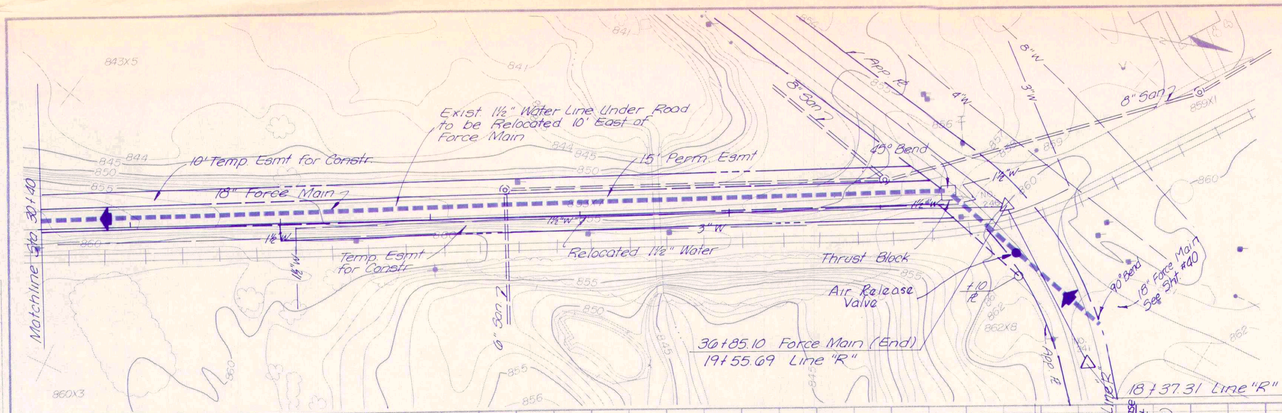
18" FORCE MAIN

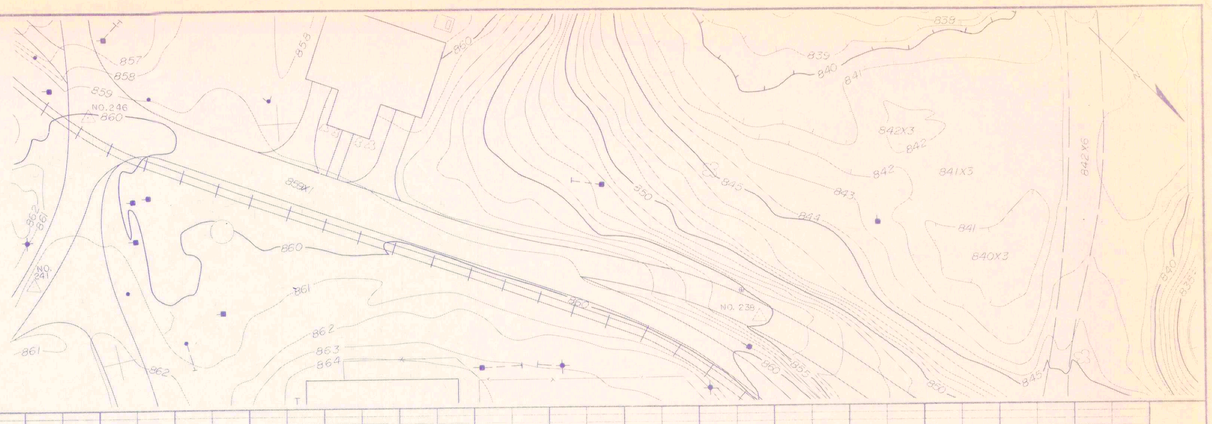
FALL CREEK R.W.D. PLAN & PROFILE

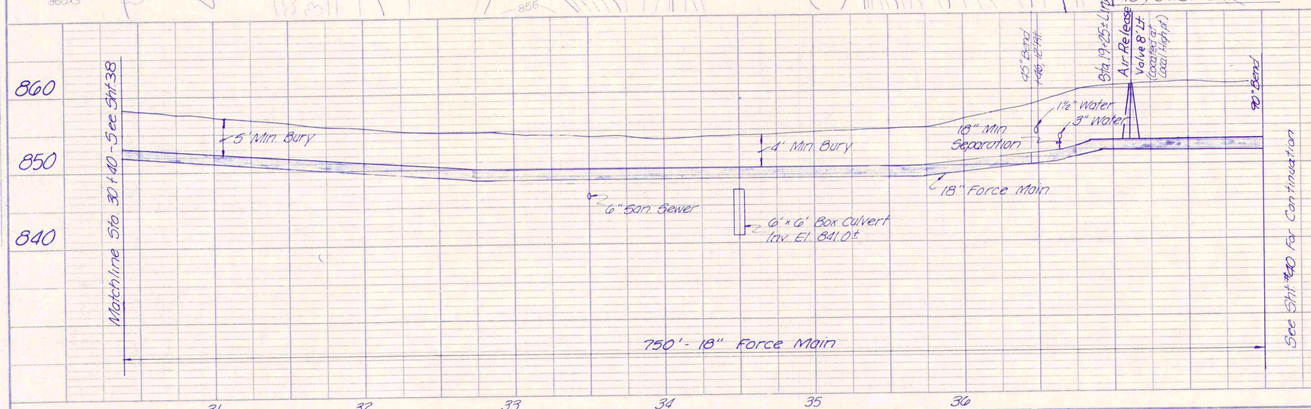
HORIZ. 1"=50'
VERT. 1"=10'

BEAM, LONGEST & NEFF, INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA

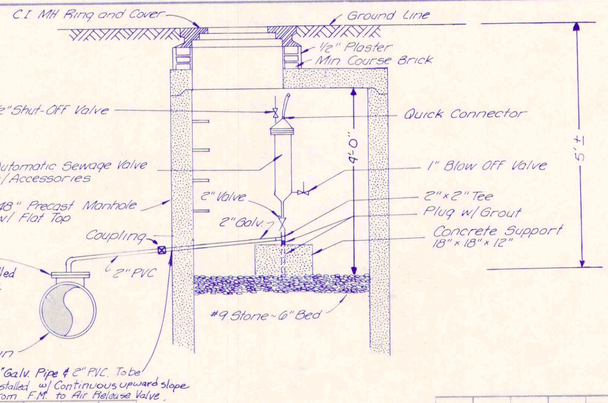
SHEET 38





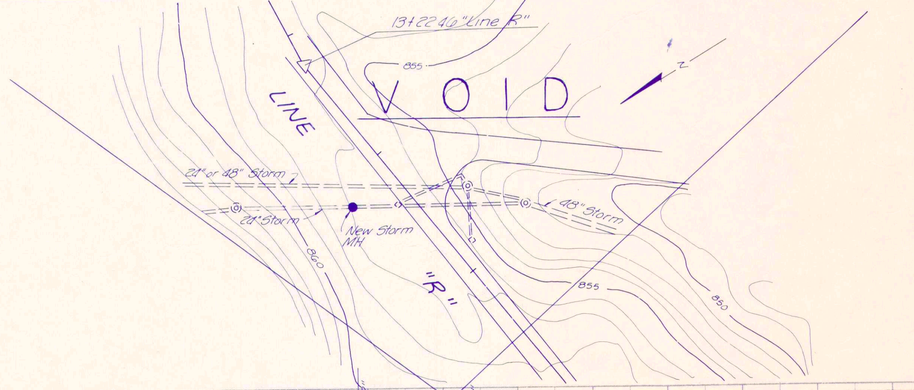


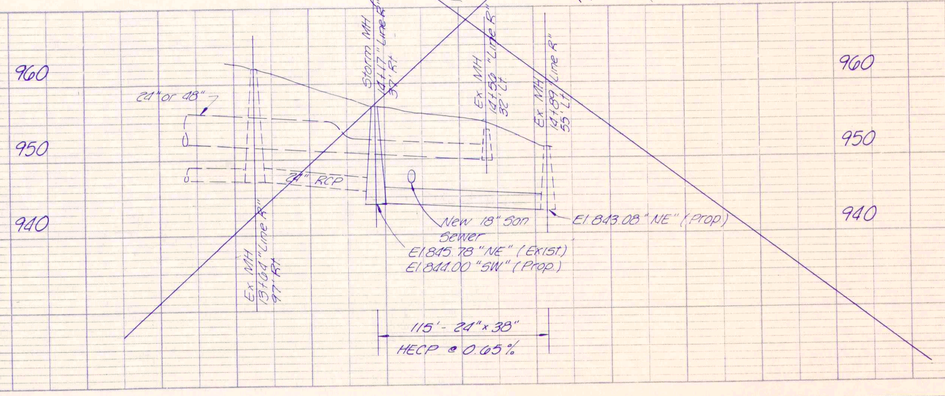
VOID



REMOTE FORCE MAIN AIR RELEASE

No Scale





18" Force Main
Remote Air Release Valve Detail

FALL CREEK R.W.D. PLAN & PROFILE		SHEET
HORIZ. 1"=50'	BEAM, LONGEST & NEFF, INC.	39
VERT. 1"=10'	CONSULTING ENGINEERS	
	INDIANAPOLIS, INDIANA	

RECORD DRAWING

Contractor

210' Bore & Jack

Temp. Esmt for Constr.

Temp Esmt for Constr.

15' Perm Esmt.

10' Temp Esmt for Constr

10' Temp Esmt for Constr

MH (130)

App. R/

App. R/

App. R/

App. R/

App. R/

App. R/

LINE "R"

LINE

10' Temp Esmt for Constr.

MH (130)

15' Perm. Esmt

MH (129)

302

App. R/

App. R/

App. R/

App. R/

6" Storm

8+42.16 Line "R"

6+43.66 Line "R"

LINE

App. R/

MH (129)

15' Perm. Esmt

10' Temp Esmt for Constr.

App. R/

App. R/

App. R/

LINE "R"

Match line 6/6 13+00

MH (128A)

8+42.16 Line "R"

11+66.85 Line "R"

MH (130) 41.79, 12.1' Lt. Line "R"

MH (130) 1.79, 12.1' Lt.

MH (129) 165, 21' Lt.

MH (129) 165, 21' Lt.

MH (128A) 516 13+00

870 870

860 860

850 850

e installed to M.H. 131

D.I. Pipe to Sewer Pipe Adapter Fitting Reqd.

Bore & Jack 210' of 36" Steel Casing @ 0.25% (Min Wall Thickness 0.532")

El. 856.38 "SE"
El. 856.28 "W"

6" Storm Sewer

El. 856.38 "W"
El. 856.28 "SE"

El. 854.45 "NW"
El. 854.75 "E"

El. 854.75 "E"
El. 854.45 "NW"

El. 852.99 "NE"
El. 852.89 "SW"

18" Ductile Iron Pipe

0.25 %

176'-18" @ 0.25%
(Exclusive of Bore & Jack)

See View @ Rt.

See View @ Lt.

419'-18" @ 0.39%

See @ Rt.

See @ Lt.

455'-18" @ 0.34 %

4 5 6 7 8 8 9 10 11 12 13

18+22.46 Line "R"

Temp Esmt for Constr.

48" Storm

55"

* Note: Contractor Shall Excavate Storm Sewers Prior to Construction of This Section of Gravity Sewer To Verify Location and Depth

Perm. Esmt.

120 ft

55'

60'

MH (127)

LINE "R"

App. ft

10' Temp Esmt for Constr.

15' Perm Esmt

Temp Esmt for Constr.

MH (128)

18+37.31 Line "R"

10' Temp Esmt for Constr.

20' Perm Esmt

App. R/

See Sht #39 for Continuation of Force Main

45° Bend

3%

24"

App. R/

4" Steam

Buried Power Cable

LINE

19+55.69 Line "R"

300

MH (127)

Perm Esmt

App. R/

App. R/

10" Storm Sewer

Power Poles

MH (126)

20' Perm Esmt

90° Bend

18" Force Main (200 psi)

MH (126A)

10' Temp Esmt for Constr.

8" Steam

18+37.31 Line "R"

24+22.74 Line "R"

Metering MH

Note: Where 18" Force Main & 18" Gravity Sewer are in the Same Trenchline, A 2' Horizontal Clear Distance Shall Be Maintained. All Bedding Shall Be Placed on Undisturbed and Confined Earth or Compacted Backfill Approved By the Engineer

Temp. Esmt for Constr.

SEE YARD PIPING PLAN Sht. #69

15' Perm Esmt

Prop. Force Main See Sht. 45

Prop Lift Station See Sht. 69

MH (122)

MH (123)

10' Temp Esmt for Constr.

Perm. Esmt

Temp Esmt

Prop Sewer See Sht. 69

Prop Sewer See Sht. 69

When directed By Owner, Contractor Shall Remove 20' of The 18" Backwash Sewer and Plug.

MH (R-1)

MH (R-2)

15' Perm Esmt

Temp. Esmt For Constr.

MH (128) 1.06, 0.5' Rt.

MH (127) 1.27, 20.6' Lt.

MH (127) 1.27, 20.6' Lt.

MH (126A) 257.3

Drop MH (126) 257.3 El. 843.43

MH (122) 23.50, 13.6' Lt. Included in "Yard Piping"

NOTE: All pipe & Manhole items used to connect existing 18" backwash Sewer to Lift Station are included in "Yard Piping"

860 860

850 850

840 840

830

Ex 24" Storm Sewer

Ex 24" Storm Sewer

El. 847.32 "SE"
El. 846.32 "SW"

El. 845.45 "NE"
El. 845.25 "NW"

El. 845.45 "NE"
El. 845.25 "NW"

4" Gas

4" Steam
8" Water

4" Water

90° Bend

18" Force Main (200 psi)

El. 841.18 "SE"
El. 840.14 "NW"

El. 844.62 "SE"
El. 843.52 "NW"

18" W

Profile along 18" Force Main

90° Bend

Prop. 18" Sewer (Yard Piping)

This Section of Sewer not To Be Completed Until Directed By Owner

El. 834.00 "N"
El. 836.30 "SE"

Ex. 18" Backwash Sewer

El. 833.00 "NW"
El. 832.80 "E"
El. 835.08 "W"

re Rt.

200'-15" @ 1.50 %

333'-18" @ 0.62 %

See View @ Rt.

430'-18" @ 0.93 %

55'-18" @ 4.25 %

710'-18" Force Main (200 p.s.i.)

254'-18" @ 1.30 %

14 15 16 17 18

REVISED 3-15-84
CHANGED PERM. R/W TO PERM ESMT AROUND LIFT STATION

RECORD DRAWING

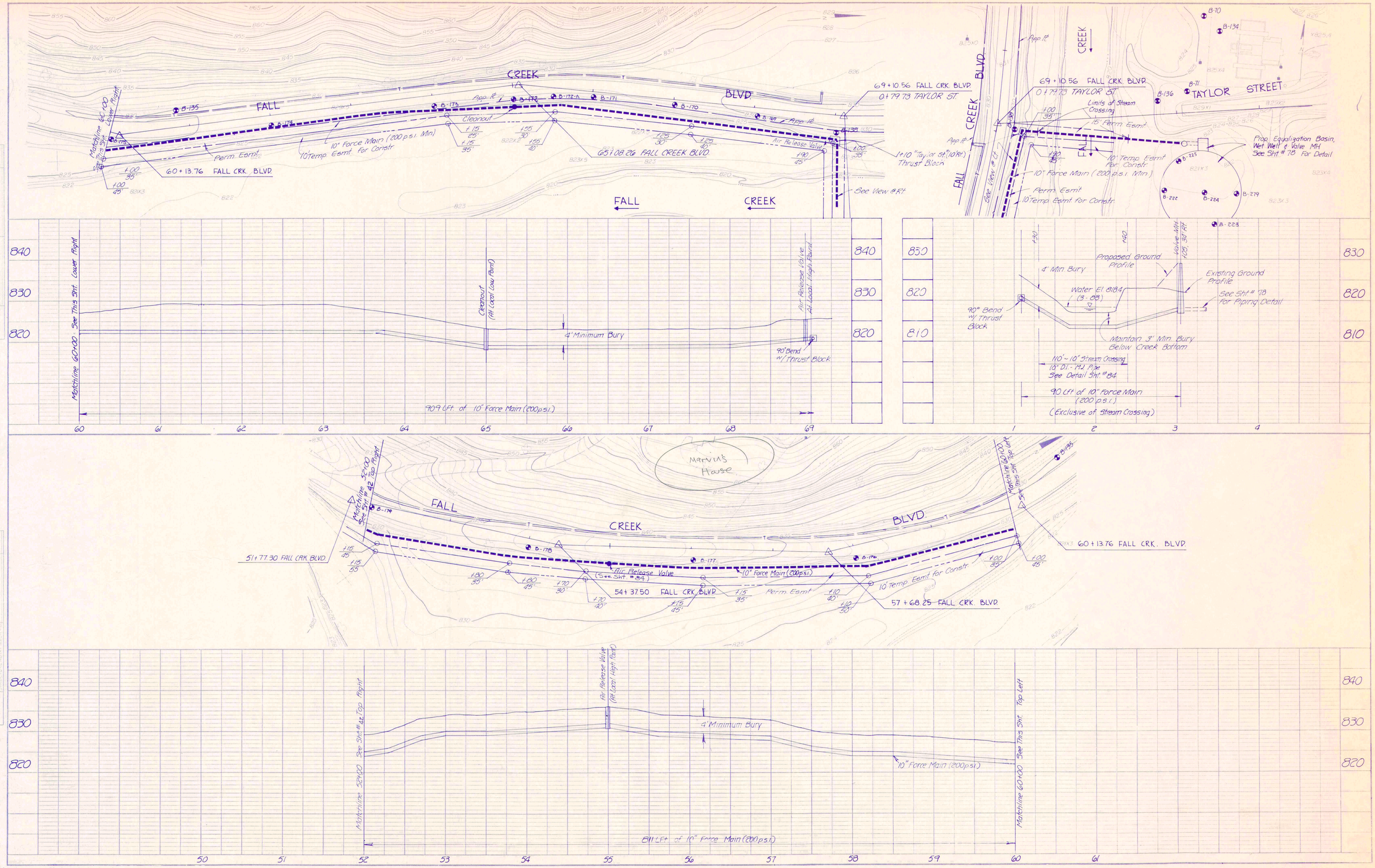
18" GRAVITY SEWER ~ REFORMATORY INTERCEPTOR
18" FORCE MAIN ~ REFORMATORY ROAD

FALL CREEK R.W.D. PLAN & PROFILE

HORIZ. 1"=50'
VERT. 1"=10'

BEAM, LONGEST & NEFF, INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA

SHEET 40

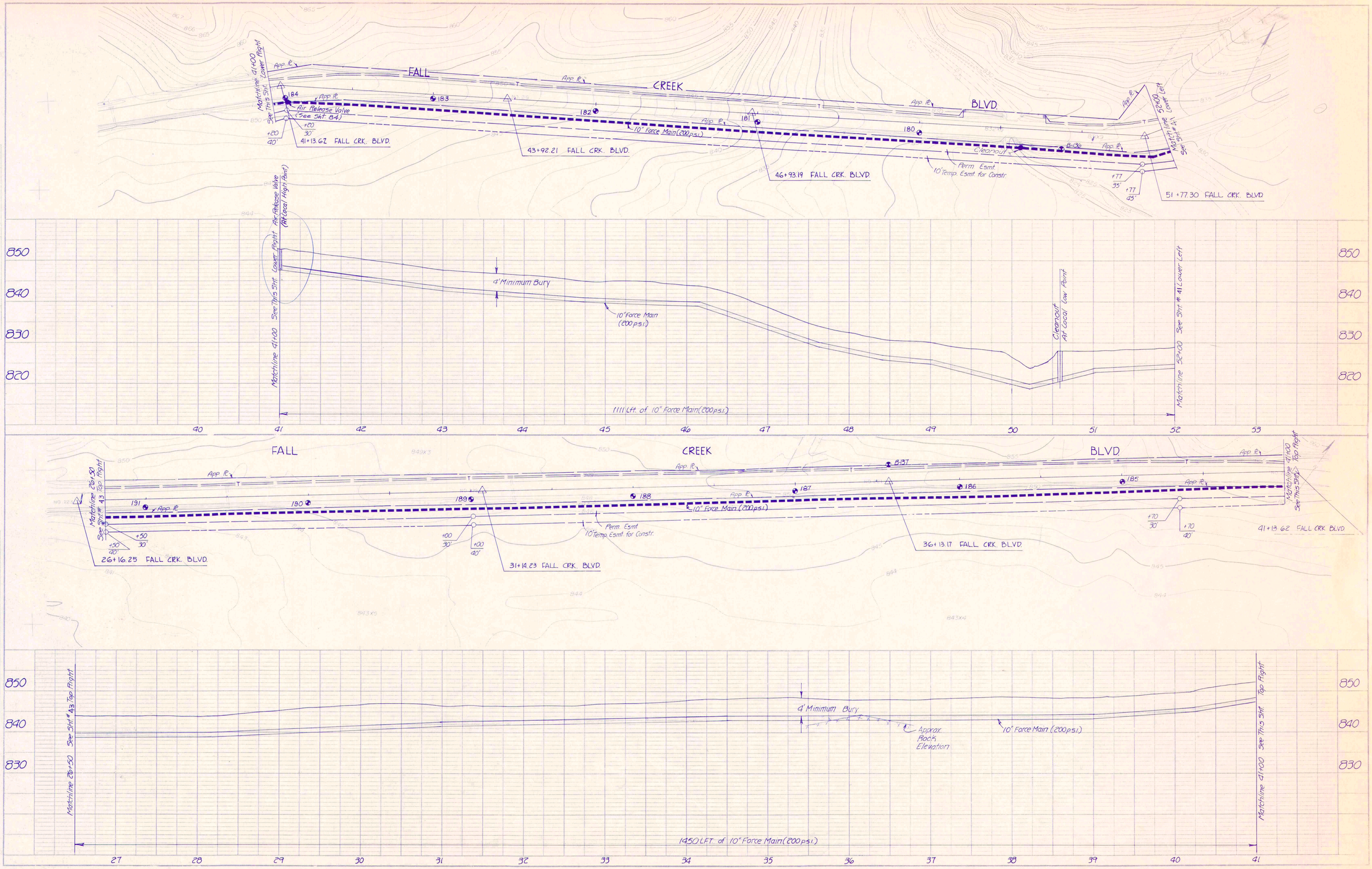


PLAN

PROFILE

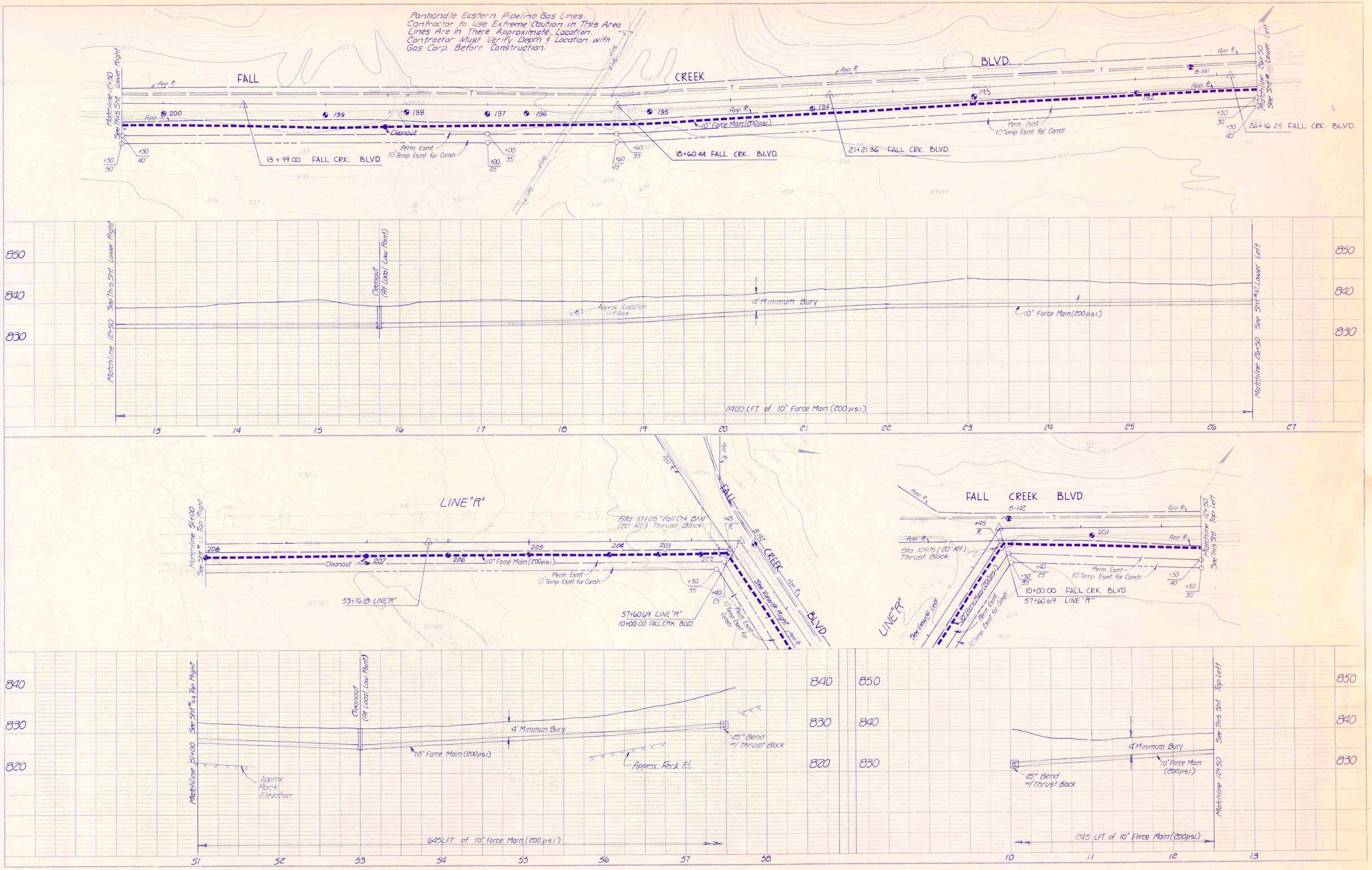
RECORD DRAWING

FALL CREEK BLVD. / TAYLOR ST.		
FALL CREEK R.W.D. PLAN & PROFILE		SHEET
HORIZ. 1"=50'	BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA	41
VERT. 1"=10'		



RECORD DRAWING

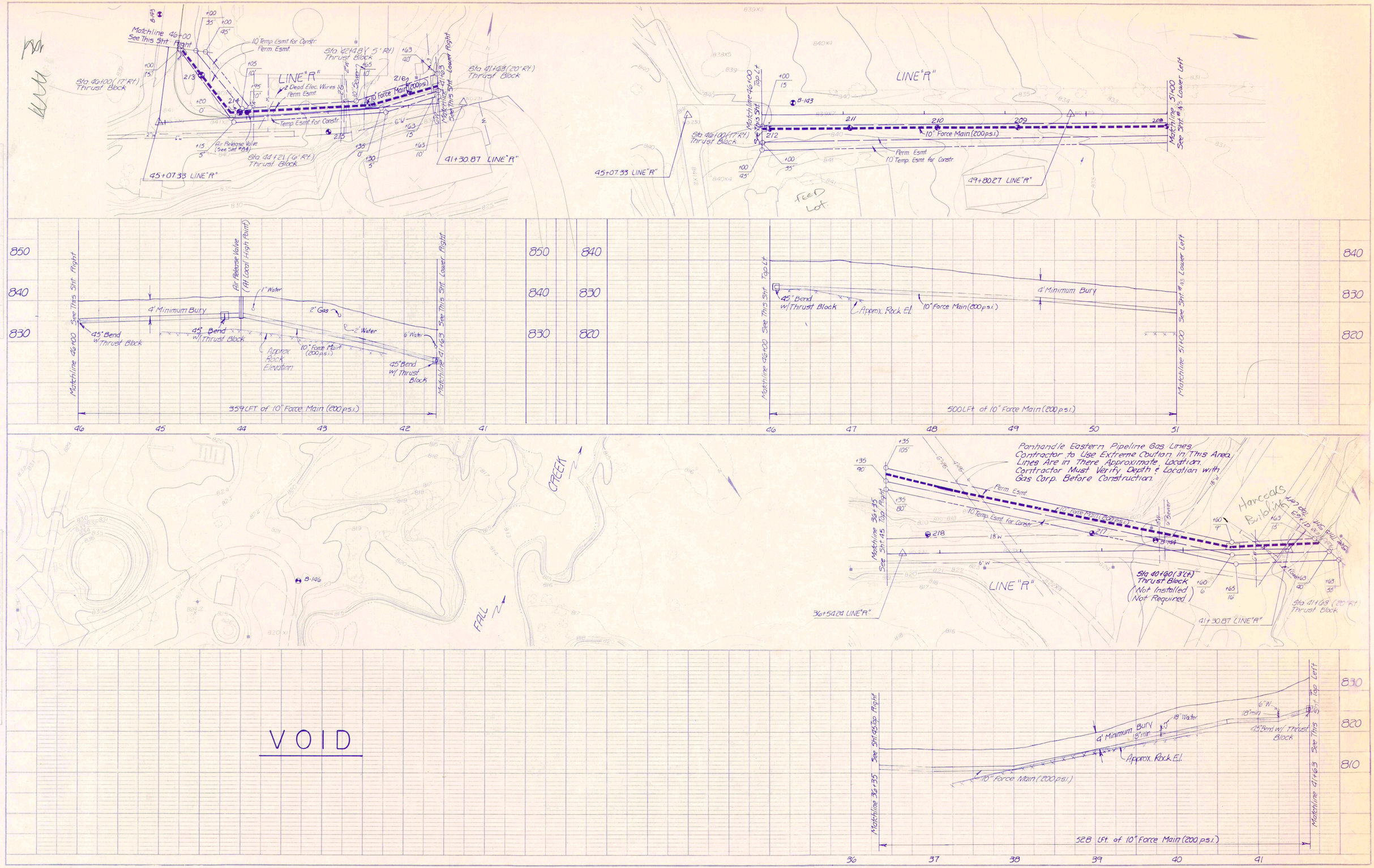
FALL CREEK BLVD.		
FALL CREEK R.W.D. PLAN & PROFILE		SHEET
HORIZ. 1"=50'	BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA	42
VERT. 1"=10'		



RECORD DRAWING

ERIC KESKE REGISTERED No. 13442 STATE OF INDIANA PROFESSIONAL ENGINEER

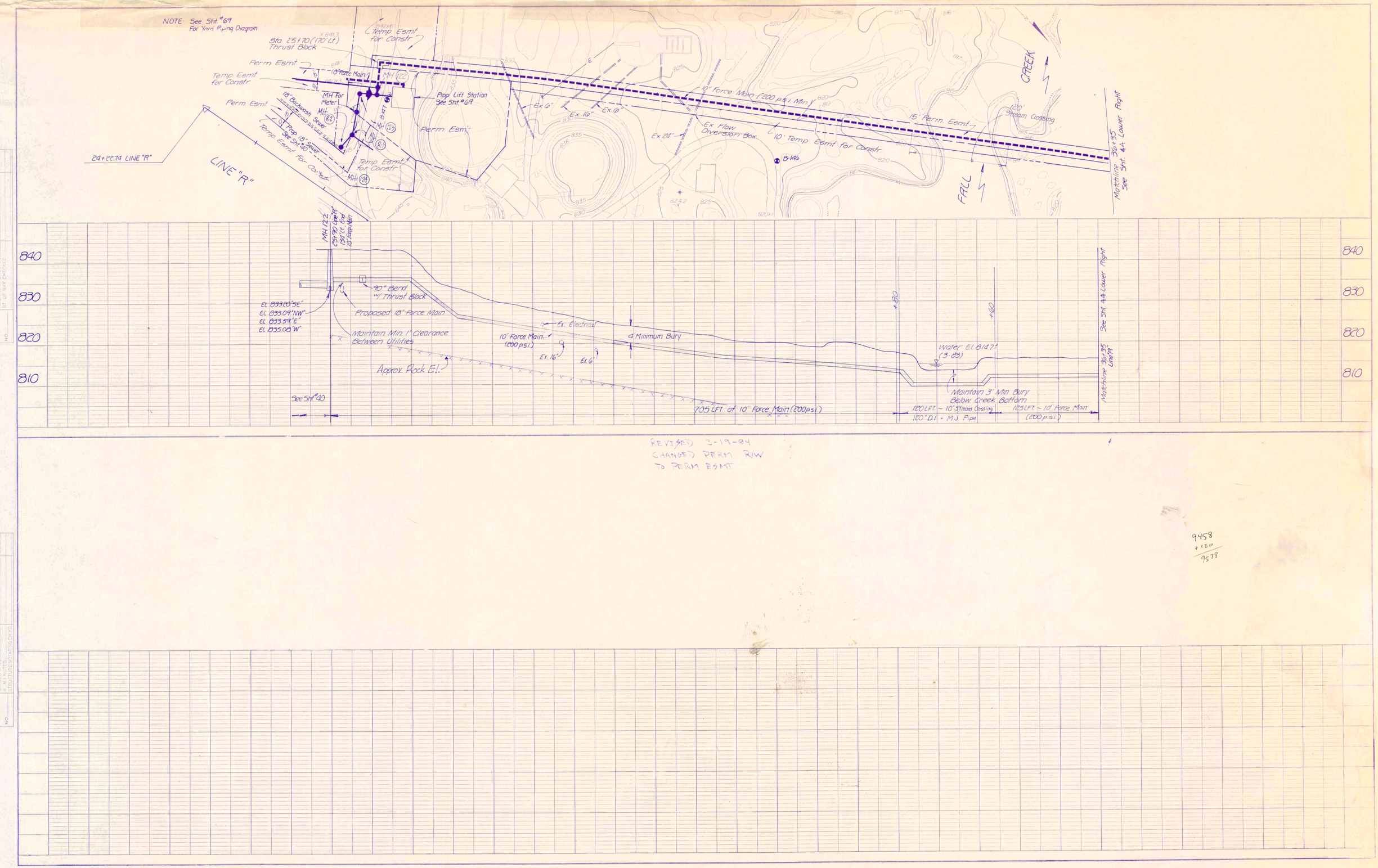
FALL CREEK BLVD./LINE "R"		
FALL CREEK R.W.D. PLAN & PROFILE		SHEET
HORIZ. 1"=50'	BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA	43
VERT. 1"=10'		



RECORD DRAWING

LINE "R"		
FALL CREEK R.W.D. PLAN & PROFILE		SHEET
HORIZ. 1" = 50'	BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA	44
VERT. 1" = 10'		

FM-4



REVISED 3-19-84
CHANGED PERM R/W
TO PERM ESMT

9458
+120
9578

PLAN
NOTE BOOK
NO.
SURVEYED
PLOTTED
ALIGNMENT CHECKED
RT. OF WAY CHECKED
BY
DATE

PROFILE
NOTE BOOK
NO.
SURVEYED
PLOTTED
GRADES CHECKED
B.M.'s NOTED
STRUCTURE NOTATIONS CHK'D
BY
DATE

RECORD DRAWING

ERIC KESKE
REGISTERED
No. 13442
STATE OF INDIANA
PROFESSIONAL ENGINEER

LINE "R"

FALL CREEK R.W.D. PLAN & PROFILE

HORIZ. 1" = 50'
VERT. 1" = 10'

BEAM, LONGEST & NEFF, INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA

SHEET 45

FM-5

TAYLOR STREET
MH 1-36
204 LF - 12" Clay Pipe Slipline (SDR26)
MH 1-35
MILL ROAD
544 LF - 12" Clay Pipe Slipline (SDR26)
MH 1-35A
MH 1-29A
92 LF - 12" Clay Pipe Slipline (SDR26)
MH 1-29
200 LF - 12" Clay Pipe Slipline (SDR26)
STATE (S.R. 38)
STREET
MH 1-1
Reploced
Ex. 12" Sewer Slipline See View Below Lt.
12" Ø "W" 821.64
12" Ø "NE" 821.94
12" Ø "SW & NE" 823.04
B-61
12" Ø "SW & NE" 824.91
8" Ø "W" 825.11
12" Ø "SW & NE" 825.31
12" Ø "E" 825.41
12" Ø "SW" 826.17
12" Ø "E" 826.17
HIGH STREET
Replace MH's 1-36, 1-35, 1-29A, 1-29 & 1-1 (5 Total This View)

FALL CREEK
12" Ø "E & W" 826.92
12" Ø "E & SW" 826.17
Temp. Esmt. for Constr.
MH 1-31
MH 1-3
MH 1-1
183 LF - 12" Clay Pipe Slipline (SDR26)
345 LF - 12" Clay Pipe Slipline (SDR26)
191 LF - 12" Clay Pipe Slipline (SDR26)
B-31
Ex. 12" Sewer Slipline See View Above
MILL ROAD
STATE (S.R. 38)
MH 1-14
10' Temp Esmt For Constr.
12" Ø "E & W" 828.74
4" Ø "N" 832.74
12" Ø "W" 829.87
12" Ø "N" 829.97
Replace Ex. Sewer See Sht. #51
MH 1-4
NW. STREET
ROADS STREET
FRANKLIN ST.
WEST STREET
Replace MH's 1-31, 1-32, 1-14 (4 Total This View)

FALL CREEK
Replace Ex. MH
Temp. Esmt. For Constr.
129 LF - 12" Clay Pipe Slipline (SDR26)
MH 1-5
MH 1-37
MH 1-37A
312 LF - 12" Clay Pipe Slipline (SDR26)
SEWER LINE G
MH 1-6
Ex. 12" Sewer to be Replaced See Sht. #51
SEWER LINE A
STREET
Ex. 10' Esmt.
Trail Esmt. for Public Utilities
5' Temp. Esmt. for Constr.
12" Ø "E & W" 831.35
4" Ø "S" 831.85
N 3" Ø "N" 832.25
12" Ø "S & E" 830.91
8" Ø "NW" 832.01
12" Ø "W & E" 832.44
4" Ø "S" 835.04
4" Ø "N" 832.94
Ex. 12" Sewer to be Sliplined See View @ Rt.
N.W. STREET

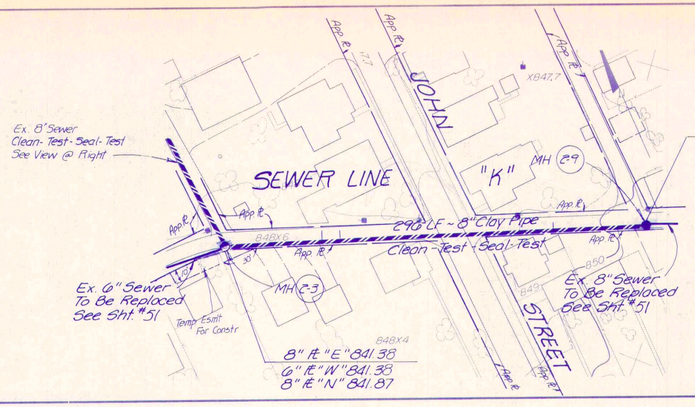
12" Ø "E & W" 832.44
4" Ø "S" 835.04
4" Ø "NE" 832.94
Temp. Esmt. For Constr.
MH 1-6
SEWER LINE G
MH 2-1
180 LF - 12" Clay Pipe Slipline (SDR26)
Ex. 10' Esmt.
Ex. 12" Sewer to be Sliplined See View @ Lt.
Ex. 12" Sewer Clean-Test-Seal-Test See View @ Rt.
STREET
WATER STREET
MAIN STREET
12" Ø "W & N" 833.13
12" Ø "E" 830.83

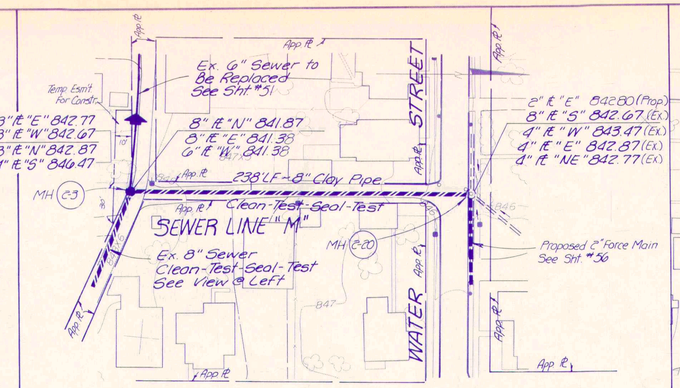
Ex. 12" Sewer To be Sliplined See View @ Lt.
MAIN STREET
State R/W (App. @ 7')
MH 2-18
SEWER LINE H
213 LF - 12" Clay Pipe Clean-Test-Seal-Test
Ex. 10' Esmt.
Perm. Esmt.
12" Ø "S" 833.56
12" Ø "E" 833.76
Ex. 12" Sewer to be Replaced See Sht. #51
10' Perm. Esmt.
WATER STREET
12" Ø "N & W" 833.13
12" Ø "E" 830.83
Replace MH's 1-5, 1-37 & 2-18 (3 Total These Views)

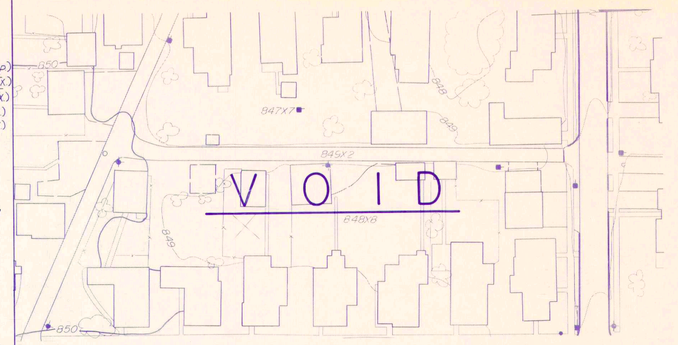
8" Ø "E" 843.67
SEWER LINE J
MH 2-15
187 LF - 8" Clay Pipe Clean-Test-Seal-Test
207 LF - 12" Clay Pipe Clean-Test-Seal-Test
MH 2-14
MH 2-13
173 LF - 12" Clay Pipe Clean-Test-Seal-Test
42 LF - 12" Clay Pipe Clean-Test-Seal-Test
MH 2-2A
131 LF - 12" Clay Pipe Clean-Test-Seal-Test
MH 2-2
MH 2-11
MH 2-10
Ex. 6" Sewer to be Replaced See Sht. 51
10' Temp. Esmt. For Constr.
Ex. Manhole to be Replaced
8" Ø "W" 841.91
12" Ø "E & N" 837.51
12" Ø "W" 837.70
12" Ø "E" 837.80
8" Ø "N" 838.20
12" Ø "W" 838.52
12" Ø "NE" 838.62
12" Ø "SW" 838.75
12" Ø "E" 838.85
12" Ø "W" 839.09
6" Ø "E" 839.39
8" Ø "N" 841.19
8" Ø "S" 839.29
MAIN STREET
PENDLETON AVENUE
BROADWAY AVENUE
CAROLINE STREET
Replace MH's 2-13, 2-2A & 2-11 (3 Total This View)

RECORD DRAWING

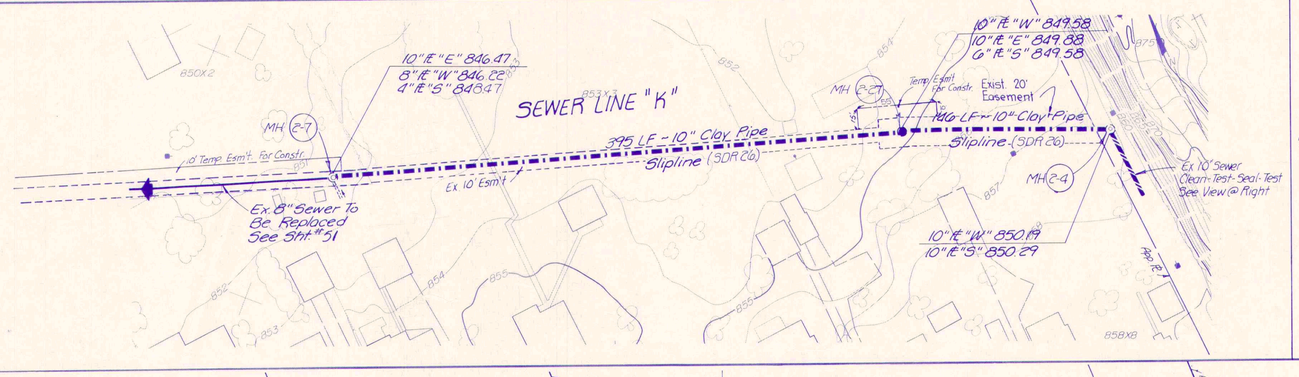
MILL ROAD, STATE STREET, SEWER LINE G
SEWER LINE H, SEWER LINE J
FALL CREEK R.W.D. PLAN
SHEET C-0
HORIZ. 1"=50'
VERT. 1"=10'
BEAM, LONGEST & NEFF, INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA
SLIPLINE / CLEAN-TEST-SEAL-TEST

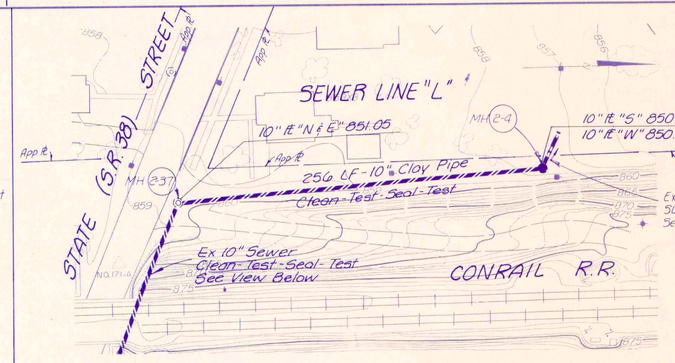




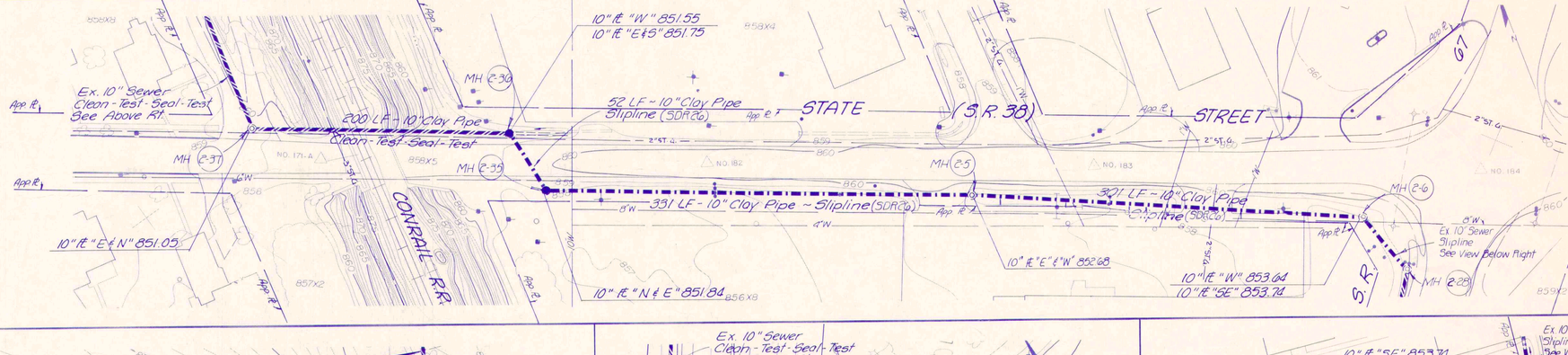


Replace MH's 2-3 & 2-9
(2 Total These Views)

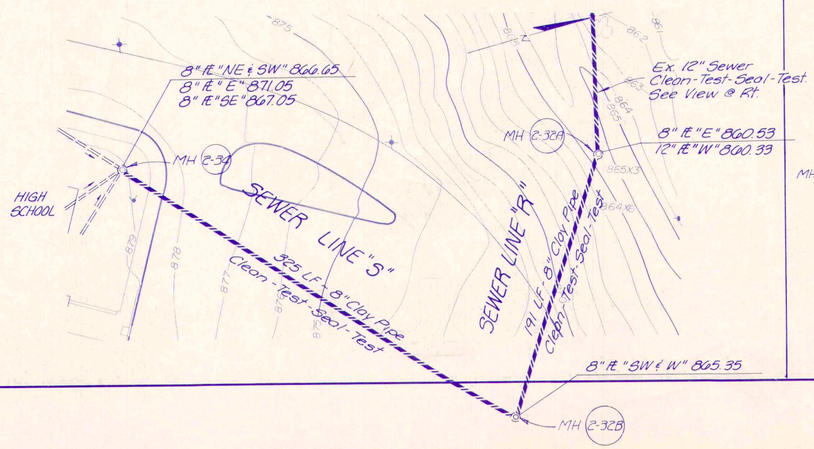


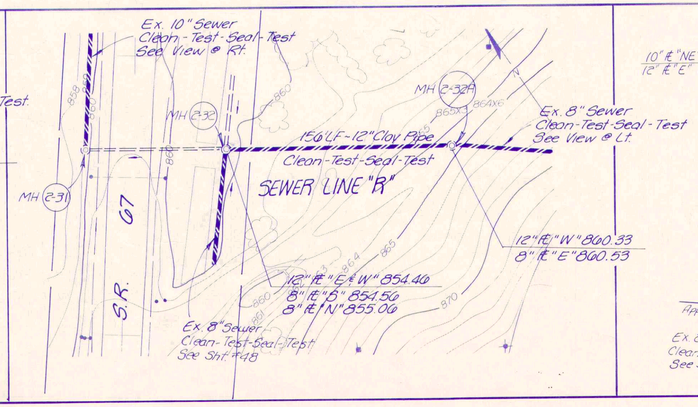


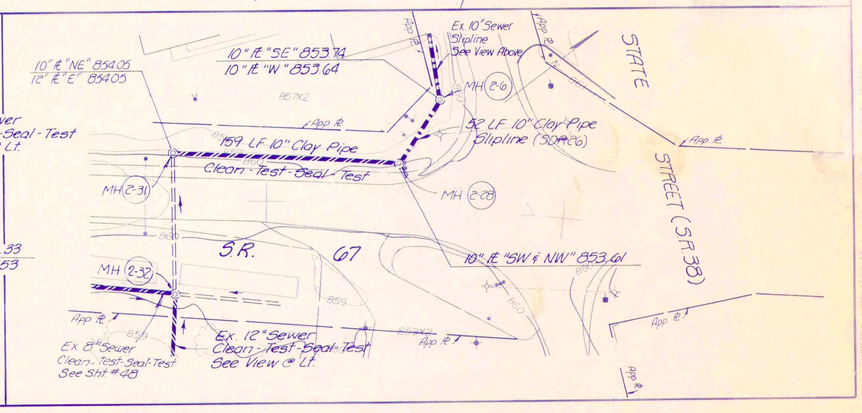
Replace MH's 2-7, 2-27 & 2-4
(3 Total These Views)



(2 Total This View)







RECORD DRAWING

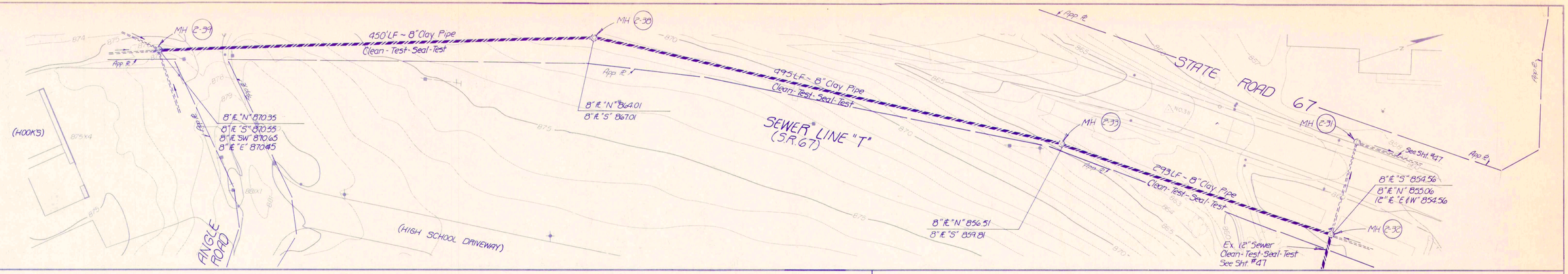
SEWER LINE "K", SEWER LINE "M", SEWER LINE "L",
STATE ST, SEWER LINE "S", SEWER LINE "R" & S.R. 67

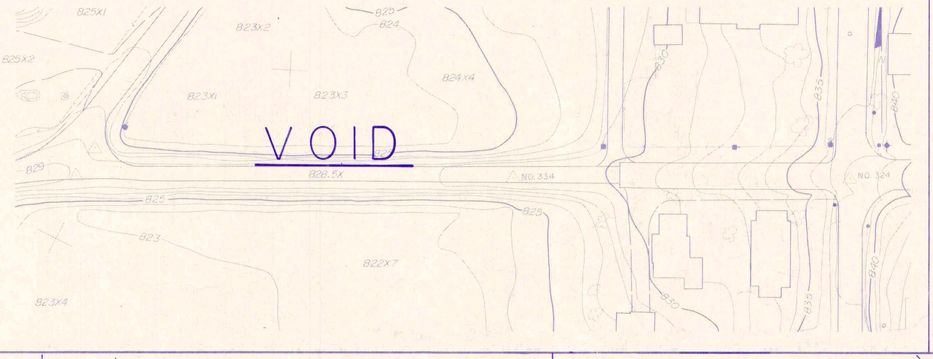
FALL CREEK R.W.D. PLAN — SHEET 47

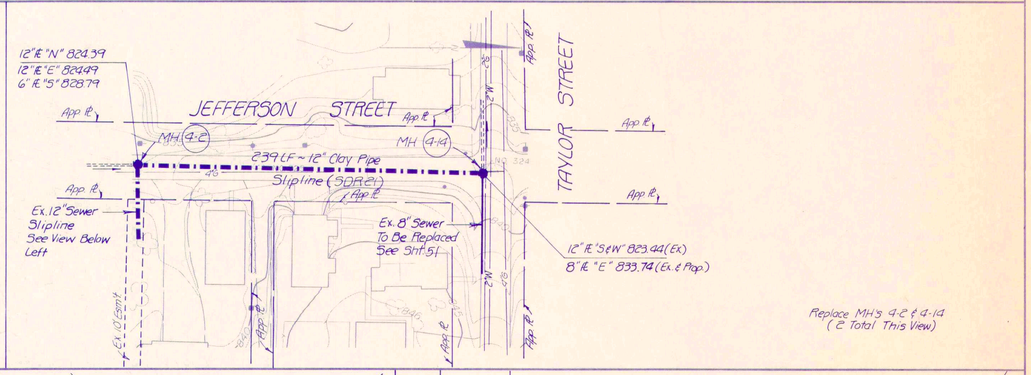
HORIZ. 1" = 50'
VERT. 1" = 10'

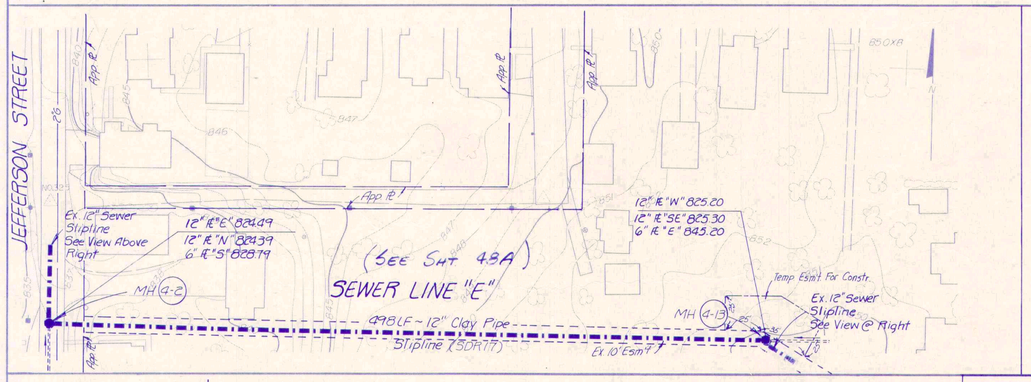
BEAM, LONGEST & NEFF, INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA

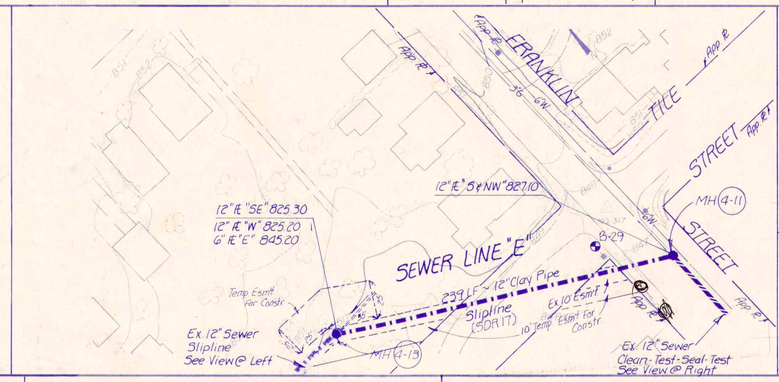
SLIPLINE / CLEAN-TEST-SEAL-TEST

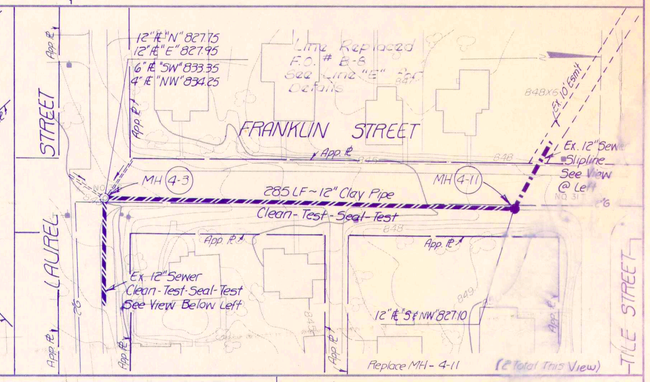


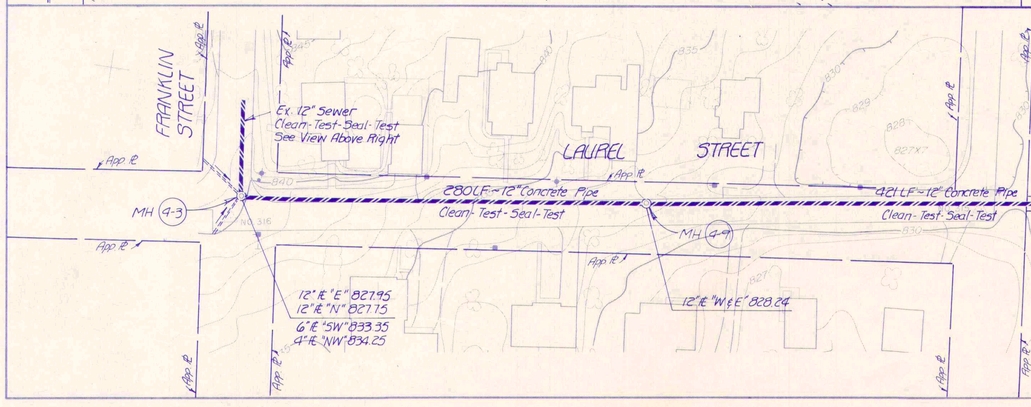


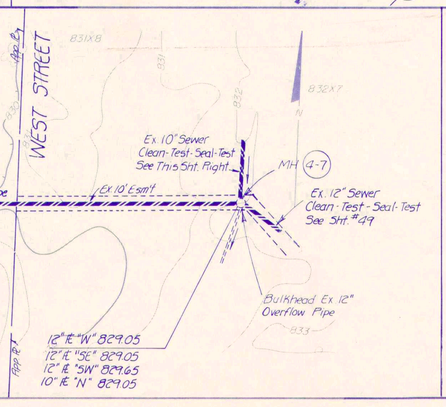


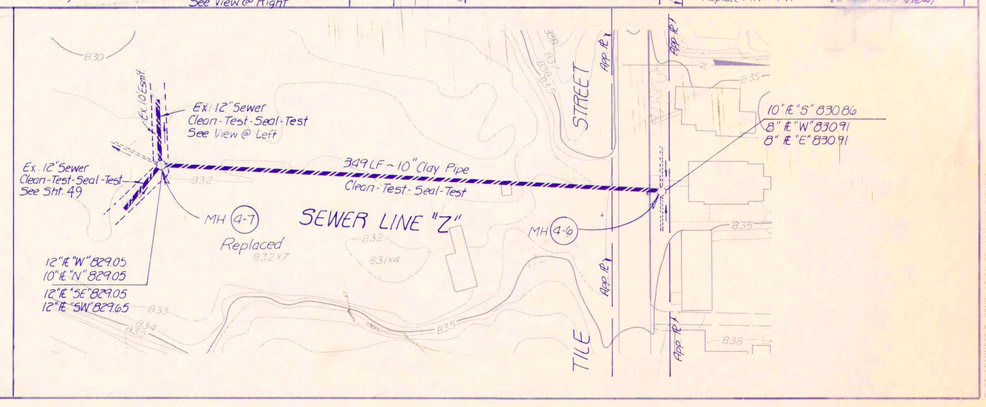












RECORD DRAWING

LEO E. BERGE — REGISTERED — No. 13442 — STATE OF INDIANA — PROFESSIONAL ENGINEER

SEWER LINE "T", JEFFERSON ST., SEWER LINE "E" FRANKLIN ST., LAUREL ST., & SEWER LINE "Z"

FALL CREEK R.W.D. PLAN — SHEET 48

HORIZ. 1" = 50' — VERT. 1" = 10'

BEAM, LONGEST & NEFF, INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA

SLIPLINE / CLEAN - TEST - SEAL - TEST

FEDERAL ROAD REGION NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
5	IND.				

Marvin

EXISTING 12"
(COLLAPSING SEWER)
MH 4-2
App. ℄
840
845
850
10' Temp. Esmt. for Construction
15' Perm. Esmt.
App. ℄
MH 4-3C
MH 4-3D
15' Perm. Esmt.
10' Temp. Esmt. for Constr.
Hub @ 20+00.00
NOTE:
EXISTING SMALL FRUIT TREES TO BE SALVAGED OR REPLACED
FRANKLIN ST.
TILE ST.
MH 4-11A
EXIST. MH 4-11
App. ℄
TIE IN
App. ℄
App. ℄
App. ℄
App. ℄
App. ℄
B 157.4ft
414
420
82°08'40" 42
120
845
840
App. ℄
EXIST MH 4-3
MH 4-3A
LAUREL ST.
App. ℄
840
27+04.02
=10+00.00
NOTE:
BULKHEAD EXIST. 12" TO NORTH WHEN NEW SEWER IS COMPLETED & TESTED
N
SCALE: 1" = 50'
SEWER LINE "E" REVISION (PENDLETON) DIV B
1/17/85

PLAN	SURVEYED	BY	DATE
	PLOTTED	E. MARCH	
NOTE BOOK	ALIGNMENT CHECKED	J. BOOZE	
No.	R/W CHECKED		

PROFILE	SURVEYED	BY	DATE
	PLOTTED	E. MARCH	
NOTE BOOK	GRADES CHECKED	J. BOOZE	
No.	R. R.'s NOTED		
	STRUCTURE FOUNDATIONS CHECKED		

850
840
830
820
MH 4-3C
820.83 "W"
820.93 "E"
MH 4-3D
827.07 "E"
827.19 "NW"
WATER
GAS(2")
6" - 833.35 "SW"
4" - 834.25 "NW"
4-3A
EXIST. MH 4-3
827.70 "W"
835.00 "N"
827.41 "E"
15' OF 12" @ 0.27%
827.75 W
MH 4-2 EXISTING
830.19 "S"
830.05 "E"
824.78 "S"
824.53 "N"
824.49 "E"
12"
350'-12" @ 0.27%
MH 4-3D
825.43 "N"
825.53 "E"
125'-12" @ 0.27%
15'-12" @ 0.27%
4-11A
WATER
8" SEWER
835.00 "W"
827.75 "W"
839.00 "E"
150'-8" @ 1.40%

PLATE 1 - PLAN - PROFILE B. R. A. STANDARD
1975

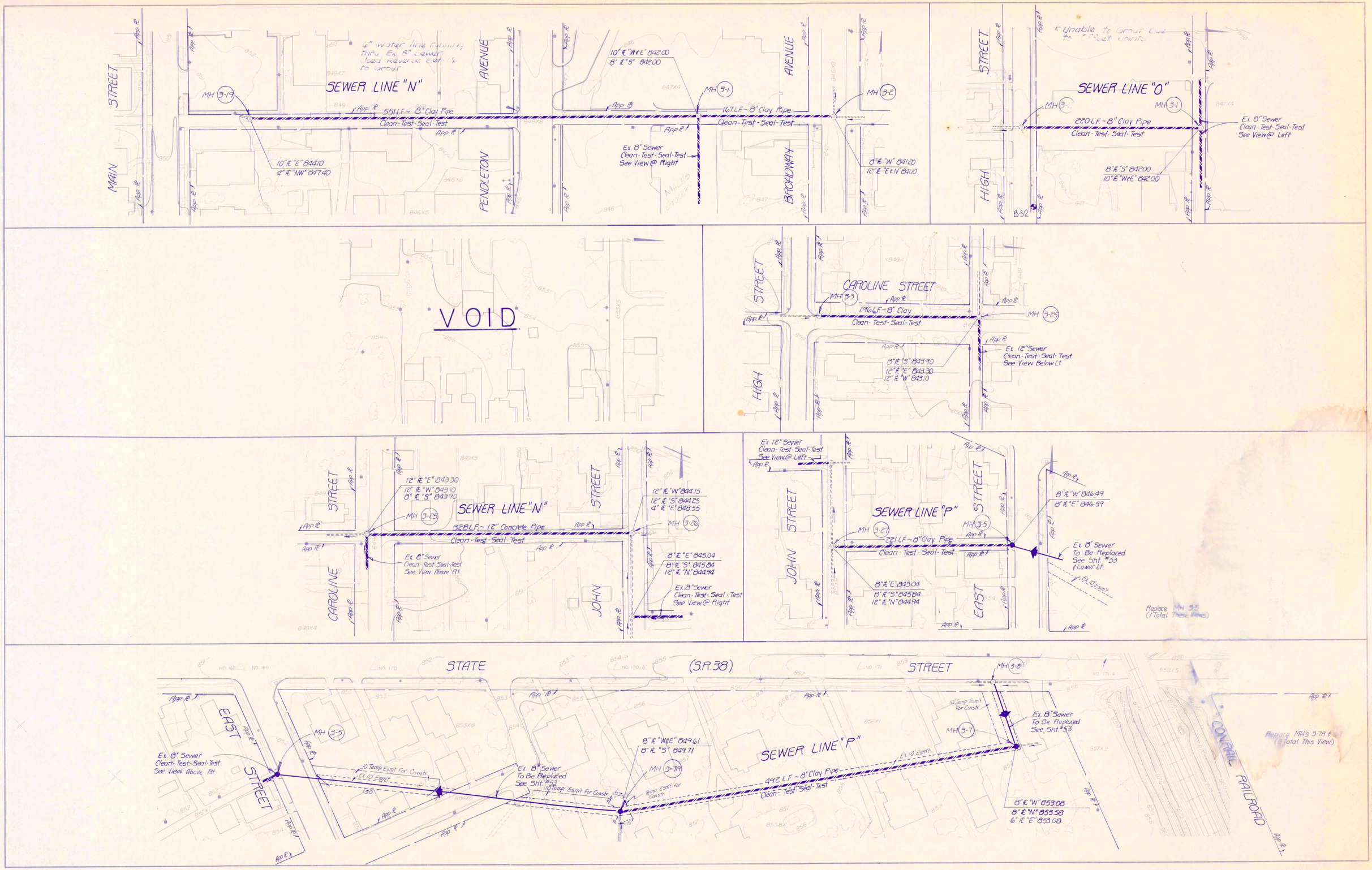
RECORD DRAWING

PROJECT NO.	LINE	SHEET NO.	TOTAL SHEETS	FILE
LINE "E"		48A		

TP.14

8"lf "N & E" 848.66
8"lf "S" 848.86
MAIN STREET
App lf
MH 6-23
400 LF ~ 8" Clay Pipe
Clean · Test · Seal · Test
6' Sewer
MH 6-24
175 LF ~ 8" Clay Pipe
Clean · Test · Seal · Test
8"lf "N & S" 837.63
8"lf "N & S" 833.68
120 LF ~ 8" Clay Pipe
Clean · Test · Seal · Test
MH 6-25
12"lf "N" 833.34
12"lf "E" 833.94
8"lf "S" 833.44
24" Storm Sewer
Ex. 12" Sewer
Clean · Test · Seal · Test
See View @ Right
MH 5-26
120 LF ~ 12" Clay Pipe
Clean · Test · Seal · Test
MH 5-27
Ex. 12" Sewer
Clean · Test · Seal · Test
See View Below
MADISON AVENUE
12"lf "S" 833.19
12"lf "W" 832.79
16"lf "N" 833.89
6"lf "E" 833.89
Ex. 10" Sewer
Clean · Test · Seal · Test
See Sht. #48
MH 4-7
Ex. 10' Esmt.
12"lf "E & NW" 832.07
15' Temp Esmt for Constr
159 LF ~ 12" Conc. Pipe
Clean · Test · Seal · Test
Ex. 12" Sewer
Clean · Test · Seal · Test
See Sht. #48
15' Temp Esmt for Constr
15' Perm. Esmt
15' Temp Esmt for Constr
SEWER LINE "C"
REVISED 3-19-84
(HANGER) ESMT AROUND
30" PIPE
MAIN STREET
MADISON AVENUE
85 LF ~ 12" Clay Pipe
Clean · Test · Seal · Test
MH 6-29
MH 4-4
Ex. 24" Storm Sewer
Ex. 12" Sewer
Clean · Test · Seal · Test
See View @ Left
12"lf "W" 832.99
12"lf "S" 833.19
16"lf "N" 833.89
6"lf "E" 833.89
12"lf "E" 833.44
12"lf "N" 833.34
8"lf "S" 833.44
Ex. 12" Sewer
Clean · Test · Seal · Test
See View Above
MH 6-22
SEWER LINE "A"
250 LF ~ 12" Clay Pipe
Clean · Test · Seal · Test
MH 5-21A
Ex. 8" Sewer
Clean · Test · Seal · Test
See View Above
MAIN STREET
8"lf "S" 834.50 (Prop)
12"lf "W & E" 833.90 (Ex)
24" Storm Sewer
PENDLETON AVE.
MH 6-21
12"lf "N & W" 837.20
12"lf "E" 838.00
Ex. 12" Sewer
Clean · Test · Seal · Test
See View Below Left
MH 5-18
225 LF ~ 12" Clay Pipe
Clean · Test · Seal · Test
159 LF ~ 12" Clay Pipe
Clean · Test · Seal · Test
Ex. 10' Esmt.
18" Storm Sewer
Ex. 10' Esmt.
Ex. 8" Sewer
To Be Replaced
See Sht. #52
Prop. 8" Sewer
12"lf "E" 834.12
12"lf "W" 834.02
8"lf "S" 836.32 (Ex.) Bulkhead
12"lf "W" 840.52
10"lf "E" 842.52
6"lf "S" 840.72
CENTER STREET
MADISON AVENUE
10"lf "W" 843.10
MH 5-20
98 LF ~ 10" Clay Pipe
Clean · Test · Seal · Test
Temp Esmt For Constr
MH 5-19
BROADWAY AVE
NO. 340
VOID
12"lf "E" 837.44
12"lf "N" 833.34
8"lf "S" 833.44
Ex. 12" Sewer
Clean · Test · Seal · Test
See View Above
MH 6-22
SEWER LINE "B"
231 LF ~ 12" Clay Pipe
Clean · Test · Seal · Test
MH 5-18
Ex. 12" Sewer
Slipline
See View @ Right
MH 5-1
MADISON AVE.
12"lf "N & W" 837.20
12"lf "E" 838.00
Ex. 12" Sewer
Clean Test Seal Test
See View Above
CENTER STREET
SPRING STREET
12"lf "E & S" 839.18
6"lf "NW" 841.48
12"lf "E & S" 839.18
6"lf "NW" 841.48
MH 5-1
SPRING STREET
MH 5-17
147 LF ~ 12" Clay Pipe
Slipline (SDR 26)
249 LF ~ 12" Clay Pipe
Slipline (SDR 26)
Ex. 12" Sewer
Slipline
See View @ Right
MH 5-16
Ex. 12" Sewer
Clean · Test · Seal · Test
See View @ Left
MADISON AVE
12"lf "E & W" 840.85
8"lf "N" 841.25
BROADWAY AVENUE
Ex. 12" Sewer
Clean · Test · Seal · Test
See View @ Right
12"lf "N & W" 842.96
12"lf "S" 849.36
6"lf "E" 844.06
VOID
12"lf "N & S" 845.11
8"lf "E" 845.66
Replace MH's 5-1, 5-17, 5-15 & 5-2
(4 Total These Views)
SPRING STREET
BROADWAY AVE.
Ex. 12" Sewer
Slipline
See View @ Left
5-112
72 LF ~ 12" Clay Pipe
Clean · Test · Seal · Test
135 LF ~ 12" Clay Pipe
Slipline (SDR 26)
MH 5-2
MH 5-15
MH 5-14
12"lf "E & S" 845.57
Ex. 12" Sewer
Slipline
See View Below Left
12"lf "N & W" 842.96
12"lf "S" 843.36
6"lf "E" 844.06
WALNUT STREET
BROADWAY AVENUE
12"lf "E & S" 845.57
WALNUT
211 LF ~ 12" Clay Pipe
Slipline (SDR 26)
MH 5-2
MH 5-10
Ex. 12" Sewer
Slipline
See View Above Right
Ex. 12" Sewer
To Be Replaced
See Sht. #65
12"lf "E" 847.15 (Ex. & Prop.)
12"lf "W" 847.15 (Ex.)
STREET
STREET
STREET
Ex. 8" Sewer
To Be Replaced
See Sht. #53
MH 5-14
174 LF ~ 10" Clay Pipe
Slipline (SDR 26)
MH 5-12
MH 5-11
Ex. 8" Sewer
To Be Replaced
See Sht. #52
10"lf "E" 849.99 (Ex.)
12"lf "W" 849.99 (Ex.) To Be Replaced
8"lf "N" 850.29 (Ex.) To Be Replaced
6"lf "S" 850.39 (Ex.)
PEARL
EAST
8"lf "N" 850.71 (Ex.) To Be Removed
8"lf "S" 851.71 (Ex.)
10"lf "W" 850.51 (Ex.)
6"lf "NE" 851.21 (Ex.)
6"lf "E" 851.61 (Ex.)
6"lf "S" 852.41 (Ex.)
10"lf "N" 850.51 (Prop.)
VOID
EAST STREET
(Jr High School)
SEWER LINE "D"
193.5 LF ~ 8" Clay Pipe
Slipline (SDR 26)
MH 5-3
MH 5-5
8"lf "SW" 852.12
6"lf "N" 852.12
Ex. 8" Sewer
To Be Replaced
See Sht. #52
8"lf "NE" 851.93 (Ex.)
8"lf "S" 851.47 (Ex.) To Be Removed
10"lf "S" 851.47 (Prop.)
Replace MH's 5-14, 5-12, 5-11 & 5-5 (4 Total These Views)
Type 7 Casting
RECORD DRAWING

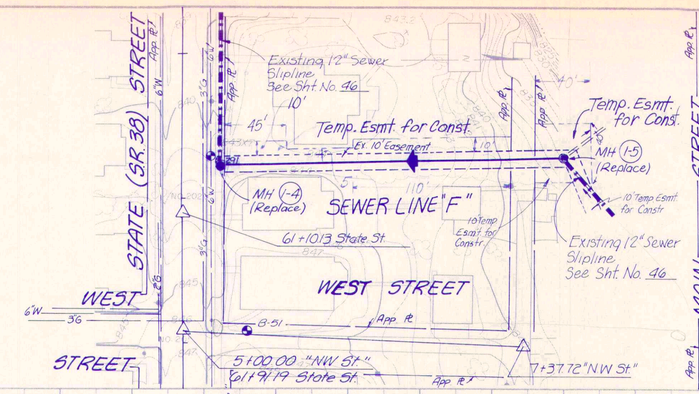
MAIN ST. SEWER LINE "C", SEWER LINE "A", WALNUT ST. SPRING ST., BROADWAY AVE. & SEWER LINE "B & D"
FALL CREEK R.W.D. PLAN
SHEET 49
HORIZ. 1"=50'
VERT. 1"=10'
BEAM, LONGEST & NEFF, INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA
SLIPLINE / CLEAN-TEST-SEAL-TEST

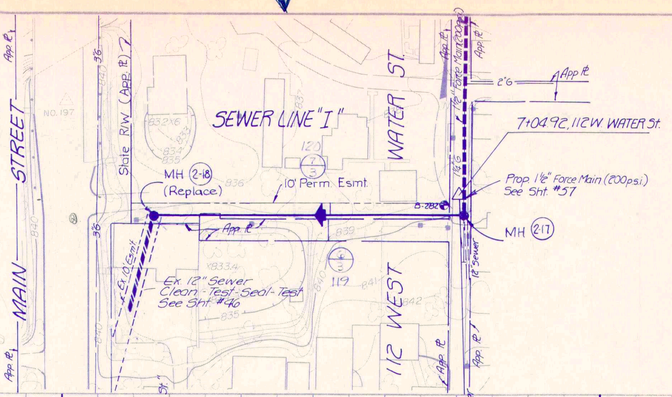


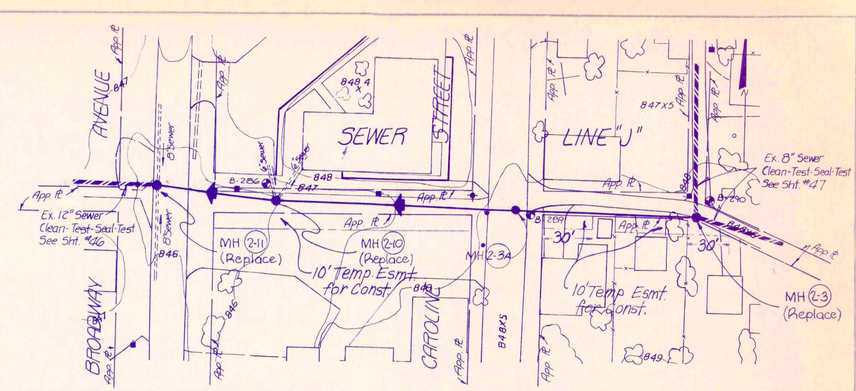
RECORD DRAWING

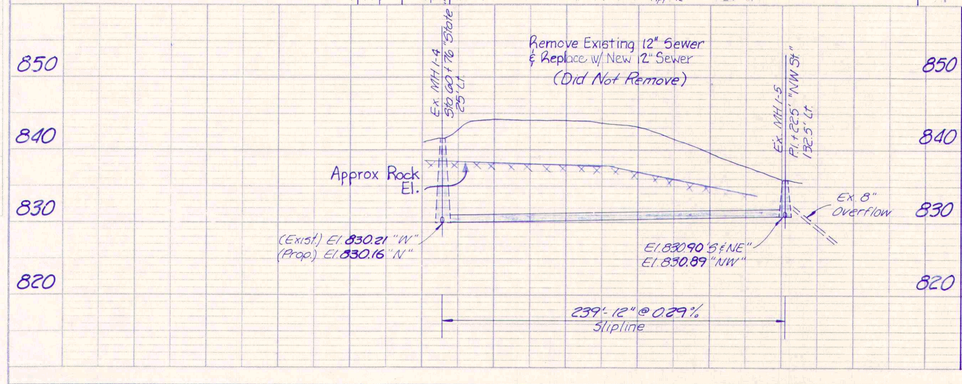
ENG RESKE REGISTERED No. 13142 STATE OF INDIANA PROFESSIONAL ENGINEER

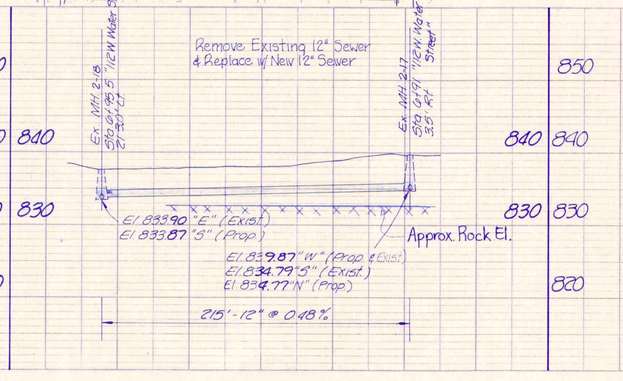
SEWER LINE "N", SEWER LINE "O", CAROLINE ST., & SEWER LINE "P"		
FALL CREEK R.W.D. PLAN		SHEET
HORIZ. 1" = 50'	BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA	50
VERT. 1" = 10'		
CLEAN-TEST-SEAL-TEST		

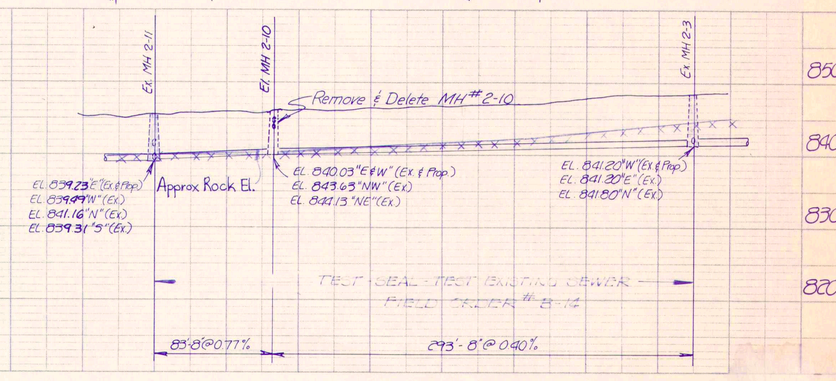


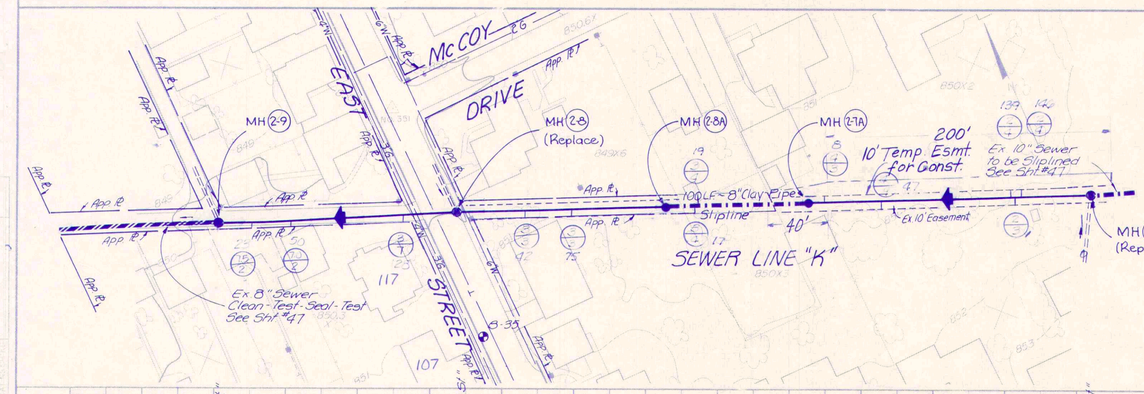


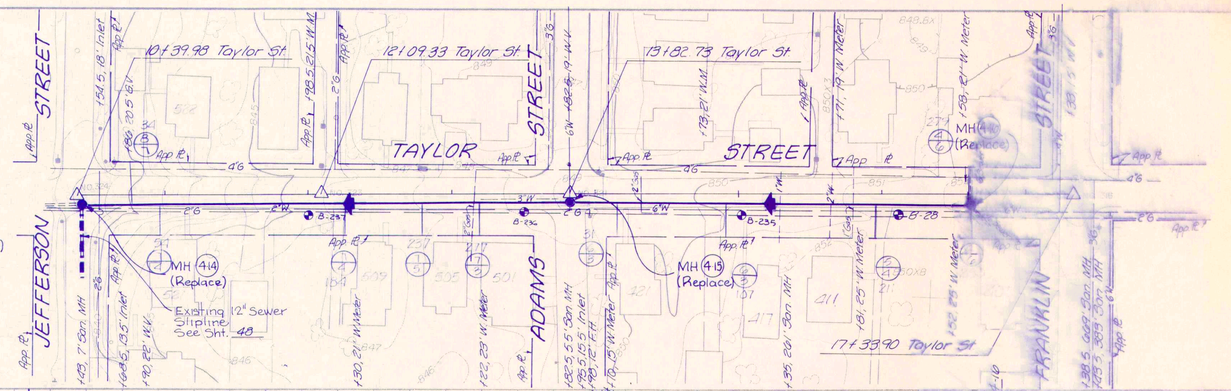


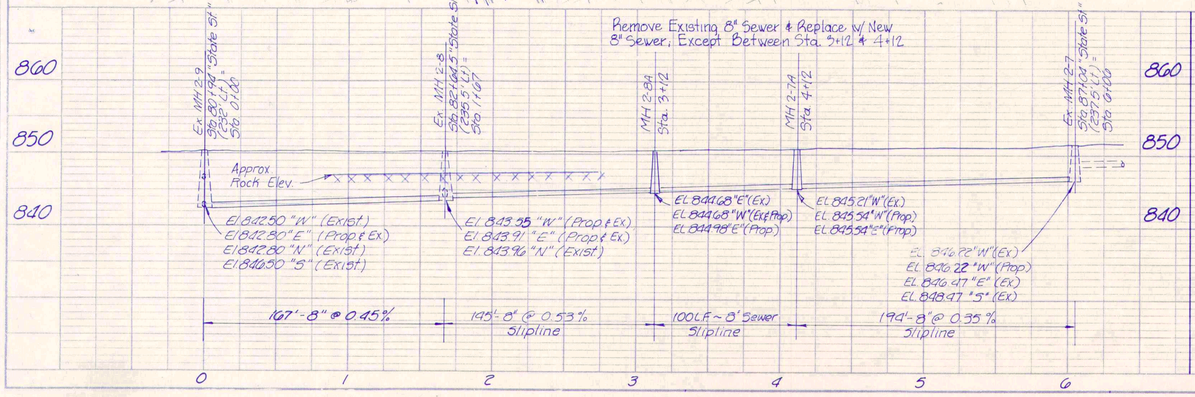


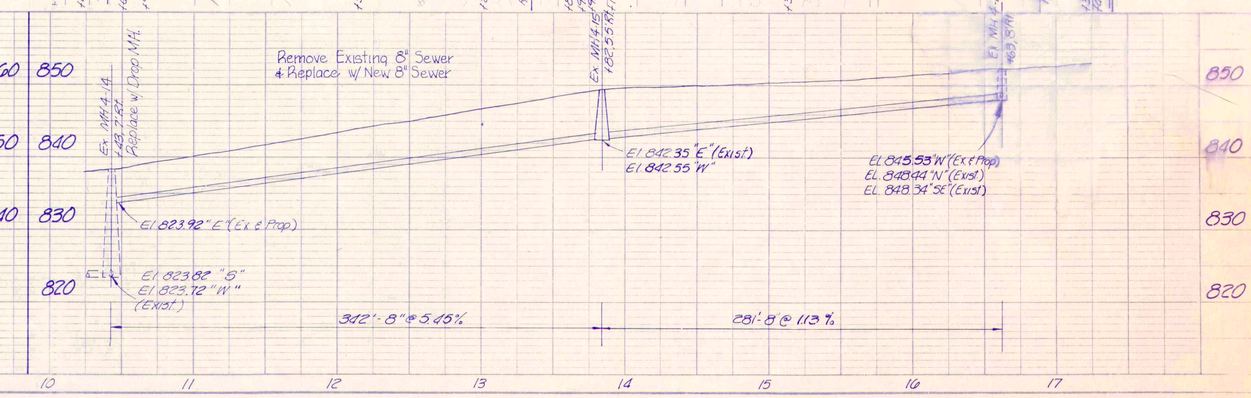












RECORD DRAWING

ERIC RESAE — 10706 — STATE OF INDIANA — REGISTERED PROFESSIONAL ENGINEER

SEWER LINES "F, I, J & K" / TAYLOR ST.

FALL CREEK R.W.D. PLAN & PROFILE — SHEET 5 / 1

HORIZ. 1" = 50' — VERT. 1" = 10'

BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA

PLAN — DRAWN: — TRACED: — CHECKED: — NOTE BOOK — NO.

PROFILE — DRAWN: BRUCE CHALKLEY — TRACED: M. S. NEFF — CHECKED: THURSTON PORTER, JR. — NOTE BOOK — NO.

30+53.45 PENDLETON AVE.

55+38.28 PENDLETON AVE.

PENDLETON AVENUE

MOORE AVE.

MH (6-8) Bulkhead Ex. 8" Sewer "N"

Remove Ex. Conc. Divider in MH (6-8A) & Bulkhead Ex. 8" Sanitary Sewer "N & S"

MH (6-9)

Remove & Replace Ex. MH (6-2) over Ex. Storm Sewer Tie Ex. 6" Sanitary Sewer "SE" To New MH (6-9A) w/ 10 LF - 6" Pipe - Bulkhead Ex. Sanitary Sewer "N & S"

MH (6-10) Bulkhead Ex. 8" Sewer "S"

Construct New MH (5-9) over Ex. 12" Sewer

Ex. 12" Sewer Clean - Test - Seal - Test See Sht. #49

Ex. 8" Storm Sewer

Ex. 8" Sanitary Sewer

Ex. 24" Storm Sewer

Ex. 10' Easement

Ex. 16" Sewer Clean - Test - Seal - Test See Sht. #49

WALNUT STREET

EAST STREET

Inlet, Type "J-10" Req'd El. 852.72 "E" El. 852.47 "N"

Remove exist. Inlet & Replace w/ Inlet, Type "J-10" El. 850.00 "E" Bulkhead Pipe "W" P.I. 6+59.79 Δ = 0°44'21" Lt.

See Sht. 65

Ex. 10" Sewer Slipline See Sht. #65

MH (5-3)

MH (5-2)

MH (5-5A)

MH (5-1)

Ex. 15" Storm Sewer

Ex. 10" Storm Sewer

Ex. 10" Sewer Slipline See Sht. #65

Ex. 8" Sewer Slipline See Sht. #49

Ex. 8" Prop. Sanitary Sewer

26"-18" @ 100% ±

8"-12" @ 1.00%

15"-24" @ 1.00%

250'

10' Temp Esmt for Const. M.H., Type C-4 Req'd

M.H., Type C-4 Req'd

Inlet, Type "J-10" Req'd El. 853.00 "W"

MH (5-11) (Replace)

Remove exist. Inlet & Replace w/ Inlet, Type "J-10" El. 850.00 "W" Bulkhead Pipe "E"

MH (5-3B) (Replace) (Eliminated)

MH (5-4) (Replace)

MH (5-3) (Replace)

Remove exist. Inlet & Replace w/ Inlet, Type "A" El. 851.97 "N" Exist. 10" El. 847.75 "W" (Stone) Bulkhead pipe "S"

M.H., Type "C-4" Req'd

5100.00 EAST ST. 7+82.94 WALNUT ST.

ELEMENTARY SCHOOL

NOTE: Remove Ex. 8" Sanitary Sewer & Replace w/ 10" Dia. Pipe. Remove Ex. 10" & 12" Storm Sewer From MH (5-1) to MH (5-2), Replace in Location as Shown.

Ex. MH (6-8) +37.17 Rt.

MH (6-8B) +53.6 Rt.

Ex. MH (6-9) +86.42.5 Rt.

Ex. MH (6-2) +35.14 Rt.

MH (6-9A) +33.6 Rt.

MH (6-10) +81.16.5 Rt.

EL 850.37 "S" (Ex.) EL 850.37 "W" (Ex.) EL 850.37 "N" (Ex.) Bulkhead EL 850.37 "NW" (Prop.)

EL 849.85 "E" EL 848.03 "N" EL 849.01 "E"

EL 849.62 "S" El. 849.02 "E" El. 848.04 "N"

Ex. 8" Storm & Sanitary Sewers are Parallel & At Approx. The Same Elevations

EL 843.01 "N" EL 843.19 "S" EL 843.40 "SE"

Ex. Storm Sewer

Ex. Sanitary Sewer

EL 833.68 "S" (Prop.) EL 833.92 "W" (Ex.) EL 833.90 "E" (Ex.)

20'-8" @ 0.60%

270'-8" @ 1.80%

326'-8" @ %

860 850 840 830

50 51 52 53 54 55 56 57

Ex. MH (5-11) +90.23 Rt.

Ex. MH (5-4) +116.23 Rt.

Ex. MH (5-3) +205.21.5

Ex. 10" Storm Sewer

EL 850.71 "N" (Ex.) EL 850.61 "W" (Ex.) EL 851.21 "NE" (Ex.) EL 851.71 "S" (Ex.) EL 852.41 "S" (Ex.) EL 851.61 "E" (Ex.) EL 850.38 "N" (Prop.)

EL 851.26 "S" (Ex. & Prop.) EL 851.73 "NE"

EL 851.08 "N & S" (Ex. & Prop.)

423'-10" @ 0.23%

105'-10" @ 0.27%

Approx. Rock Elevation

M.H. 5-E +86.5 Rt.

M.H. 5-D +3.5 Rt.

M.H. 5-C +130.5 Rt.

Exact Elevation

Proposed Storm Sewer Plotted 20' Below Datum

Ex. 10" El. 848.33 "NE" El. 845.83 "N" El. 845.83 "SW"

136'-24" @ 0.15%

218'-24" @

130'-24" @ %

El. 848.24 "E" El. 848.33 "W" El. 846.04 "S"

El. 838.90 "W" Ex. 10" El. 846.90 "E" El. 846.60 "S"

860 850 840 830

5 6 7 8 9 10

VOID

VOID

RECORD DRAWING

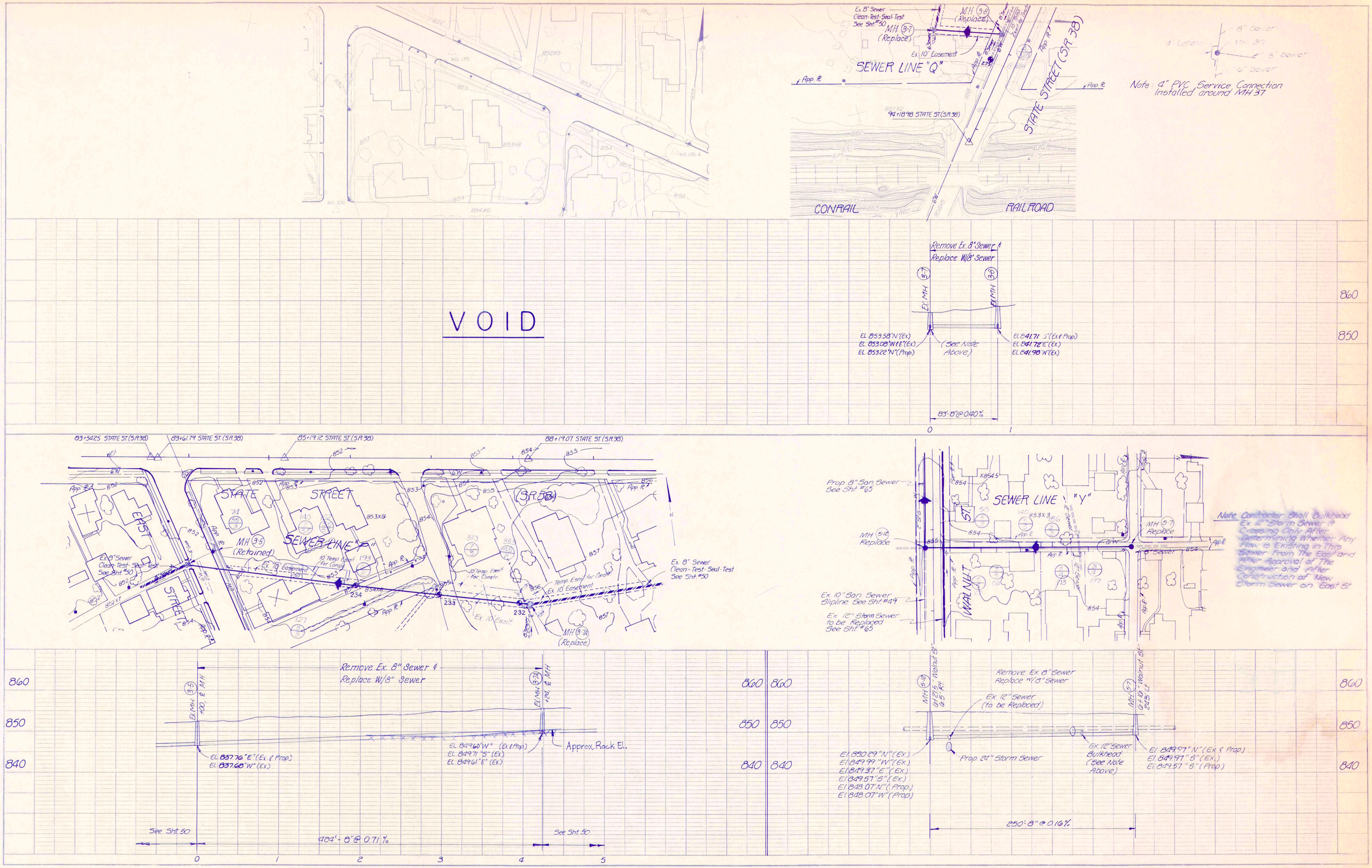
I. G. VECKE, REGISTERED No. 13442 STATE OF INDIANA PROFESSIONAL ENGINEER

PENDLETON AVE/EAST STREET

FALL CREEK R.W.D. PLAN & PROFILE — SHEET 12

HORIZ. 1"=50' — VERT. 1"=10'

BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA



RECORD DRAWING

SEWER LINES "Q, P, & Y"		
FALL CREEK R.W.D. PLAN & PROFILE		SHEET
HORIZ. 1"=50'	BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA	53
VERT. 1"=10'		

PLAN
DATE
NOTE BOOK
NO.

PROFILE
DATE
NOTE BOOK
NO.

PENDLETON AVENUE

PENDLETON AVENUE

App. R.

MH 6-37

MH 6-36

MH 6-35

MH 6-34

MH 6-33

MH 6-32

MH 6-31

MH 6-30

B-66

B-64

S-91

B-23

FIELD LINE

"O" LINE

9+90.30 PENDLETON AVE.

12+68.57 PENDLETON AVE.
55+70.44

17+45.09 PENDLETON AVE.

22+24.71 PENDLETON AVE.

27+09.61 PENDLETON AVE.

30+95.52 PENDLETON AVE.

35+64.92 PENDLETON AVE.

See Sht. 55

See This Sht. Lower Left

See This Sht. Top Right

Matchline 20+50

Matchline 20+30

Matchline 35+40

2% G

2.5% G

2.8% G

6" PVC STORM DRAIN

Note: Contractor Shall Expose & Verify Location & Depth Of Exist. Drainage Pipe Before Constructing New Sewer

Temp. Ditch Grade

Temp. Ditch Grade

Lift Station (See Sht. 56)

4" Force Main (200 psi)

Thrust Block 31+17, 35' Lt.

Exist. 30" Pipe

Exist. 18" STORM

Cliff Stormdr. 17+17.47 Lt.

90° Bend

Thrust Block 17+33' Lt.

4' Minimum Bury

1¼" ST. GAS

2" ST. GAS

FARM BUREAU CO-OP

FREEDOM HILL ROAD

PENDLETON AVENUE

FARM R/W +66 LEFT STATION

FARM R/W +66 LEFT STATION

Farm Entr.

Farm Entr.

Temp. Ditch Grade

Temp. Ditch Grade

Approx Rock El.

Approx. Rock El.

EL. 871.24"N"

EL. 869.46"S"
EL. 869.26"N"

EL. 868.71"W"
EL. 868.77"S"
EL. 868.49"N"

EL. 866.64"S"
EL. 866.45"N"

EL. 865.09"S"
EL. 864.97"N"

EL. 863.69"S"
EL. 863.54"N"

EL. 859.04"S"
EL. 859.06"W"
EL. 858.90"N"

EL. 860.98"N"
EL. 858.83'E

EL. 861.57"S"
EL. 861.10"N"

424'-8" @ 0.42%

163'-8" @ 0.42%

474'-8" @ 0.45%

372'-8" @ 0.37%

437'-8" @ 0.30%

193'-8" @ 0.91%

62'-8" @ 0.40%

39'-8"

467'-8" @ 1.36%

445 LF. of 4" Force Main (200 psi)

RECORD DRAWING

REVISED 3-19-84
CHANGED BEGIN & END AROUND MH 6-33 TO MH 6-28

NEED ELEVATION & N/S LOCATION OF LIFT STATION.
NEED LOCATION & PIPE END & INVERT ELEV.
NEED LOCATION & CURB BOX & HOSE.
NEW ASPHALT LINE & NEW LOCATION & THICK BANK
BWC 3/19/85

PENDLETON AVENUE
FALL CREEK R.W.D. PLAN & PROFILE
HORIZ. 1"=50'
VERT. 1"=10'
BEAM, LONGEST & NEFF, INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA
SHEET 54

PLAN
NOTE BOOK
NO.

PROFILE
NOTE BOOK
NO.

Note: Box 11 Tied in with Box 14 At Tee At 43+1' Subsequently, 6" Stub is Abandoned, & Available for any future needs.

Match line 35+50 See Sht. 54 Top Right

Temp. Easement for Constr.

PENDLETON AVENUE

Air Release Valve

MH (6-29) 58 (6-20)

6"W

B-292

2"S G

App. ℄

B-24

MH (6-28) 430 (8-5-4)

6" lateral (Box 11 & 14) 2' out of MH

4" Force Main (200 psi.)

MH (6-15)

6" Sewer

8" Sewer

INDIANA AVENUE

35+64.92 PENDLETON AVE.

38+50.43 PENDLETON AVE.

41+73.89 PENDLETON AVE.

CENTRAL R.R.

PENN

REFORMATORY ROAD

Post-Ex Inspection Reported By Reynolds

Lift Station

Perm R/W for Lift Station

Temp. Easmt for Constr.

Perm. Esmt

Temp. Esmt For Constr.

Perm. Esmt

4" Force Main (200 psi.)

See Sht. 54 Lower Right

B-23

3+63.51 Reformatory Rd.

30+95.52 PENDLETON AVE

MH (6-31)

B-284

MH (6-40)

5+00.00 Reformatory Rd.

Note: Contractor Shall Expose & Verify Location and Depth of Ex. Drainage Pipe Before Constructing New Sewer

See Sht. 54 Lower Right

880 / 870 / 860

Match line 35+50 See Sht. 54 Top Right

MH (6-29) 415.31 L.F.

Air Release Valve (8" Iron Right Hand)

4" Minimum Bury

MH (6-28) +50.26 L.F.

Ex. MH (6-15) +96.17 L.F.

EL 863.34 "S"
EL 863.29 "N"

EL 869.91 "N" (Ex.)
EL 869.95 "S" (Ex.)
EL 870.01 "E" (Ex.)
EL 871.98 "W" (Prop.)

EL 864.80 "S"

See Sht. 54

447'-8" @ 0.34%

670 L.F. of 4" Force Main (200 psi.)

36 37 38 39 40 41 42

MH (6-40) +65.25 Rt.

EL 862.34 "E"

Ex. 30" Pipe

MH (6-31) +69.25 Lt. PENDLETON AVE.

EL 859.04 "S"
EL 859.06 "W"
EL 858.90 "N"

Approx. Rock El.

455'-8" @ 0.72%

3 4 5 6 7 8

880 / 870 / 860

* NOTE: THIS SHT. ALL RURAL ROUTE #2.

PENN CENTRAL RAILROAD

LINE "O"

5' Temp. Easement for Constr.

PENDLETON AVENUE

See Sht. 54 Lower Left

See Sht. 54 Lower Left

See View @ Rt.

MH (6-38)

405 (6-14)

368 (6-10)

309 (4-3-11)

342 (5-18)

324 (4-2-24)

MH (6-35)

App. ℄

B-293

B-294

2"S G

B-65

37 50+00.00 LINE "O"

49+49.15 LINE "O"

52+59.55 LINE "O"

40 55+70.44 LINE "O"
12+68.57 PENDLETON AVE.

39

46+67.70 LINE "O"

PENN CENTRAL RAILROAD

49+49.15 LINE "O"

MH (6-39) 4-24-218

4-5-24-65

37A

50+00.00 LINE "O"

See View @ Rt.

890 / 880 / 870 / 860

MH (6-38) +72.19 L.F.

EL 871.11 "S"
EL 870.95 "E"

MH (6-35) +81.25 L.F. PENDLETON AVE.

EL 868.71 "W"
EL 868.49 "N"
EL 868.77 "S"

585'-8" @ 0.40%

50 51 52 53 54 55 56

MH (6-39) +45.5 L.F.

MH (6-38) +72.19 L.F.

EL 872.60 "N"

EL 871.11 "S"
EL 870.95 "E"

APPROXIMATE ROCK EL.

227'-8" @ 0.65%

47 48 49 50

890 / 880 / 870 / 860

VOID

970.95
868.71
2.24 FT
2.88'
0.49 FT

REVISED 3-14-84
CHANGED R/W AROUND LIFT STATION
Revised 8-1-84
Changed Grade From MH 6-29 To MH 6-15

RECORD DRAWING

REGISTERED PROFESSIONAL ENGINEER

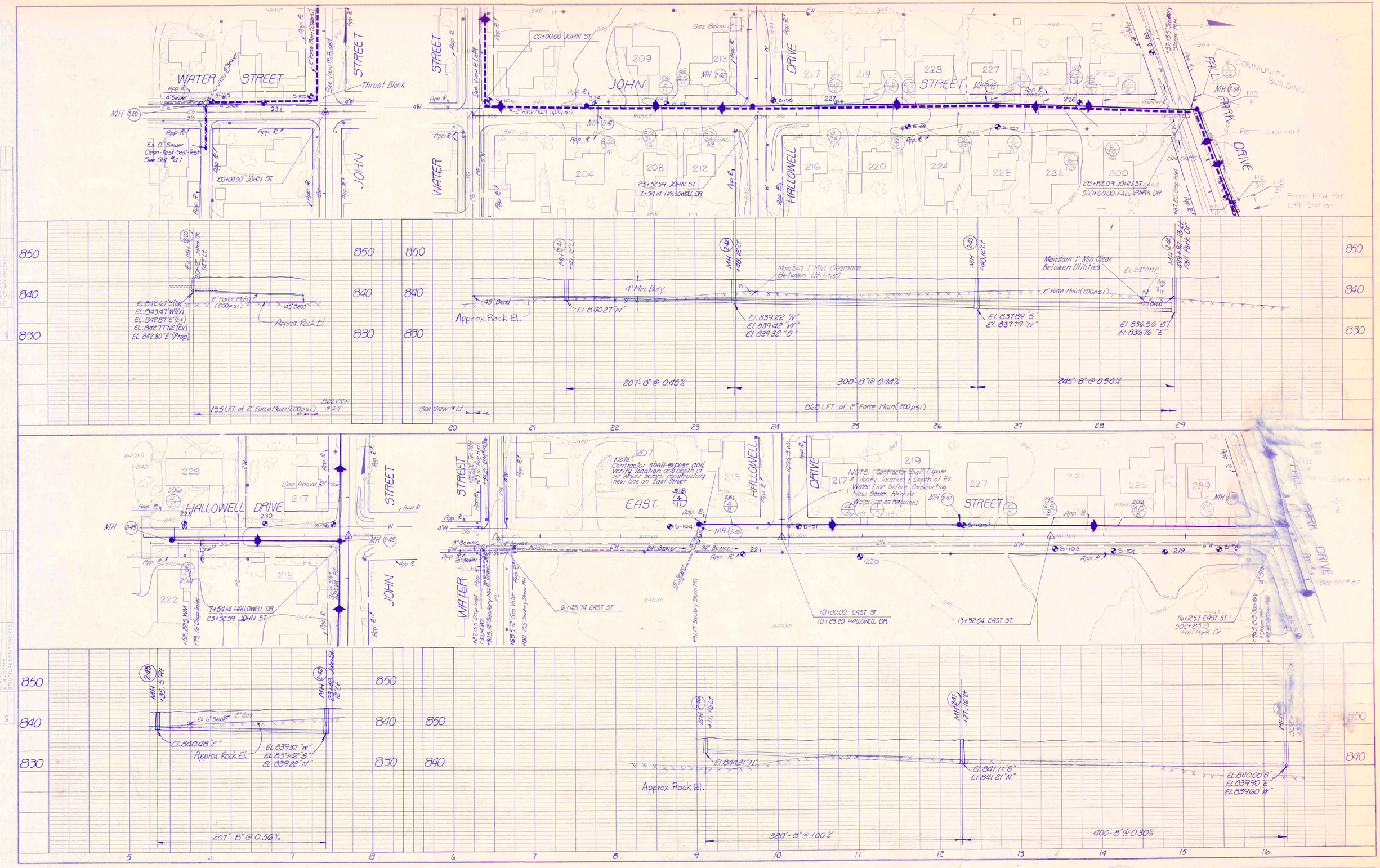
PENDLETON AVE / REFORMATORY RD. & LINE "O"

FALL CREEK R.W.D. PLAN & PROFILE

HORIZ. 1"=50'
VERT. 1"=10'

BEAM, LONGEST & NEFF, INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA

SHEET 55



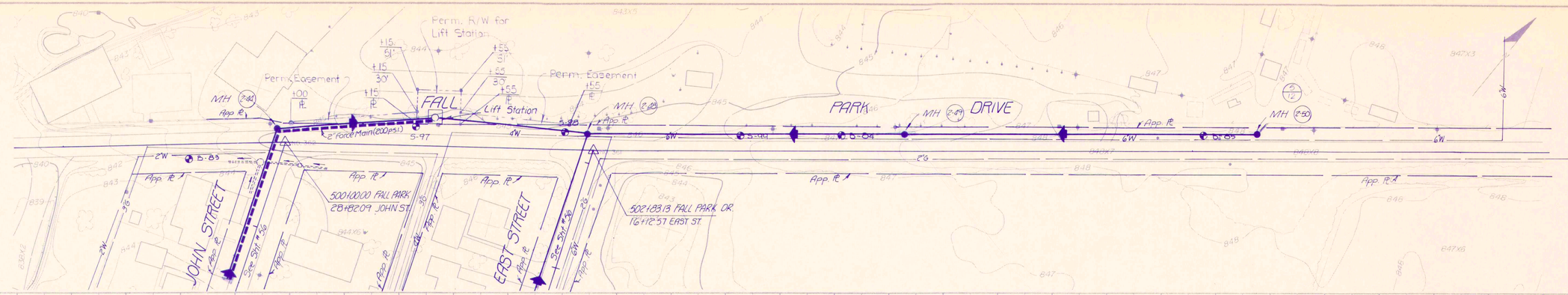
PLAN

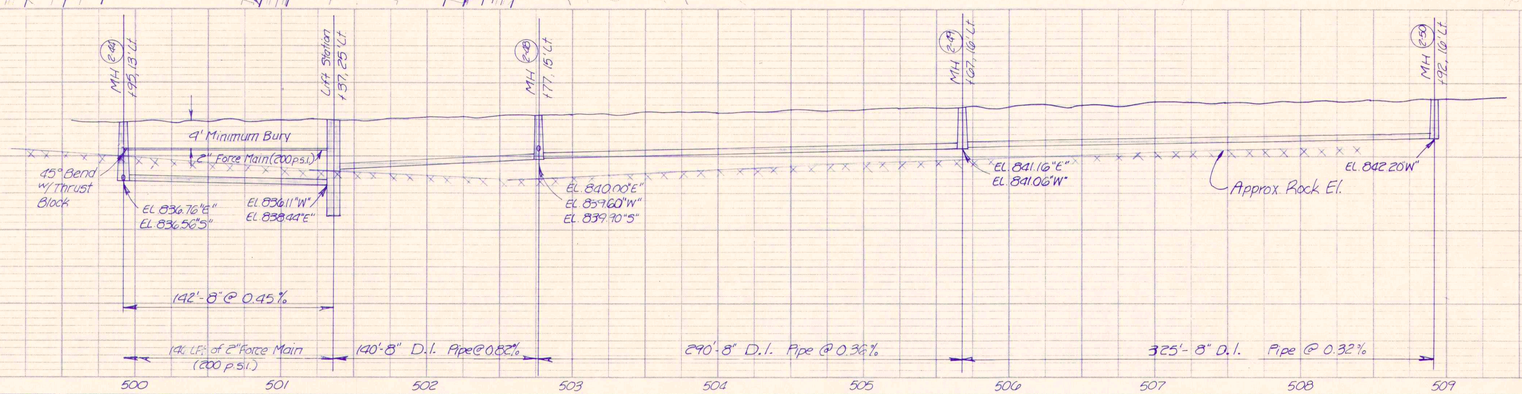
PROFILE

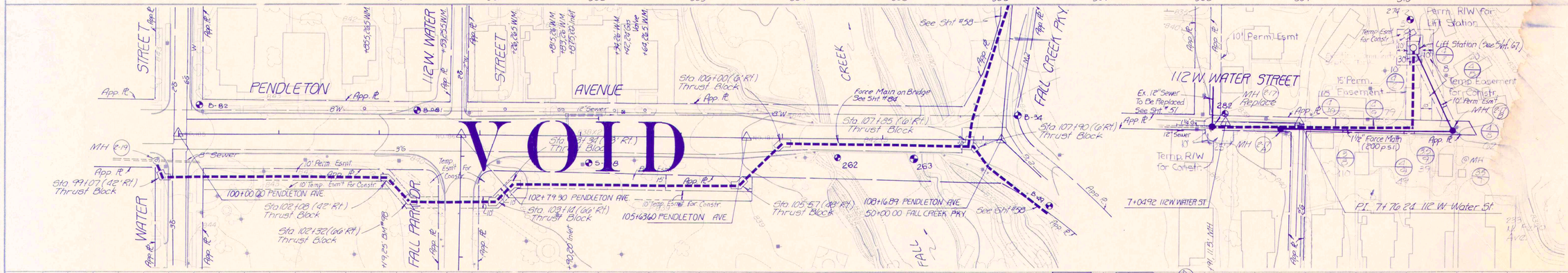
RECORD DRAWING

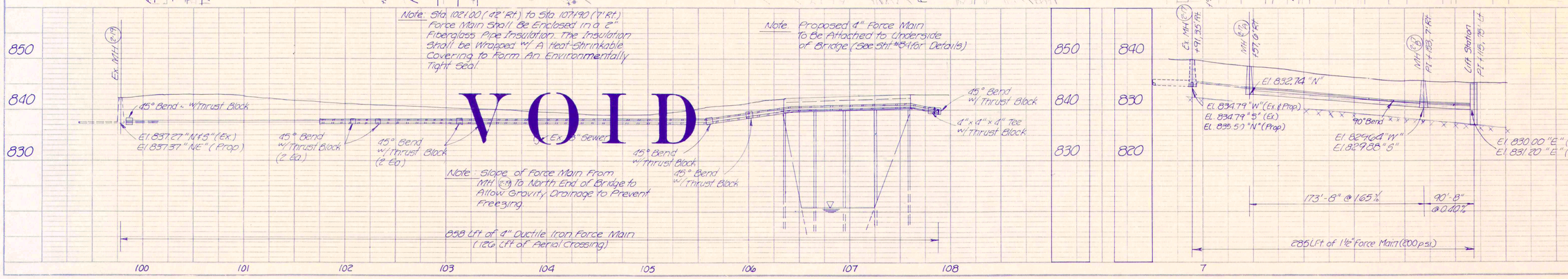
ERIC RESKE REGISTERED No. 13442 STATE OF INDIANA PROFESSIONAL ENGINEER

WATER STREET / JOHN STREET HALLOWELL DRIVE / EAST STREET		
FALL CREEK R.W.D. PLAN & PROFILE		SHEET
HORIZ. 1"=50'	BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA	56
VERT. 1"=10'		









VOID

VOID

RECORD DRAWING

ERIC KESHE REGISTERED PROFESSIONAL ENGINEER STATE OF INDIANA

FALL PARK DRIVE / PENDLETON AVENUE / 112 W. WATER STREET

FALL CREEK R.W.D. PLAN & PROFILE

HORIZ. 1"=50'
VERT. 1"=10'

BEAM, LONGEST & NEFF, INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA

SHEET 5

PLAN
PROFILE

PENDLETON AVENUE

See View Below Rt. See Sht 35

9 Sta. 107+85 (6' Rt.) Tee w/ Thrust Block

108+16.89 PENDLETON AVE
50+00.00 FALL CREEK PKY

9 Sta. 107+90 (6' Rt.) Thrust Block

Perm. Easement

Perm R/W for Lift Station

Vacuum Release Valve

Lift Station (See Sht. 66)

111+97.00 PENDLETON AVE

Perm. Easement

116+13.88 PENDLETON AVE

Perm. Easement

118+66.00 PENDLETON AVE

MH (253)

MH (254)

MH (255)

MH (256)

MH (257)

MH (258)

MH (259)

MH (260)

MH (261)

MH (262)

MH (263)

MH (264)

MH (265)

MH (266)

MH (267)

MH (268)

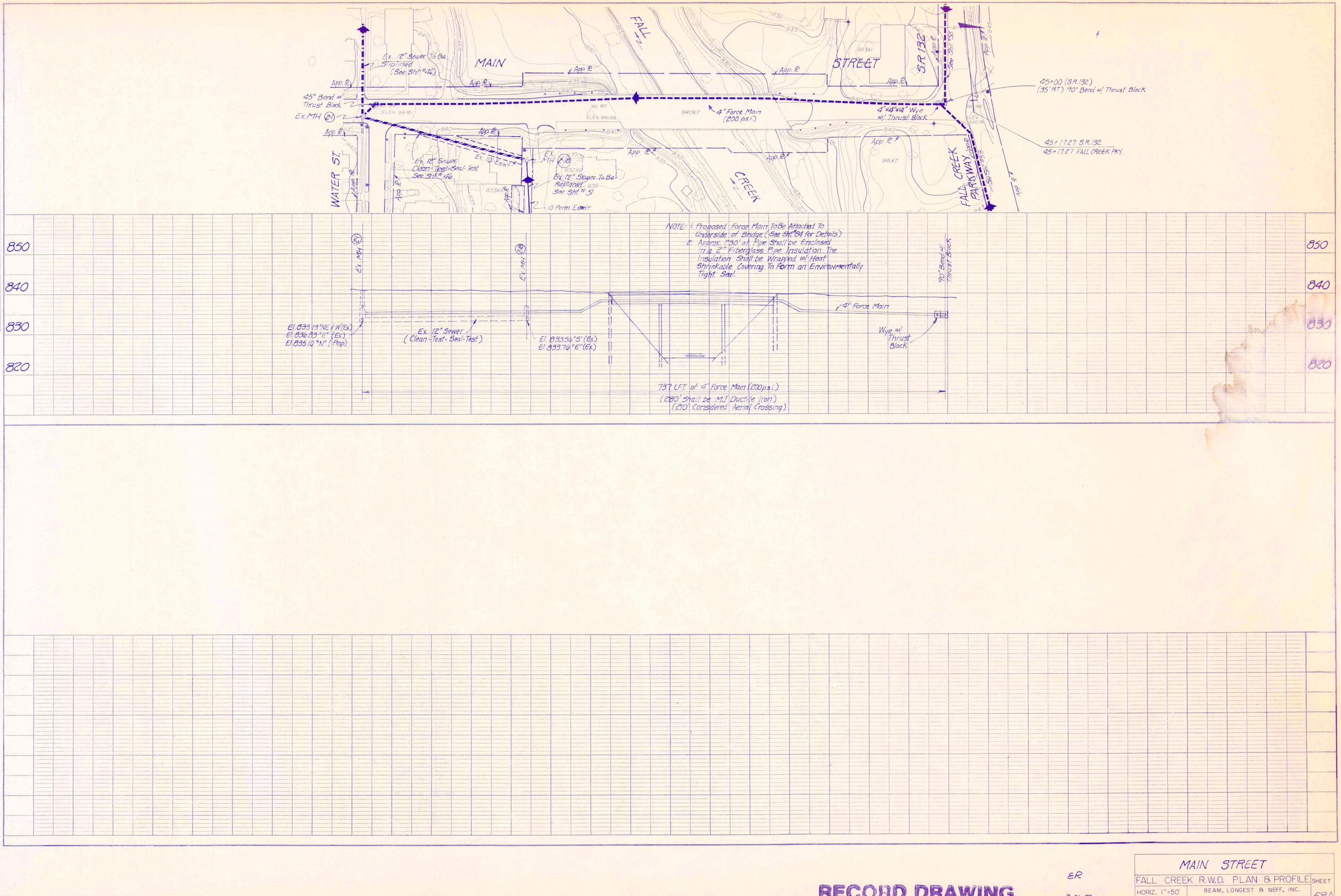
MH (269)

MH (270)

MH (271)

MH (272)

MH

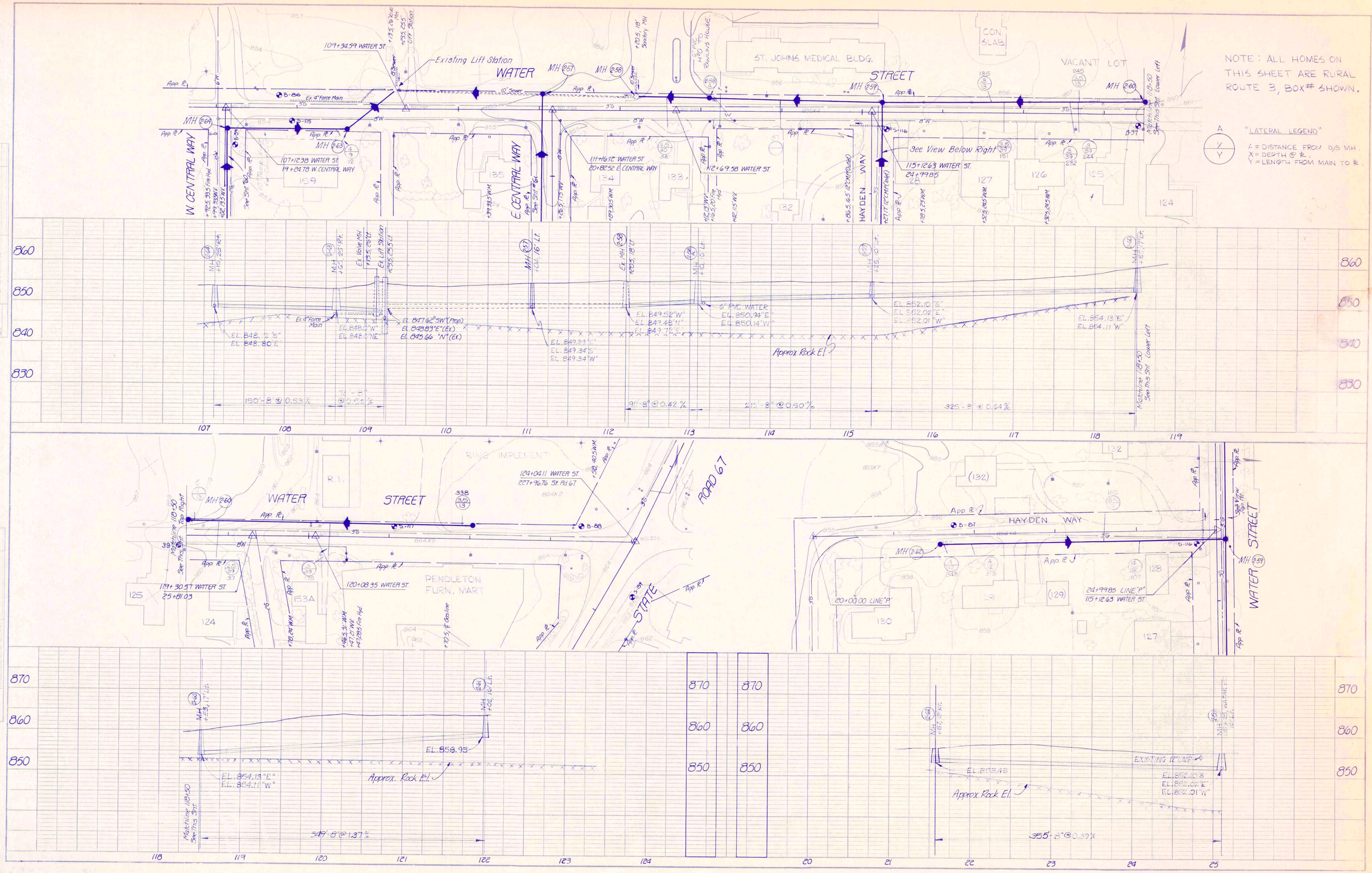


RECORD DRAWING

ER

3-30-83

MAIN STREET		
FALL CREEK R.W.D. PLAN & PROFILE		SHEET
HORIZ. 1" = 50'	BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA	58A
VERT. 1" = 10'		



PLAN

PROFILE

RECORD DRAWING

WATER STREET/ LINE "P"

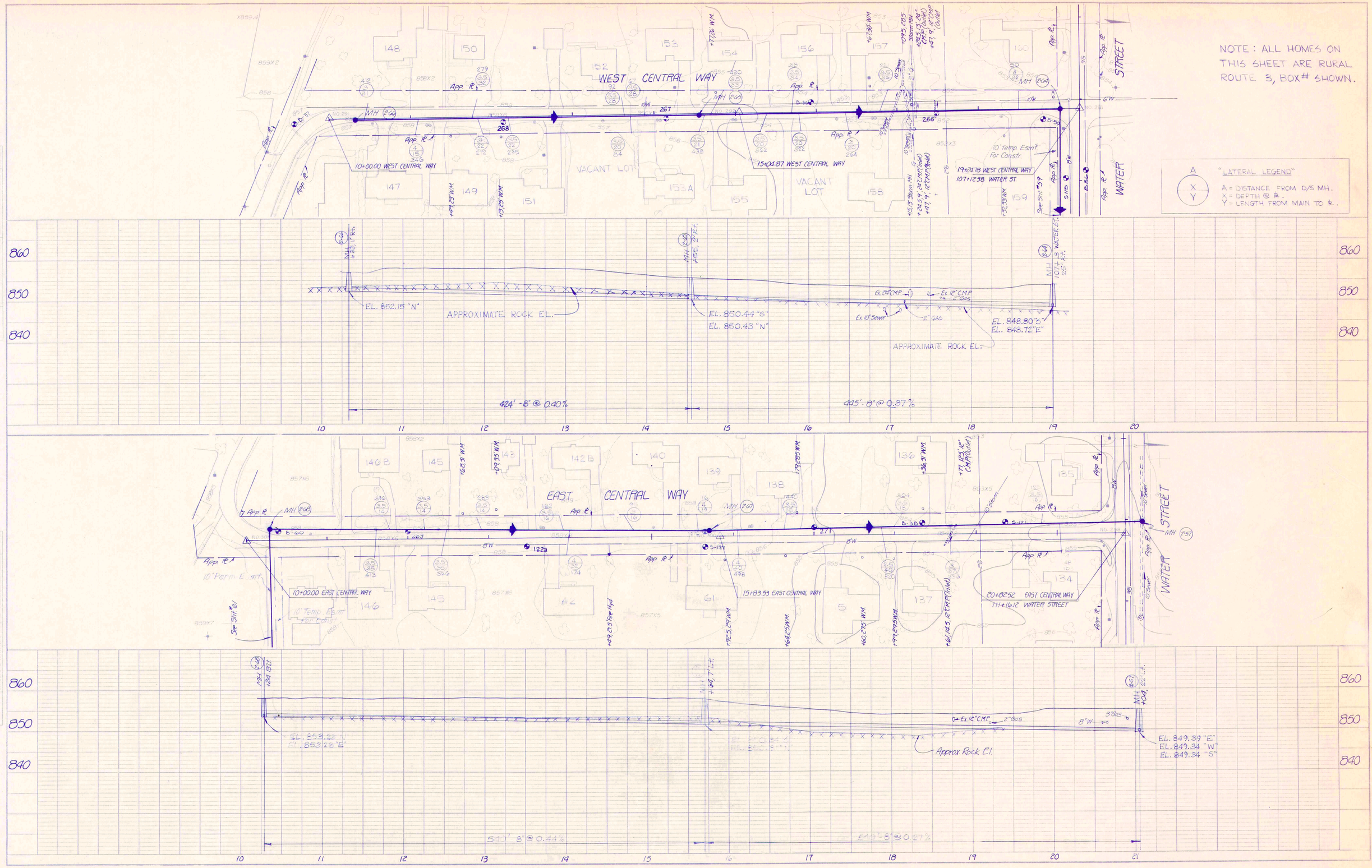
FALL CREEK R.W.D. PLAN & PROFILE

HORIZ. 1"=50'

VERT. 1"=10'

BEAM, LONGEST & NEFF, INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA

SHEET 59



PLAN

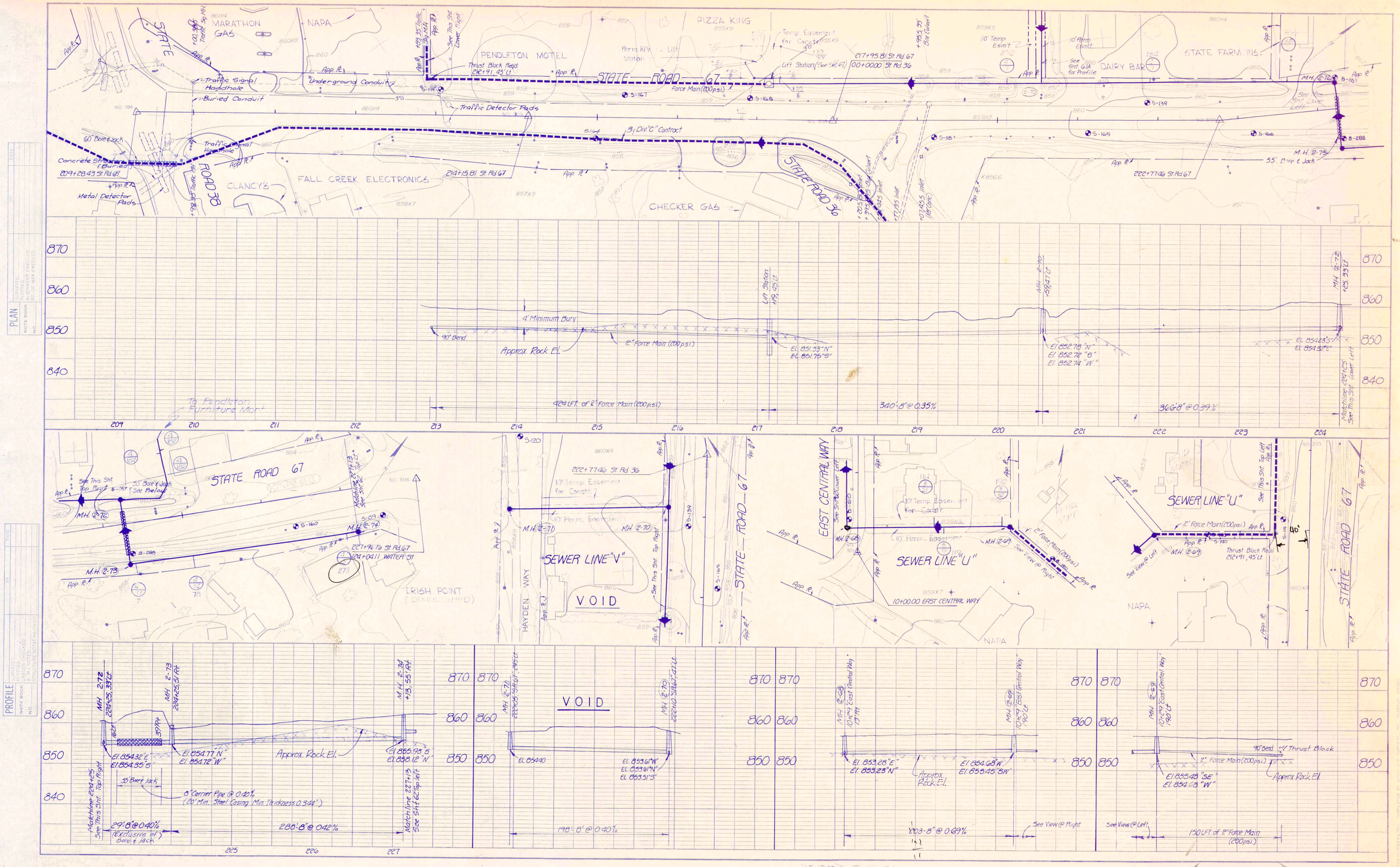
PROFILE

RECORD DRAWING

ERIC RESKE
REGISTERED
No. 13442
STATE OF INDIANA
PROFESSIONAL ENGINEER

WEST & EAST CENTRAL WAY		
FALL CREEK R.W.D. PLAN & PROFILE		SHEET
HORIZ. 1"=50'	BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA	60
VERT. 1"=10'		

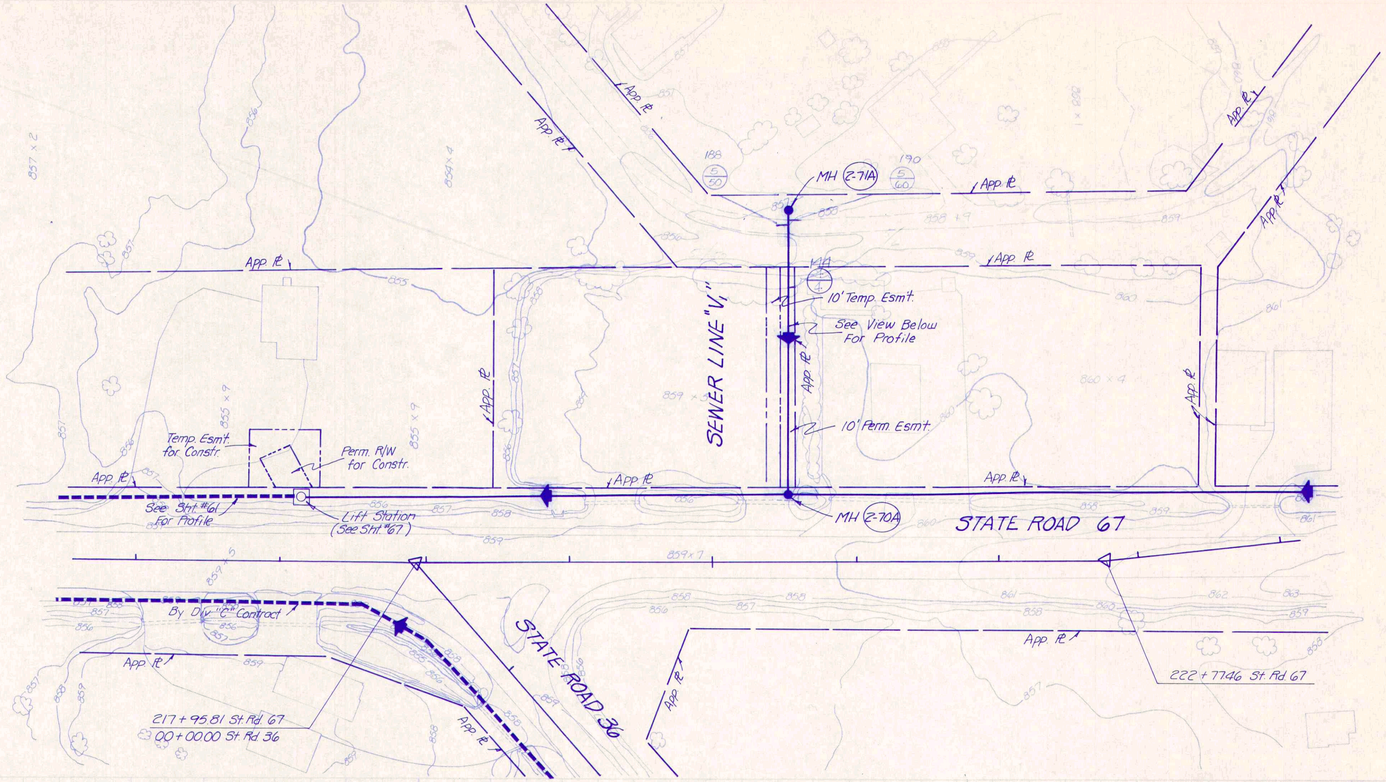
"ASBUILT"
1/23/85

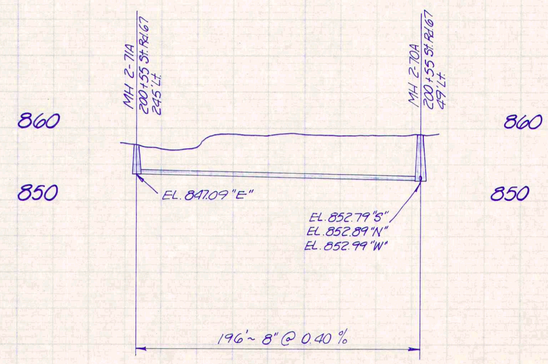


REVISED 3-19-84
VOID SEWER LINE "V" &
MOVE IT TO A NEW LOCATION

RECORD DRAWING

STATE ROAD 67 SEWER LINES "V & U"		
FALL CREEK R.W.D. PLAN & PROFILE		SHEET
HORIZ. 1"=50' VERT. 1"=10'	BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA	61





SEWER LINE "V,"

STATE ROAD 67

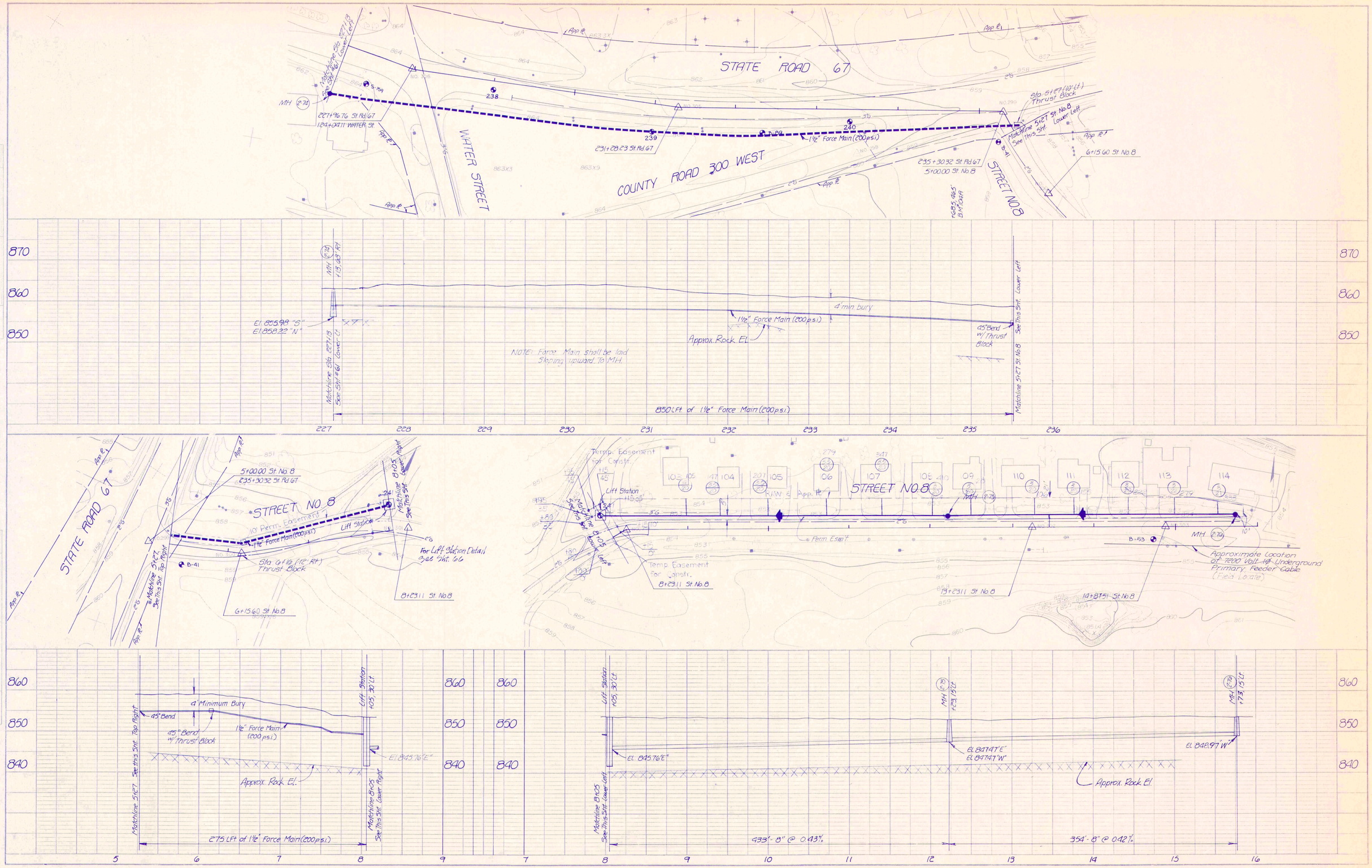
FALL CREEK R.W.D. PLAN & PROFILE

HORIZ. 1"=50'
VERT. 1"=10'

BEAM, LONGEST & NEFF, INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA

SHEET 61A

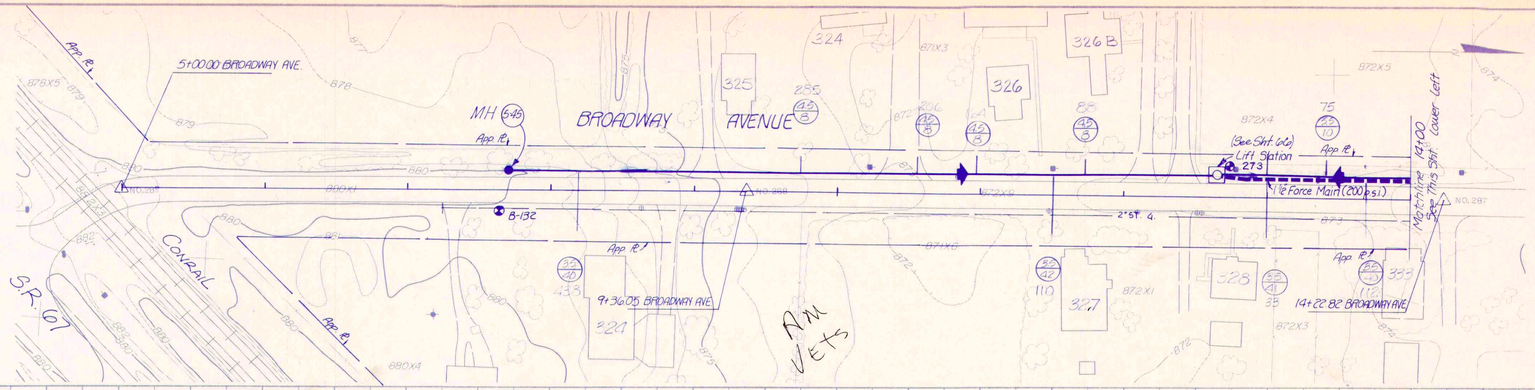
RECORD DRAWING

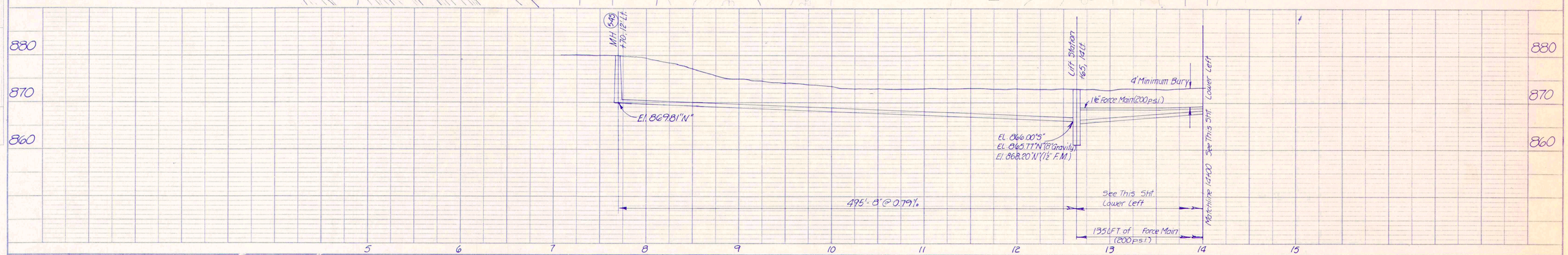


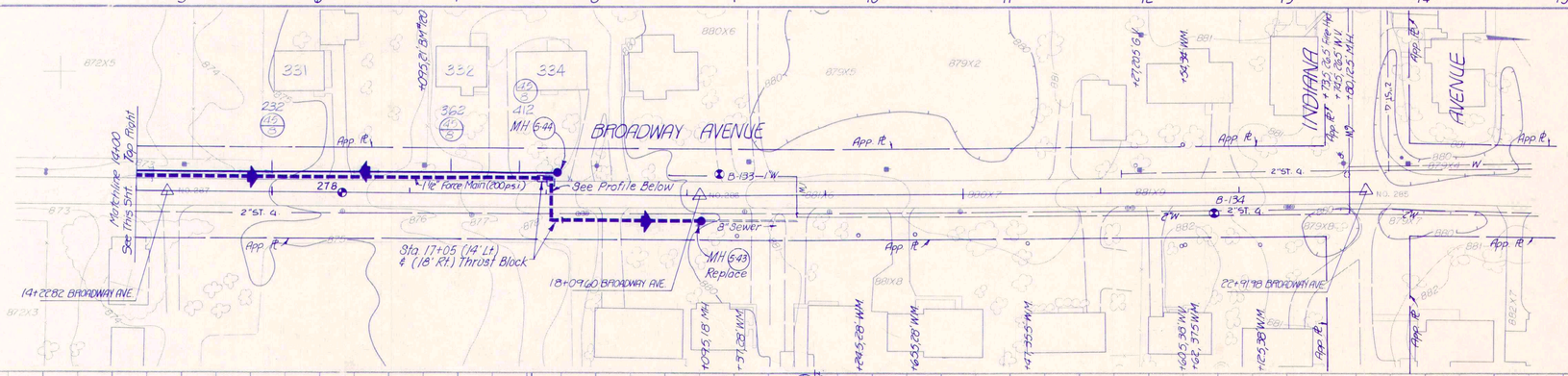
RECORD DRAWING

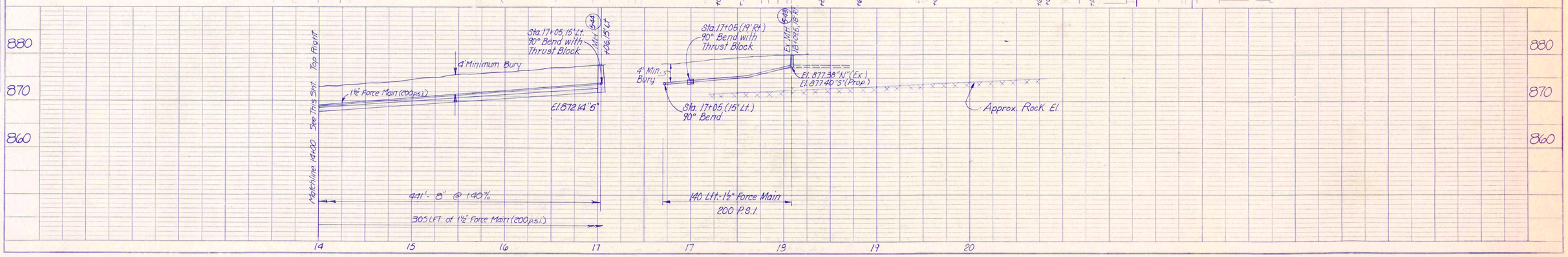
STATE ROAD 67/ STREET NO. 8		
FALL CREEK R.W.D. PLAN & PROFILE		SHEET
HORIZ. 1"=50'	BEAM, LONGEST & NEFF, INC. CONSULTING ENGINEERS INDIANAPOLIS, INDIANA	62
VERT. 1"=10'		

PLAN
SURVEYED
PLOTTED
ALIGNMENT CHECKED
BY MONITOR
STRUCTURE NOTATIONS CHKD
DATE
NOTE BOOK
NO.









PROFILE
SURVEYED
PLOTTED
CHECKED
BY MONITOR
STRUCTURE NOTATIONS CHKD
DATE
NOTE BOOK
NO.

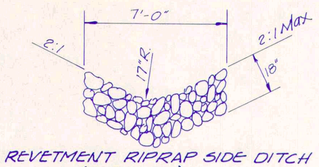
RECORD DRAWING

CRAIG RESKE
REGISTERED
No. 13042
STATE OF
INDIANA
PROFESSIONAL ENGINEER

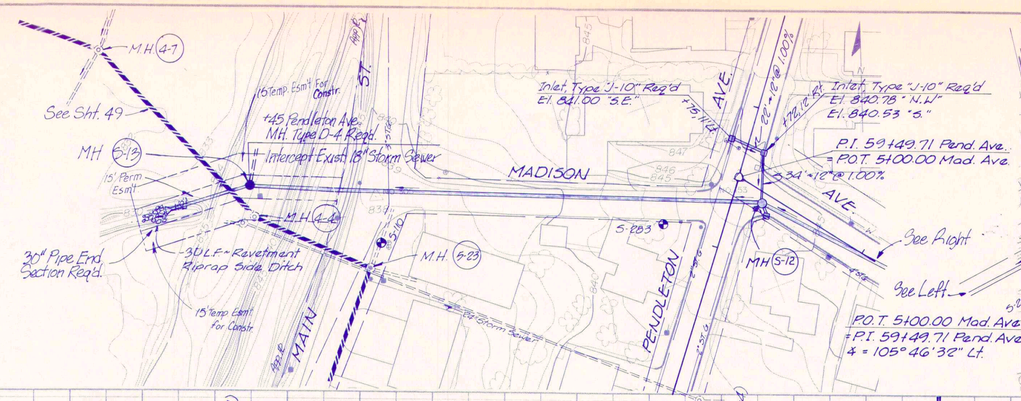
BROADWAY AVENUE
FALL CREEK R.W.D. PLAN & PROFILE
HORIZ. 1"=50'
VERT. 1"=10'
BEAM, LONGEST & NEFF, INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA
SHEET 63

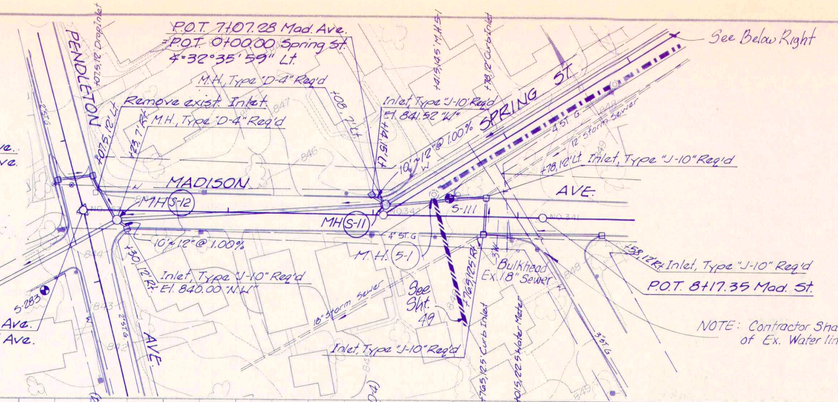
13

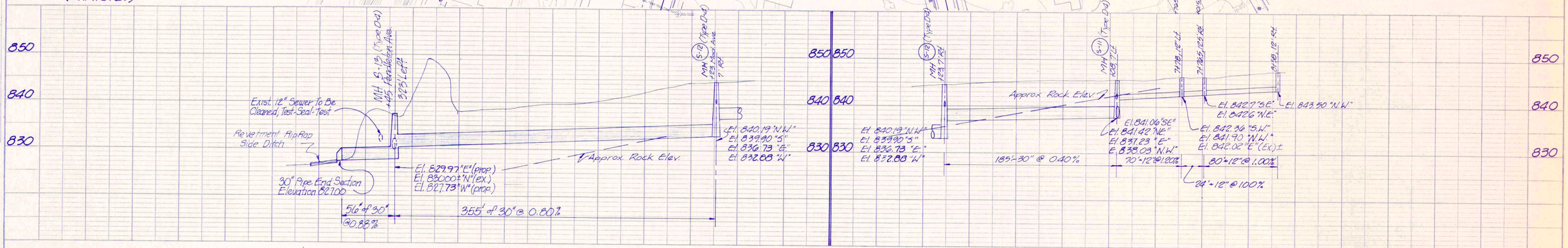
PLAN — SURVEYED, PLOTTED, ALIGNMENT CHECKED, GRADE CHECKED, ALL OPTIONS CHECKED, NOTE BOOK, NO., BY, DATE



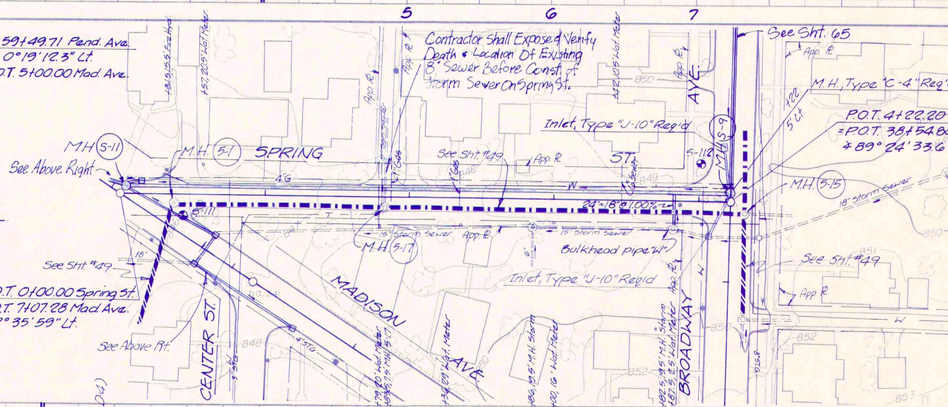
REVETMENT RIPRAP SIDE DITCH (R.R.S.D.)

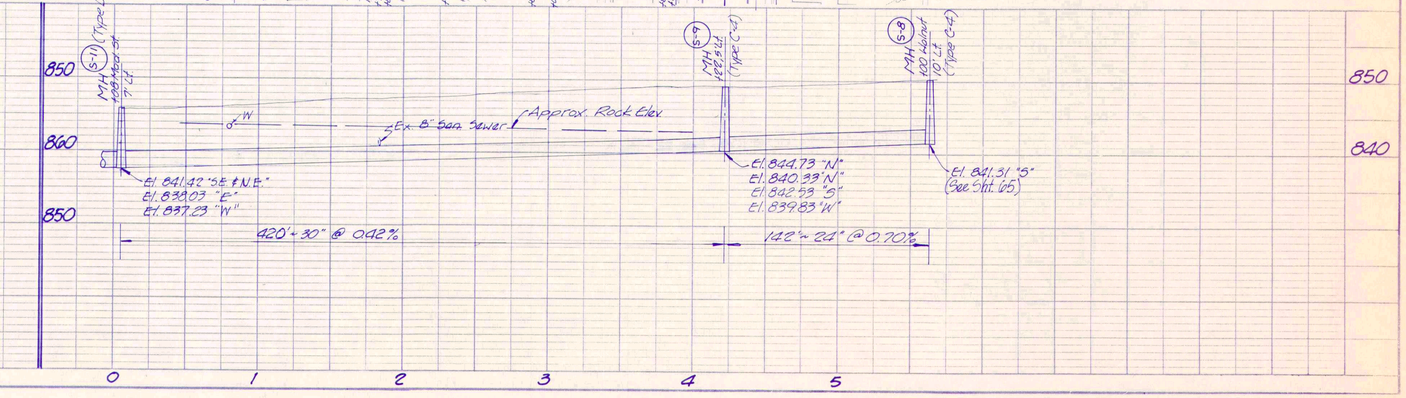












VOID

RECORD DRAWING

ERIC RESH — REGISTERED — PROFESSIONAL ENGINEER — STATE OF INDIANA

MADISON AVE / PENDLETON AVE. SPRING STREET		
FALL CREEK R.W.D. PLAN & PROFILE		SHEET
HORIZ. 1"=50'	BEAM, LONGEST & NEFF, INC.	64
VERT. 1"=10'	CONSULTING ENGINEERS INDIANAPOLIS, INDIANA	

14

Inlet, Type "J-10" Req'd El. 846.00 S.E.

P.O.T. 0+00.00 Walnut St.
• P.O.T. 39+93.26 Broadway Ave.
& 90°-18'-45.8" Lt.

B-26

M.H. Type "C-4" Req'd

100.10 Lt.

BROADWAY AVE

See Sht. #64

S-11B

MH (S-8)

18"-12" @ 1.00%

Inlet, Type "J-10" Req'd El. 846.00 S.W.

MH (S-7)

WALNUT

See Sht. #49

MH (S-2) (Replace)

MH (S-14)

Type C MH w/spl casting Req'd Bulkhead pipe S.

M.H. Type "C-3" Req'd Bulkhead pipe S.W.

MH (S-6)

18" Storm Sewer

Inlet, Type "J-10" Req'd El. 847.74 "E" El. 847.49 "N"

30"-12" @ 1.00%

24"-12" @ 1.00%

PEARL ST.

P.O.T. 4+41.66 Walnut St.

Inlet, Type "J-10" Req'd El. 848.00 "W"

M.H. (S-12) (Replace)

46' of 12" @ 7.00%

EAST ST.

Type C MH w/spl Casting Req'd

8" Sanitary Sewer See Sht. No. 93

MH (S-5)

MH (S-4)

MH (S-3)

P.O.T. 7+82.92 Walnut St.
• P.O.T. 5+00.00 East St.
& 89°-28'-20.3" Lt.

M.H. (S-11)

10' Temp. Esmt.

Inlet, Type "J-10" Req'd See Sheet No. 95

Proposed 10" Sanitary Sewer See Sht. #32

M.H. Type "C-4" Req'd See Sheet No. 96

850

840

MH (S-8) 1001.02 Rt. 24

6" Gas

Approx. Rock Elev.

El. 846.11 "NE"
El. 845.82 "N.W."
El. 841.41 "E"
El. 841.31 "S"
See Sht. No. 64

426'-24" @ 0.58%

MH (S-6) 1.29 1.49 Lt.

Ex. 12" Storm Sewer

El. 845.80 "S"
El. 844.10 "E"
El. 843.90 "W"
El. 847.90 "N"

6" W

Proposed 8" Sewer

311'-24" @ 0.03%

MH 4.35

MH 4.10 16 Lt.

MH 4.63 5 Rt.

Ex. 12" Storm Sewer

El. 845.37 "E"
El. 847.67 "S"
El. 845.37 "W"

El. 847.44 "N" (Ex. 12")
El. 845.98 "N.E."
El. 845.98 "N."

El. 850.68 "S"
57'-24" @ 0.37%
56'-24" @ 0.44%

El. 848.39 "N.E." (Ex. 10")
El. 845.83 "N."
El. 845.83 "S.W."

MH (S-7) 1.29 14 Rt.

Proposed Sanitary Sewer Rt. Plotted 30' Below Datum

El. 847.01 "E"
El. 847.01 "W" (Ex. 12")

394'-12" @ 0.27%

MH (S-5) 2.15 6.5 Rt.

El. 848.07 "N"
El. 848.07 "W"
El. 849.37 "S" (Ex. 6")
El. 849.57 "E" (Ex. 10")

0 1 2 3 4 5 6 7 8

ST.

EAST

15" Storm Sewer

855X7

855X4

856X7

856

855

857

VOID

VOID

PLAN
SURVEYED
NOTE BOOK
PLOTTED
DATE
DRAWN
CHECKED
QUANTITIES CHECKED
ST. OF WAY CHECKED
NO.
DATE
BY

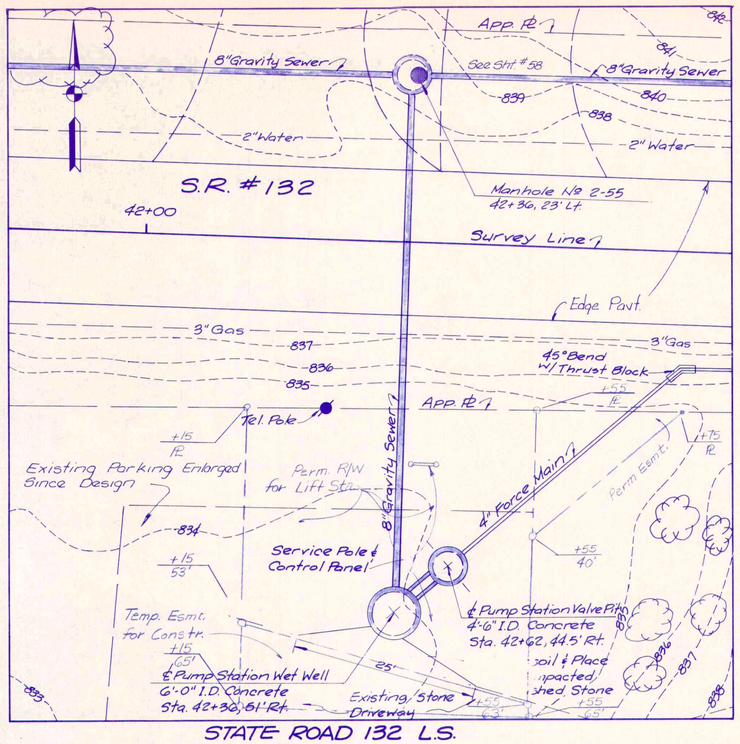
PROFILE
SURVEYED
NOTE BOOK
PLOTTED
DATE
DRAWN
CHECKED
QUANTITIES CHECKED
ST. OF WAY CHECKED
NO.
DATE
BY

RECORD DRAWING

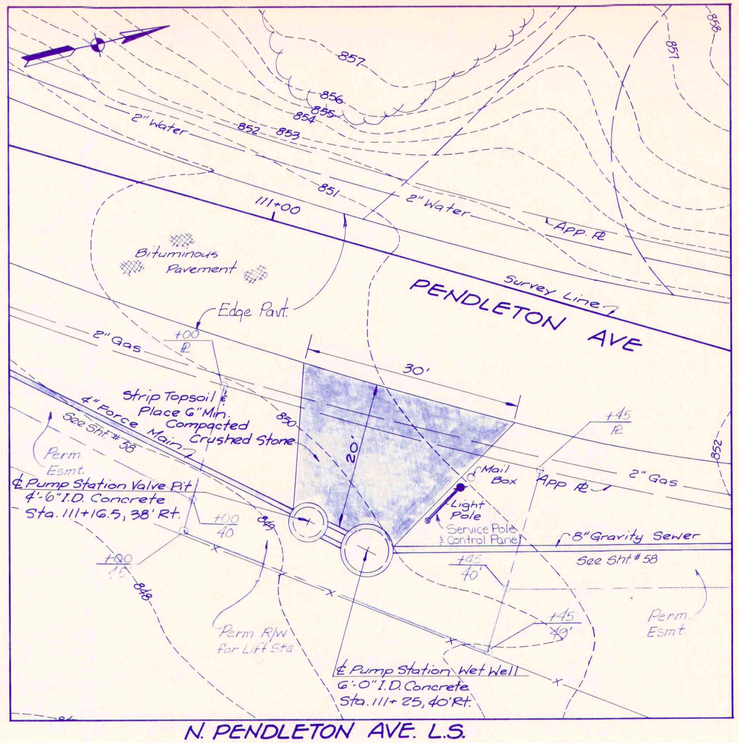
ERIC RESKE REGISTERED INDIANA STATE OF PROFESSIONAL ENGINEER

WALNUT STREET
FALL CREEK R.W.D. PLAN & PROFILE
HORIZ. 1"=50'
VERT. 1"=10'
BEAM, LONGEST & NEFF, INC.
CONSULTING ENGINEERS
INDIANAPOLIS, INDIANA

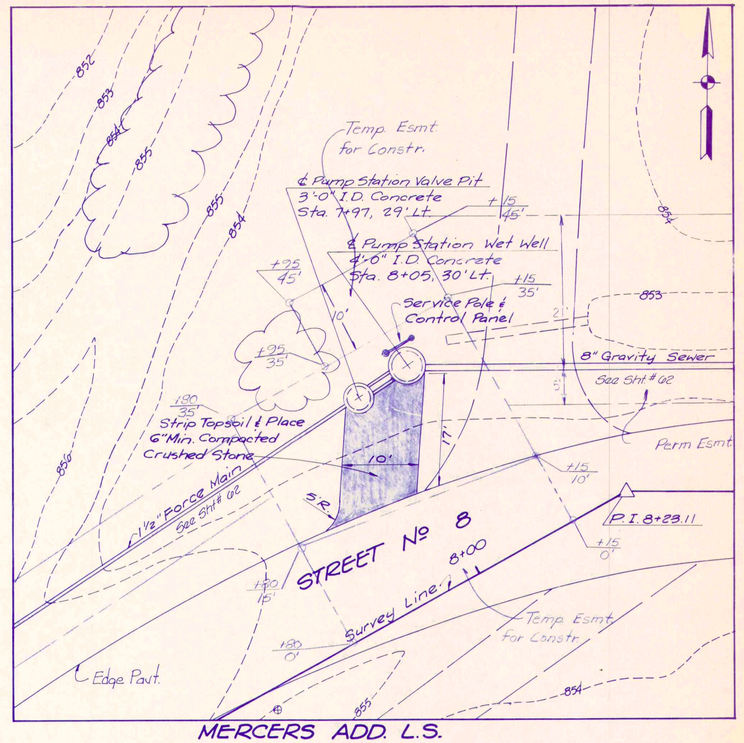
15



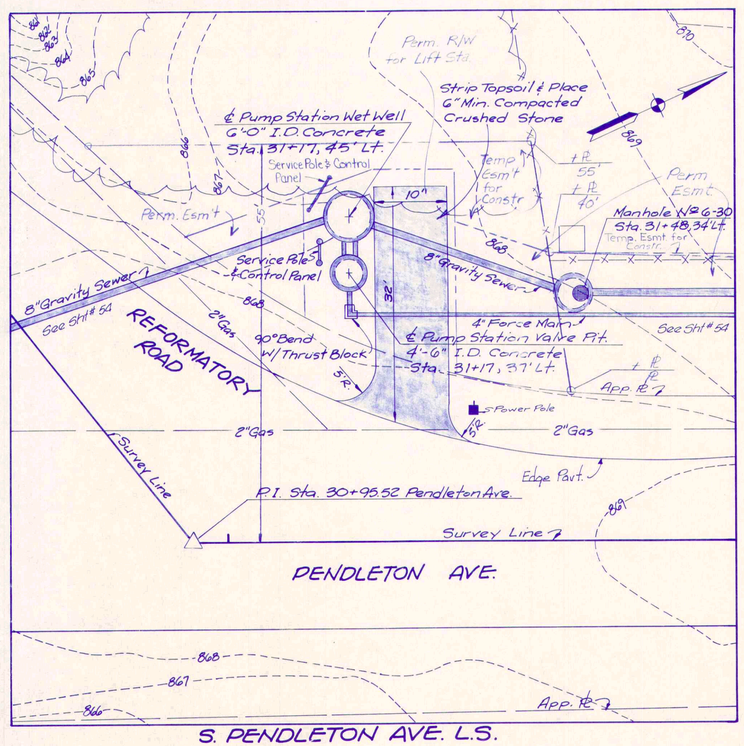
STATE ROAD 132 L.S.



N. PENDLETON AVE. L.S.

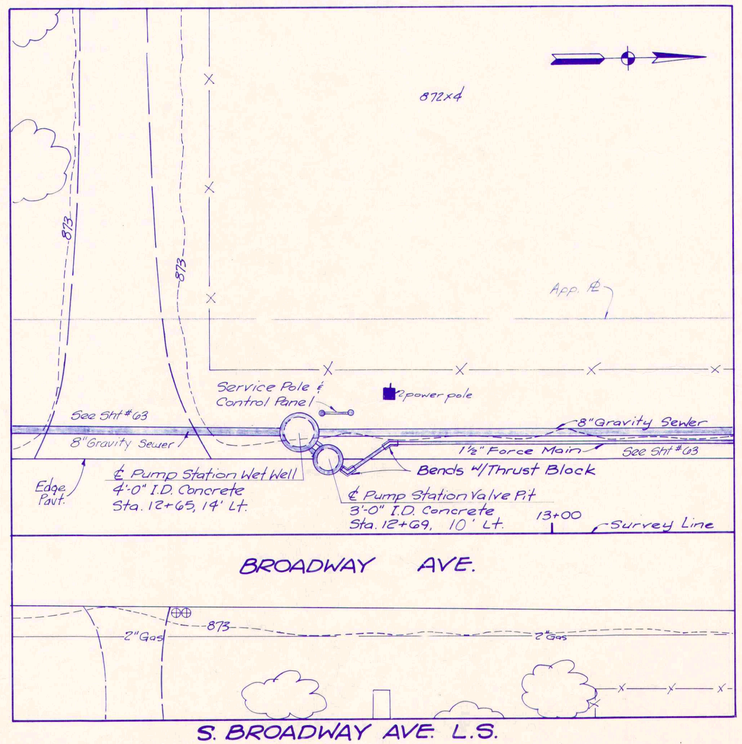


MERCERS ADD. L.S.



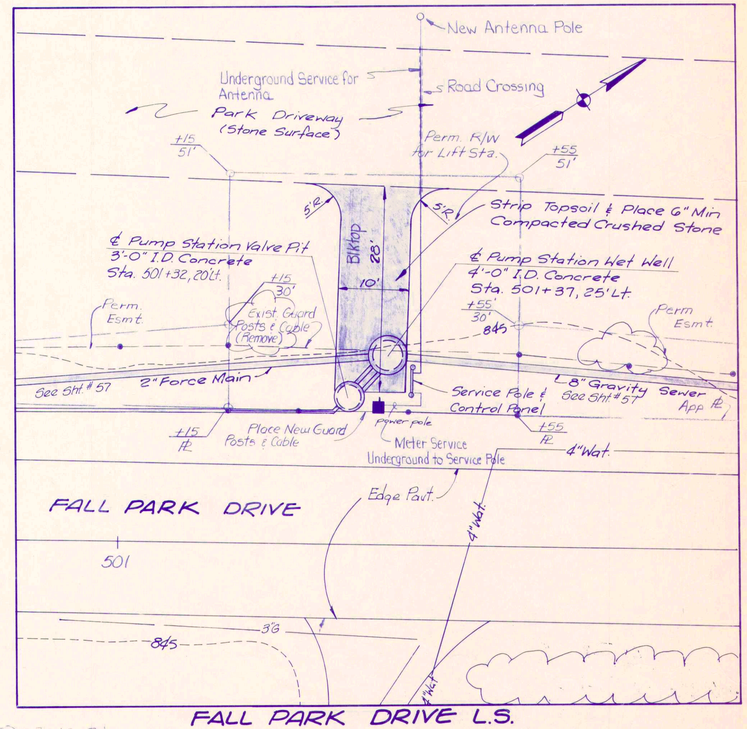
PENDLETON AVE.

S. PENDLETON AVE. L.S.



BROADWAY AVE.

S. BROADWAY AVE. L.S.



FALL PARK DRIVE L.S.

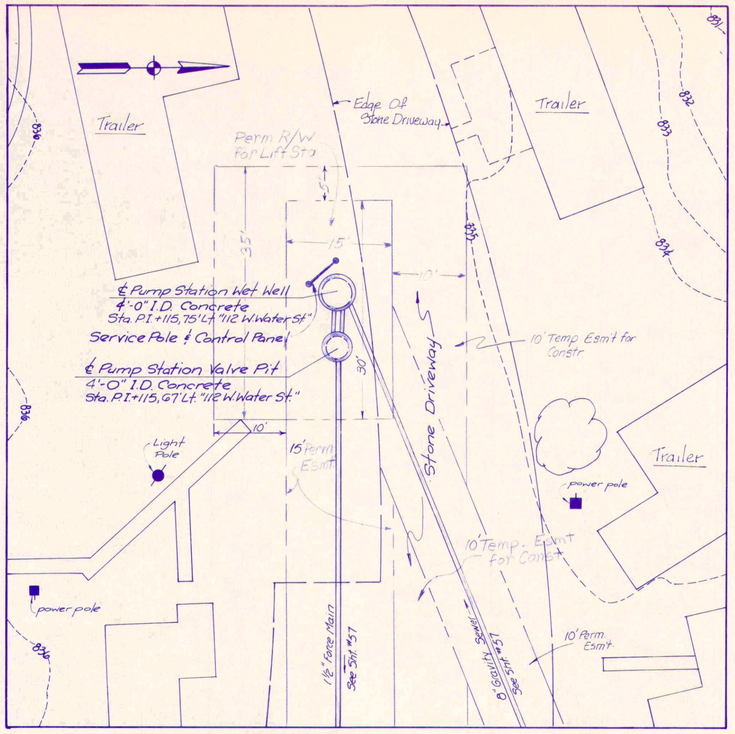
REVISED 3-19-84
CHANGED ESMT AROUND
S. PENDLETON AVE. LEFT
STATION

RECORD DRAWING

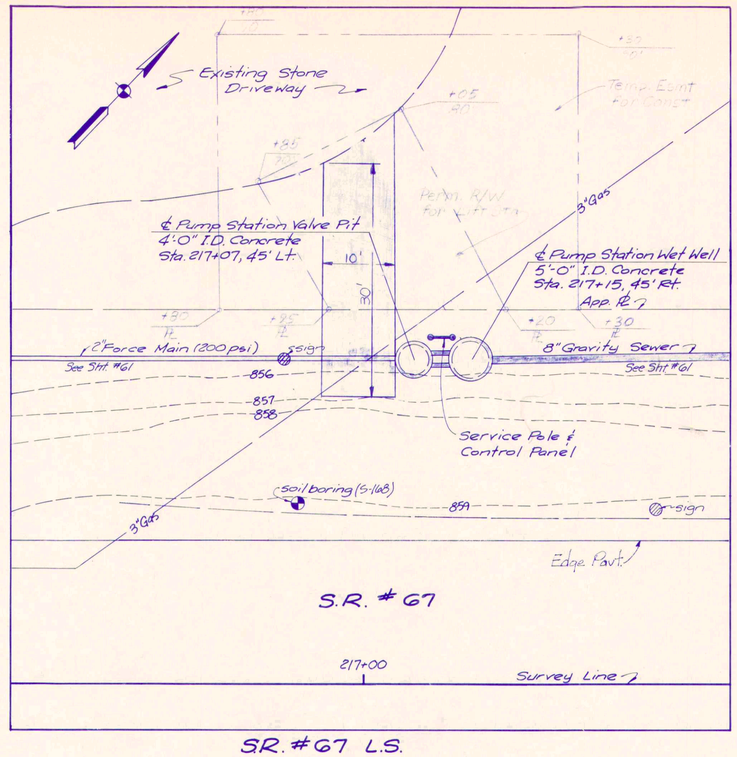
LIFT STATION LAYOUTS

Scale: 1"=10'	FALL CREEK R.W.D.	Sheet
Drawn By: VMS.	BEAM, LONGEST & NEFF	16
Designed By: GDL. SE.	Consulting Engineers 8136 Castleton Road Indianapolis In. 46250	
Certified By: ER.		

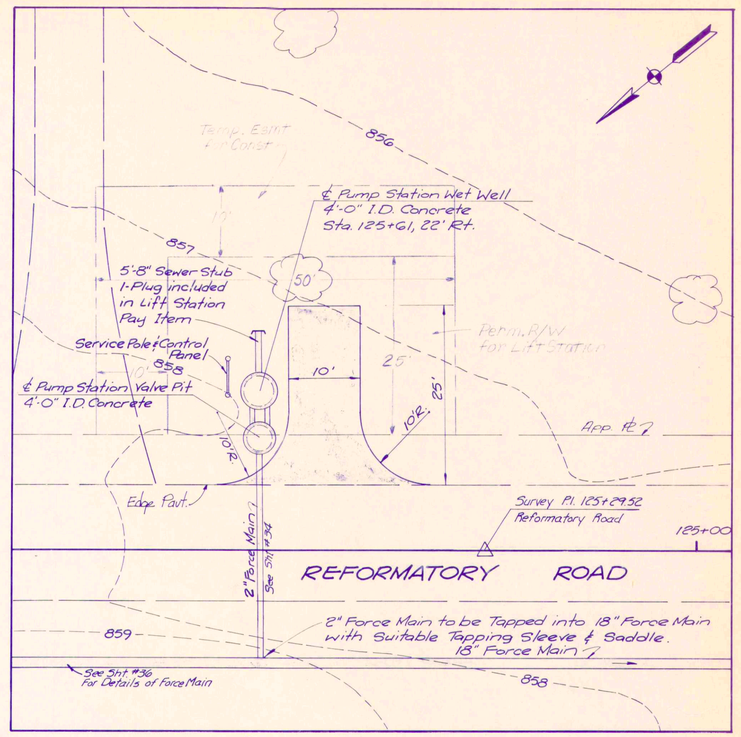
MARBAUGH N26508



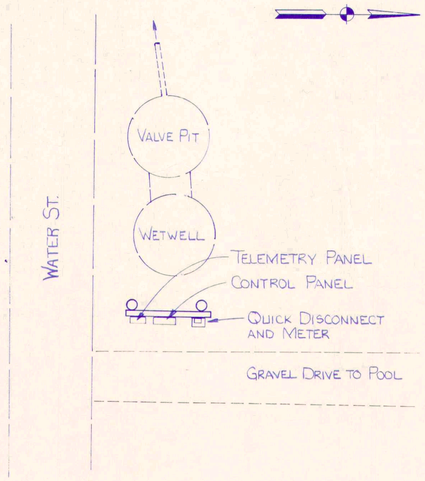
112 W. WATER ST. L.S.



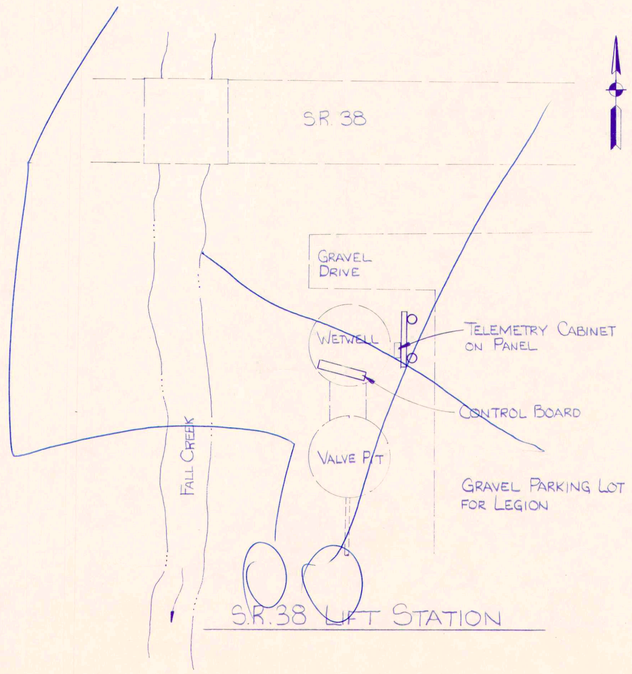
S.R. #67 L.S.



N.E. - M.H.P. L.S.



EXISTING WATER STREET LIFT STATION



S.R. 38 LIFT STATION

RECORD DRAWING

LIFT STATION LAYOUTS

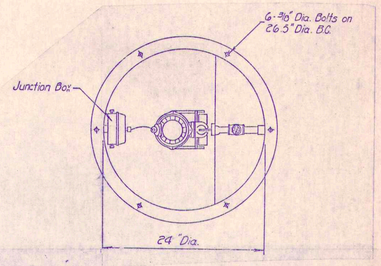
Scale: 1"=10'	FALL CREEK R.W.D.	Sheet 67
Drawn By: VMS.	BEAM, LONGEST & NEFF	
Designed By: GDL SE	Consulting Engineers 8136 Castleton Road Indianapolis In. 46250	
Certified By: ER.		

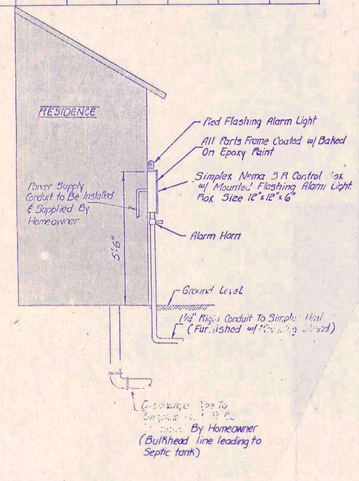
MARBAUGH N26508

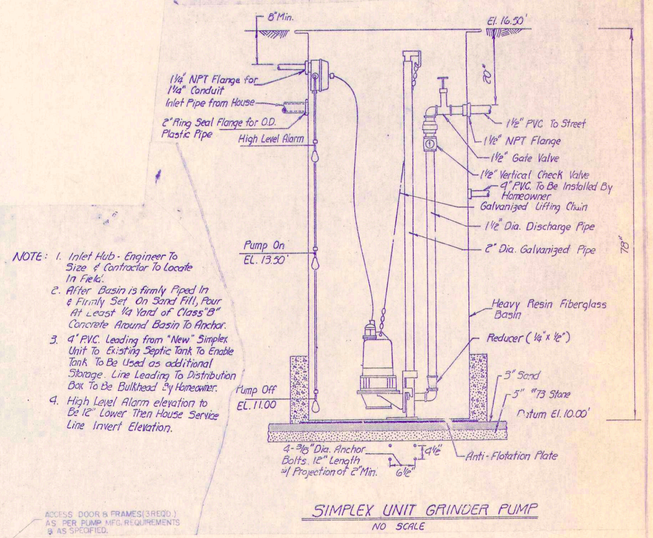
LIFT STATION	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA
S. PENDLETON AVE.	867.00	868.91	854.49	13.5'	860.90 N 858.91 S	4'-6"	6'	240-3 ϕ	3 #6 1 #10	1"	60A	855.00	857.00	858.00	—	858.70	8'	80	25'	2	—	4"	50	12"	2"	1" MIN.	8.5'
S. BROADWAY AVE.	873.00	867.35[a]	855.61	12.5'	860.41 S 860.51 N	3'-0"	4'	240-1 ϕ	2 #6 1 #10	1"	60A	862.50	863.50	864.50	—	865.00	6'	12	30'	2	—	1½"	60	12"	2"	1" MIN.	7.5'
112 W. WATER ST.	835.50	835.92	826.91	9'	831.41 S 829.71 E	4'-0"	4'	240-3 ϕ	3 #6 1 #10	1"	60A	828.00	829.00	829.80	—	830.00	8'	11	13'	2	—	1½"	30	12"	2"	1" MIN.	4'
S.R. 132 *	834.00	835.16	825.89	9'	830.34	4'-6"	6'	240-1 ϕ	2 #6 1 #10	1"	60A	826.50	828.00	829.00	—	830.00	10'	80	31'	2	—	4"	50	12"	2"	1" MIN.	4'
N. PENDLETON AVE. *	850.00	850.74	840.67	10'	844.35	4'-6"	6'	240-1 ϕ	2 #6 1 #10	1"	60A	841.50	843.00	844.00	—	844.50	9'	100	33'	2	—	4"	50	12"	2"	1" MIN.	5'
FALL PARK DR.	845.00	845.43	832.06	13.5'	836.14 W 838.40 E	3'-0"	4'	240-3 ϕ	2 #6 1 #10	1"	60A	833.11	834.61	835.61	—	836.00	8'	28	37'	2	—	2"	80	12"	2"	1" MIN.	6.5'
S.R. 67	855.50	856.01	846.90 855.45 plan	8.5'	851.53	4'-0"	5'	240-1 ϕ	2 #6 1 #10	1"	60A	848.50	850.00	851.00	—	851.50	8'	30	22'	2	—	2"	50	12"	2"	1" MIN.	4'
MERCERS ADDITION	853.50	854.17	841.97	12.3'	845.82	4'-0"	4'	240-1 ϕ	2 #6 1 #10	1"	60A	842.70	843.70	844.70	—	845.25	8'	16	56'	2	—	1½"	100	12"	2"	1" MIN.	7.0'
NE - MHP	855.50	856.00	845.09	11'	850.31	4'-0"[b]	4'	240-3 ϕ	2 #6 1 #10	1"	60A	846.00	848.50	849.50	—	850.00	10'	25	26'	2	—	2"	50	12"	2"	1" MIN.	6.5'

NOTE[a]: VALVE PIT SHALL BE ADJUST TO ROAD GRADE AND SHALL HAVE ECCENTRIC FLAT TOP AND STANDARD MANHOLE LID AND FRAME.

NOTE[b]: VALVE PIT FOR NE-MHP SHALL HAVE DOUBLE CHECK VALVE ASSEMBLIES FOR EACH PUMP. ONE CHECK VALVE MAY BE LOCATED AS PART OF THE TOTAL LIFT OUT PUMP ASSEMBLY.

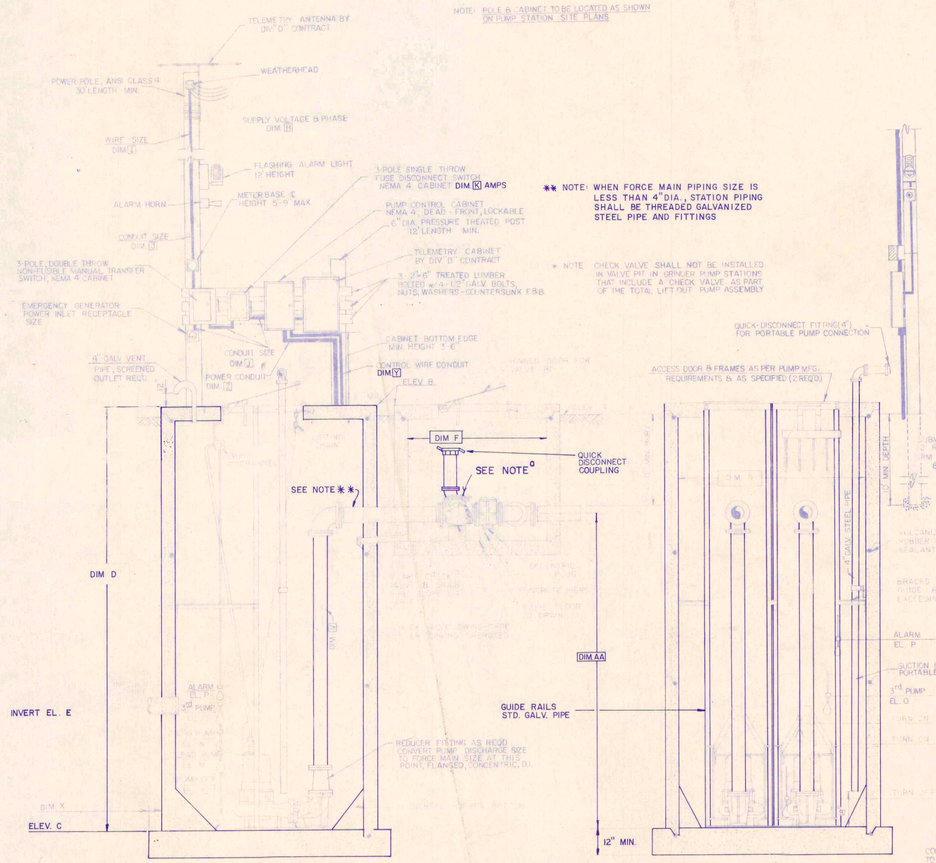






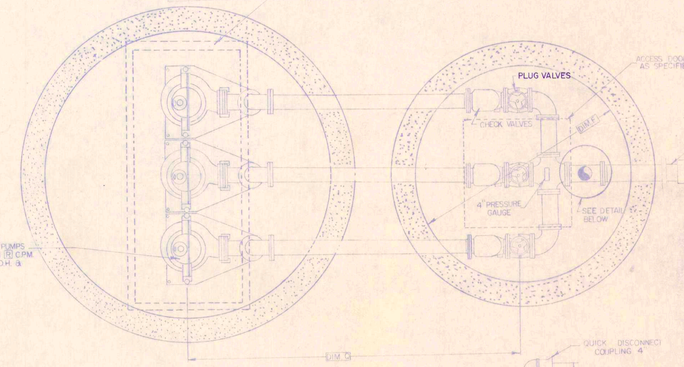
NOTE: 1. Inlet Hub - Engineer To Size & Contractor To Locate In Field.
2. After Basin is firmly Piped In & Firmly Set, On Sand Fill, Pour At Least ½ Yard of Class "A" Concrete Around Basin To Anchor.
3. 4" PVC Leading from "New" Simplex Unit To Existing Septic Tank To Enable Tank To Be Used as additional Storage. Line Leading To Distribution Box To be Bulkhead By Homeowner.
4. High Level Alarm elevation to Be 12" Lower Then House Service Line Invert Elevation.

SIMPLEX UNIT GRINDER PUMP
NO SCALE



** NOTE: WHEN FORCE MAIN PIPING SIZE IS LESS THAN 4" DIA., STATION PIPING SHALL BE THREADED GALVANIZED STEEL PIPE AND FITTINGS

* NOTE: CHECK VALVE SHALL NOT BE INSTALLED IN VALVE PIT IN GRINDER PUMP STATIONS THAT INCLUDE A CHECK VALVE AS PART OF THE TOTAL LIFT OUT PUMP ASSEMBLY



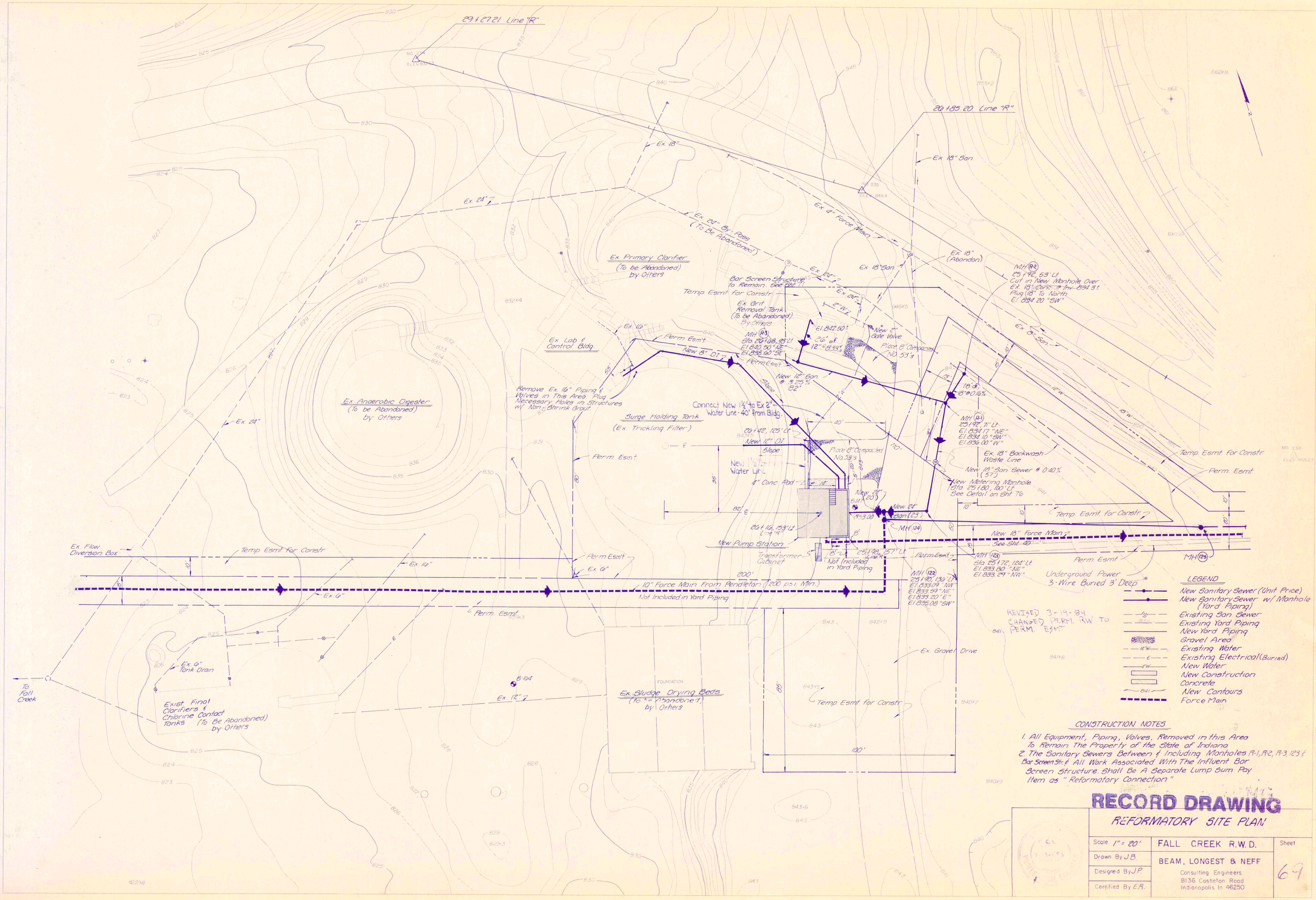
TRIPLEX SUBMERSIBLE LIFT STATION
NO SCALE

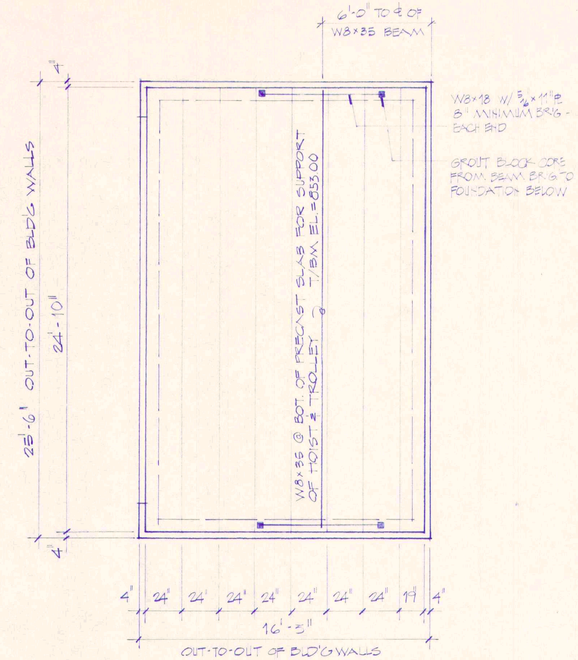
LIFT STATION DETAILS DIVISION "B"	
JOB NO. 825	FALL CREEK R.W.D.
DATE 3-30-83	BEAM, LONGEST & NEFF INC.
DR. BY G.D.	CONSULTING ENGINEERS 8-34 EASTLETON ROAD INDIANAPOLIS, INDIANA
CERTIFIED BY E.R.	SHEET NO. 68

ERIC RESKE REGISTERED ER No. 13442 STATE OF INDIANA 3-30-83 PROFESSIONAL ENGINEER

RECORD DRAWING

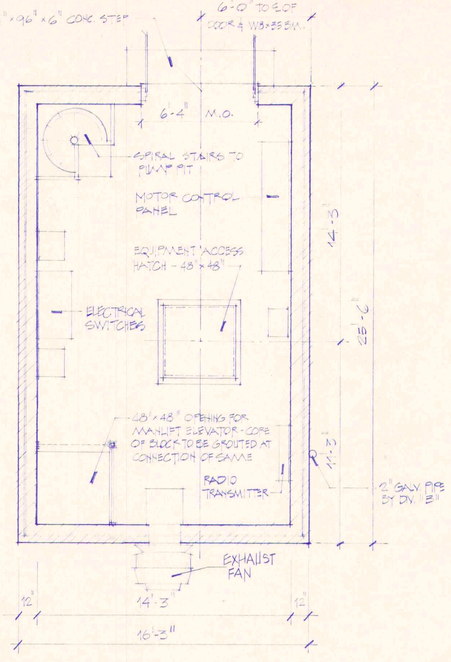
68


29+27.21 Line "R"
26+85.20 Line "R"
Ex. 18"
Ex. 18" San.
Ex. 24"
Ex. 24" By-Pass (To Be Abandoned)
Ex. 4" Force Main
Ex. Primary Clarifier (To be Abandoned) by Others
Bar Screen Structure to Remain. See Sht 71
Temp. Esmt. for Constr.
Ex. Grit Removal Tank (To be Abandoned) By Others
Ex. 18" (Abandon)
MH R-2 25+92, 53' Lt. Cut in New Manhole Over Ex. 18" Conc. @ Inv. 834.3± Plug 18" To North El. 834.20 "SW"
Ex. 8" San.
Ex. Lab & Control Bldg.
Ex. 16"
Perm. Esmt.
New 8" DI
MH R-3 Sta. 26+68, 93' Lt. El. 840.50 "NE" El. 838.60 "SE"
El. 842.50±
26' of 12" @ 8.33%
New 2" Gate Valve
Place 8" Compacted No. 53's
New 12" San. @ 3.25% 82'
Remove Ex. 16" Piping & Valves in This Area. Plug Necessary Holes in Structures w/ Non-Shrink Grout.
Connect New 1½" to Ex 2" Water Line - 40' from Bldg.
Surge Holding Tank (Ex. Trickling Filter)
Ex. Anaerobic Digester (To be Abandoned) by Others
26+42, 125' Lt.
New 12" DI
Slope
Place 8" Compacted No. 53's
New 1½" Water Line
4" Conc. Pad
MH R-1 25+92, 71' Lt. El. 834.17 "NE" El. 834.10 "SW" El. 836.00 "W"
Ex. 18" Backwash Waste Line
New 18" San. Sewer @ 0.40% (57')
New Metering Manhole Sta. 25+80, 100' Lt. See Detail on Sht 76
New 24" (20')
New 24" San. (23')
MH 124
Temp. Esmt. for Constr.
Perm. Esmt.
New 18" Force Main See Sht 40
26+16, 153' Lt. Line "R"
New Pump Station
Transformer Cabinet
Not Included in Yard Piping
25+98, 157' Lt. Line "R"
MH 123 Sta. 25+72, 124' Lt. El. 833.80 "NE" El. 833.29 "NW"
MH 125
Underground Power 3-Wire Buried 3' Deep
MH 122 25+90, 136' Lt. El. 833.09 "NW" El. 833.59 "NE" El. 833.20 "E" El. 835.08 "SW"
Ex. Flow Diversion Box
Temp. Esmt. for Constr.
Ex. 16"
Perm. Esmt.
Ex. 6"
10" Force Main From Pendleton (200 psi. Min.)
Not Included in Yard Piping
Perm. Esmt.
Ex. 6" Tank Drain
To Fall Creek
Exist. Final Clarifiers & Chlorine Contact Tanks (To Be Abandoned) by Others
Ex. 12"
Ex. Sludge Drying Beds (To be Abandoned) by Others
Ex. Gravel Drive
Temp. Esmt. for Constr.
REVISED 3-19-84 CHANGED PERM. RW TO PERM. ESMT
LEGEND
New Sanitary Sewer (Unit Price)
New Sanitary Sewer w/ Manhole (Yard Piping)
Existing San. Sewer
Existing Yard Piping
New Yard Piping
Gravel Area
Existing Water
Existing Electrical (Buried)
New Water
New Construction
Concrete
New Contours
Force Main
CONSTRUCTION NOTES
1. All Equipment, Piping, Valves, Removed in this Area To Remain The Property of the State of Indiana
2. The Sanitary Sewers Between & Including Manholes R-1, R-2, R-3, 123 & Bar Screen Str. & All Work Associated With The Influent Bar Screen Structure. Shall Be A Separate Lump Sum Pay Item as "Reformatory Connection"
RECORD DRAWING
REFORMATORY SITE PLAN
Scale 1" = 20'
Drawn By J.B.
Designed By J.P.
Certified By E.R.
FALL CREEK R.W.D.
BEAM, LONGEST & NEFF
Consulting Engineers
8136 Castleton Road
Indianapolis In. 46250
Sheet
69



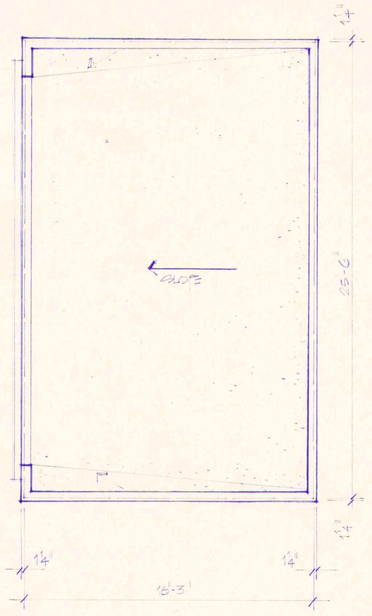
ROOF FRAMING PLAN

SCALE: 1/4" = 1'-0"



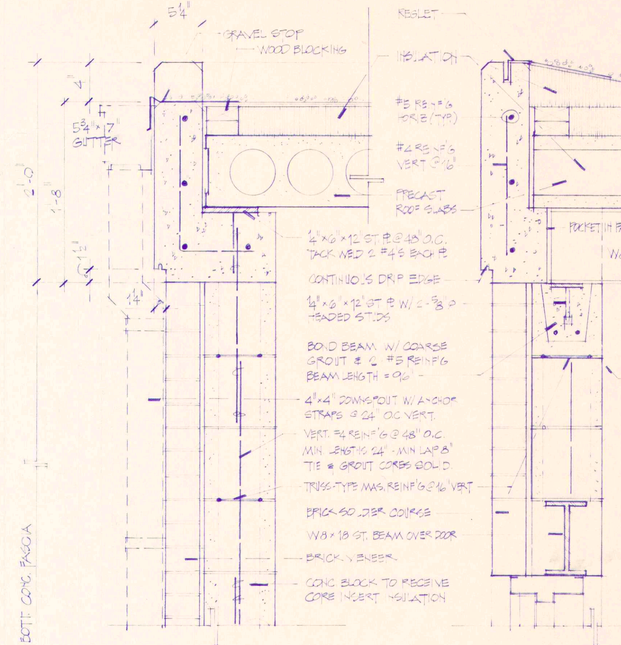
FLOOR PLAN

SCALE: 1/4" = 1'-0"



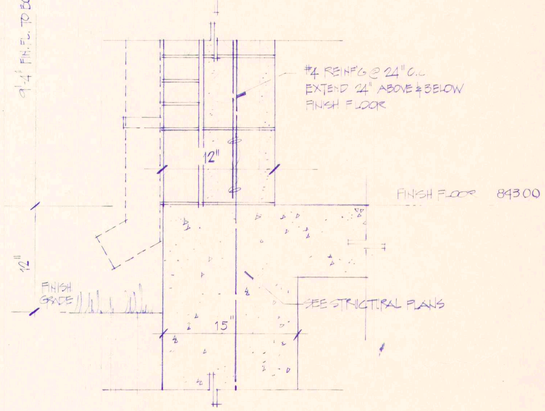
ROOF PLAN

SCALE: 1/4" = 1'-0"



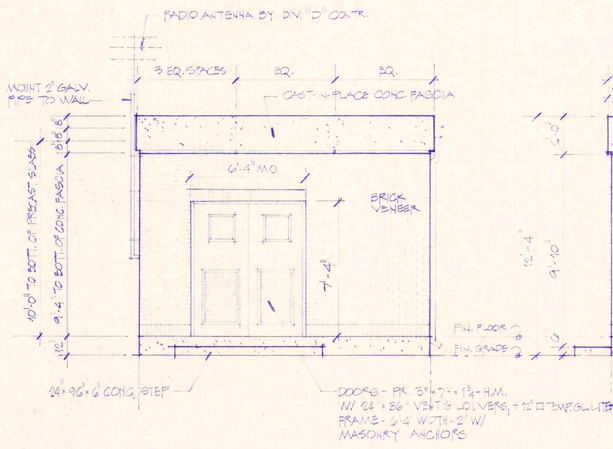
DETAIL AT BEAM BRG

SCALE: 1½" = 1'-0"



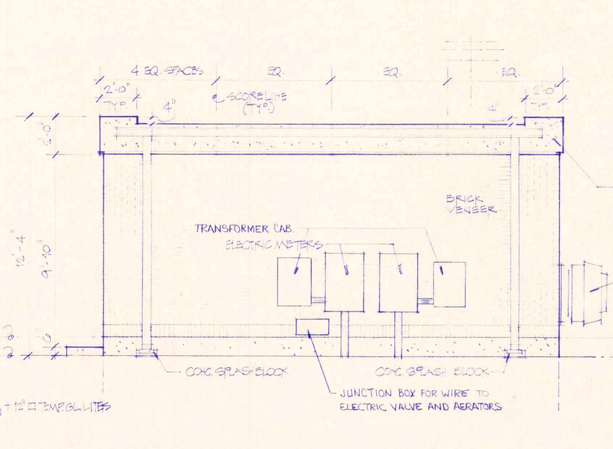
TYPICAL SECTION

SCALE: 1½" = 1'-0"



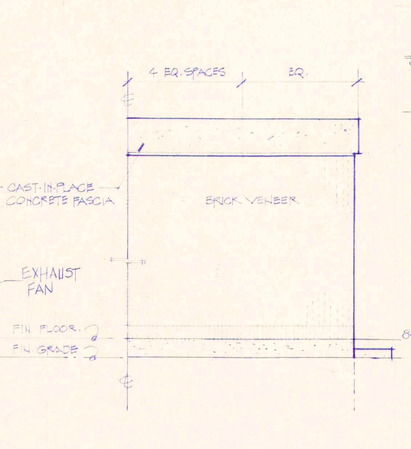
NORTH ELEVATION

SCALE: 1/4" = 1'-0"
SOUTH ELEV. SIMILAR



WEST ELEVATION

SCALE: 1/4" = 1'-0"



PARTIAL EAST ELEVATION

SCALE: 1/4" = 1'-0"

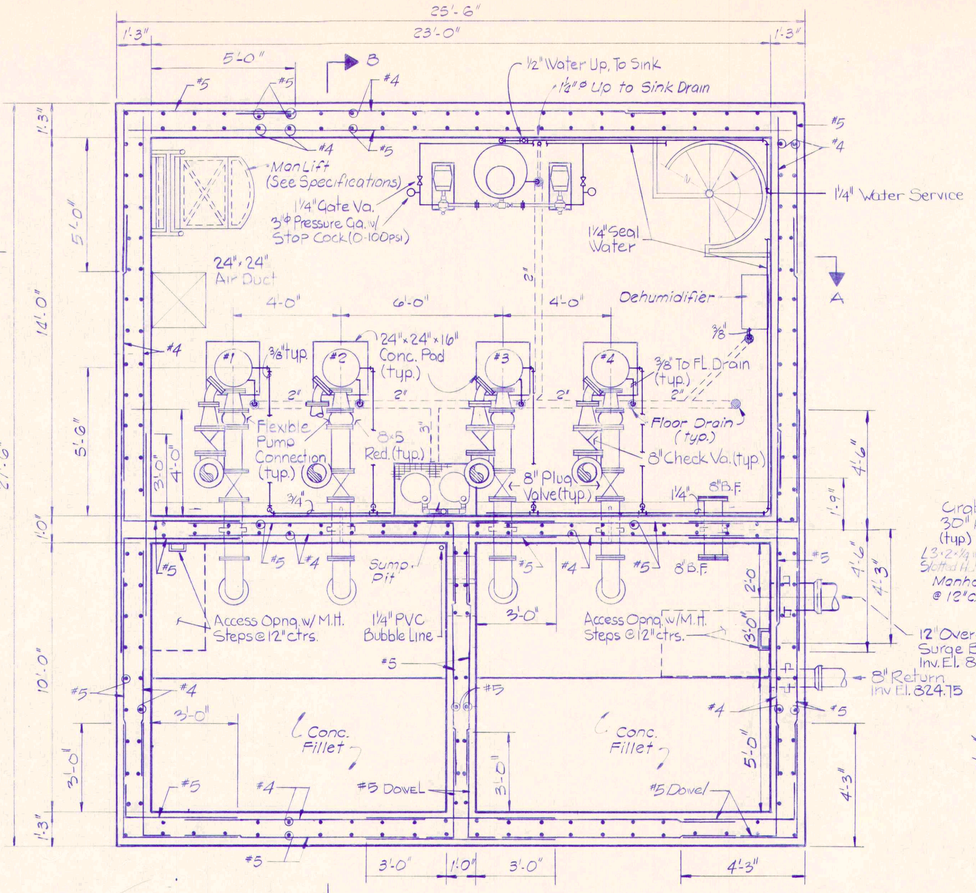
INTERIOR FINISH NOTE = EXPOSED CONC. SLAB CEILING TO BE PAINTED.
WALLS TO BE PAINTED.
FLOORS TO BE EXPOSED CONC. W/ SEALER.
NO BASE MOLDING IS REQ'D.

RECORD DRAWING

REFORMATORY LIFT STATION BUILDING

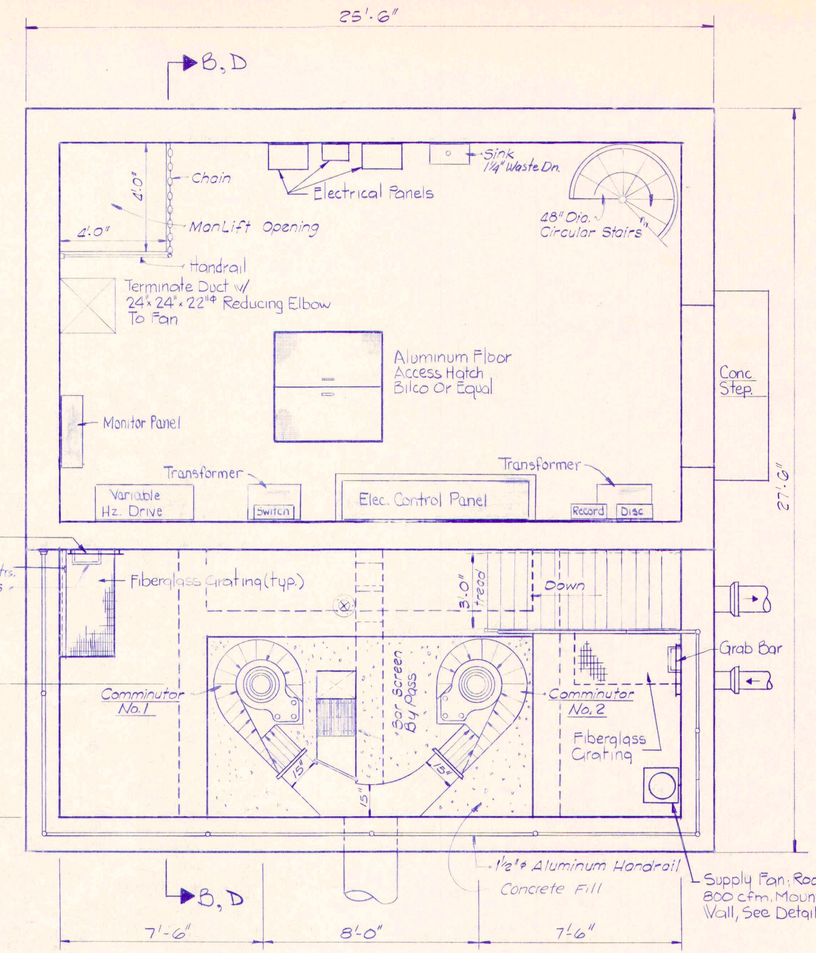
Scale: AS NOTED	FALL CREEK R.W.D.	Sheet
Drawn By: DMW	BEAM, LONGEST & NEFF	70
Designed By: JP	Consulting Engineers	
Certified By: E.R	8136 Castleton Road	
	Indianapolis In. 46250	

MARBAUGH N26508



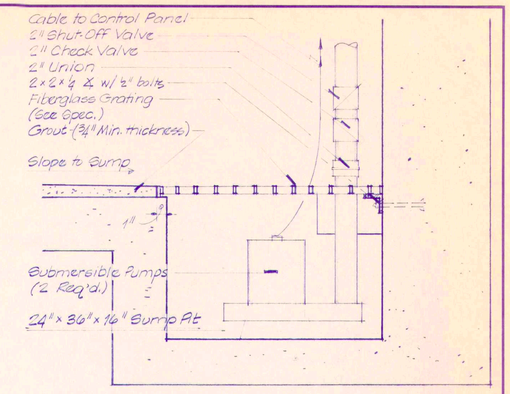
PUMP LEVEL FLOOR PLAN

Scale: 3/8" = 1'-0" (Elev. 823.00)



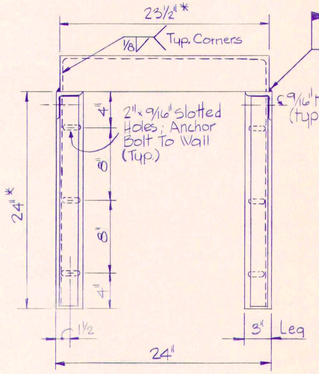
UPPER LEVEL FLOOR PLAN

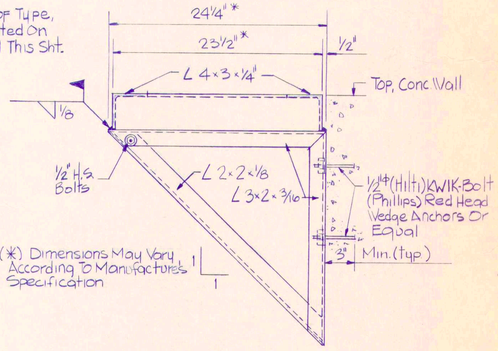
(ELEV. 843.00) Scale 3/8" = 1'-0"



SUMP PIT DETAIL

Not to Scale

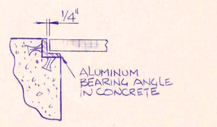


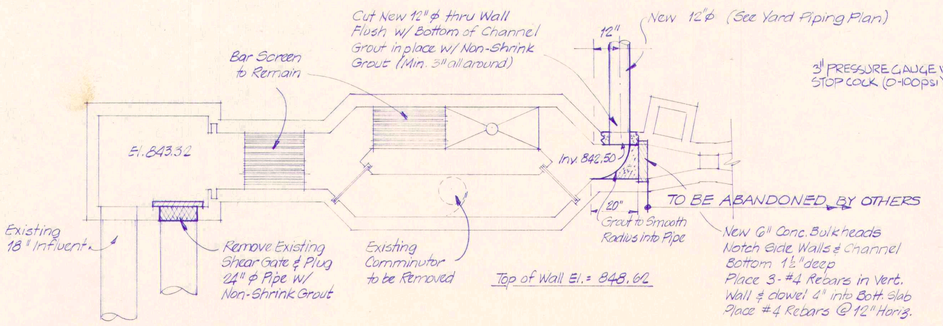


(*) Dimensions May Vary According To Manufacturers Specification

WALL BRACKET FOR SUPPLY VENTILATOR

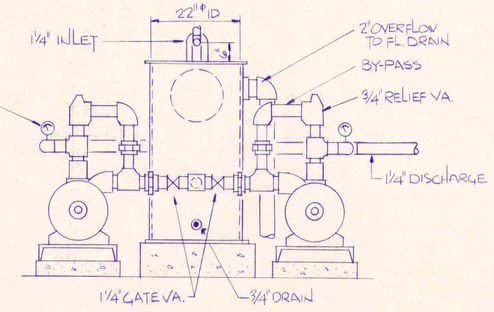
No Scale





REFORMATORY INFLUENT STRUCTURE MODIFICATION

Not to Scale

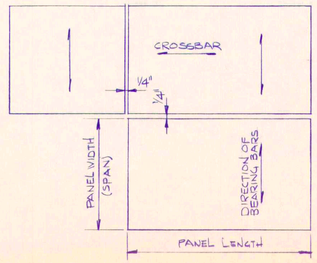


WATER SEAL SYSTEM

No Scale

NOTES:

1. CONTRACTOR SHALL FURNISH CUT-OUTS WHEREVER REQUIRED EVEN IF NOT SHOWN ON PLANS.
2. LARGE CUT-OUTS SHALL HAVE STRUCTURAL SUPPORT.
3. LARGEST RECOMMENDED SPANS @ ¼" DEFLECTION TO LBS/FT. UNIFORM LOAD FOR SPECIFIED GRATING SHALL NOT BE SURPASSED FOR LARGER SPANS. CONTRACTOR SHALL FURNISH ADDITIONAL SUPPORT FOR LARGER SIZE GRATING AT NO EXTRA COST.
4. GRATING SHALL BE REINFORCED FIBERGLASS, CHEMGRATE OR EQUAL.



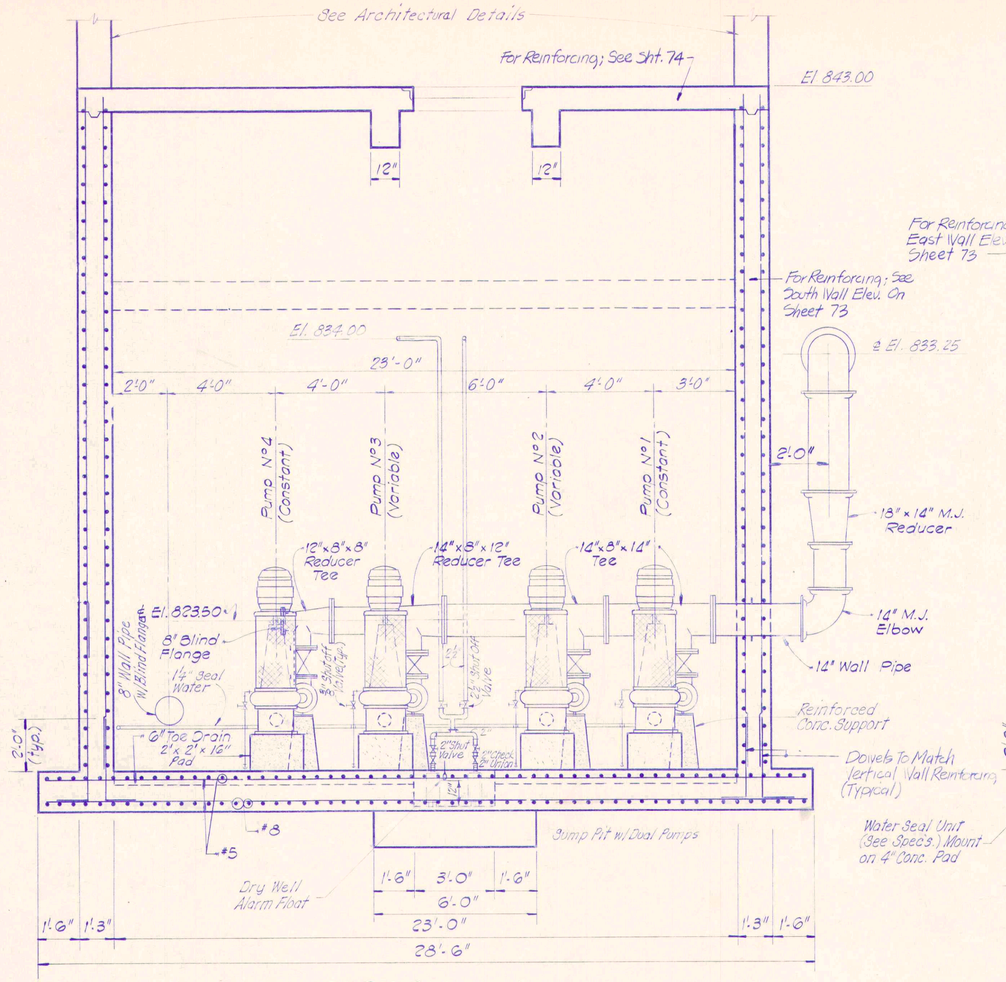
GRATING DETAILS & NOTES

RECORD DRAWING

REFORMATORY LIFT STATION STRUCTURAL AND DETAILS

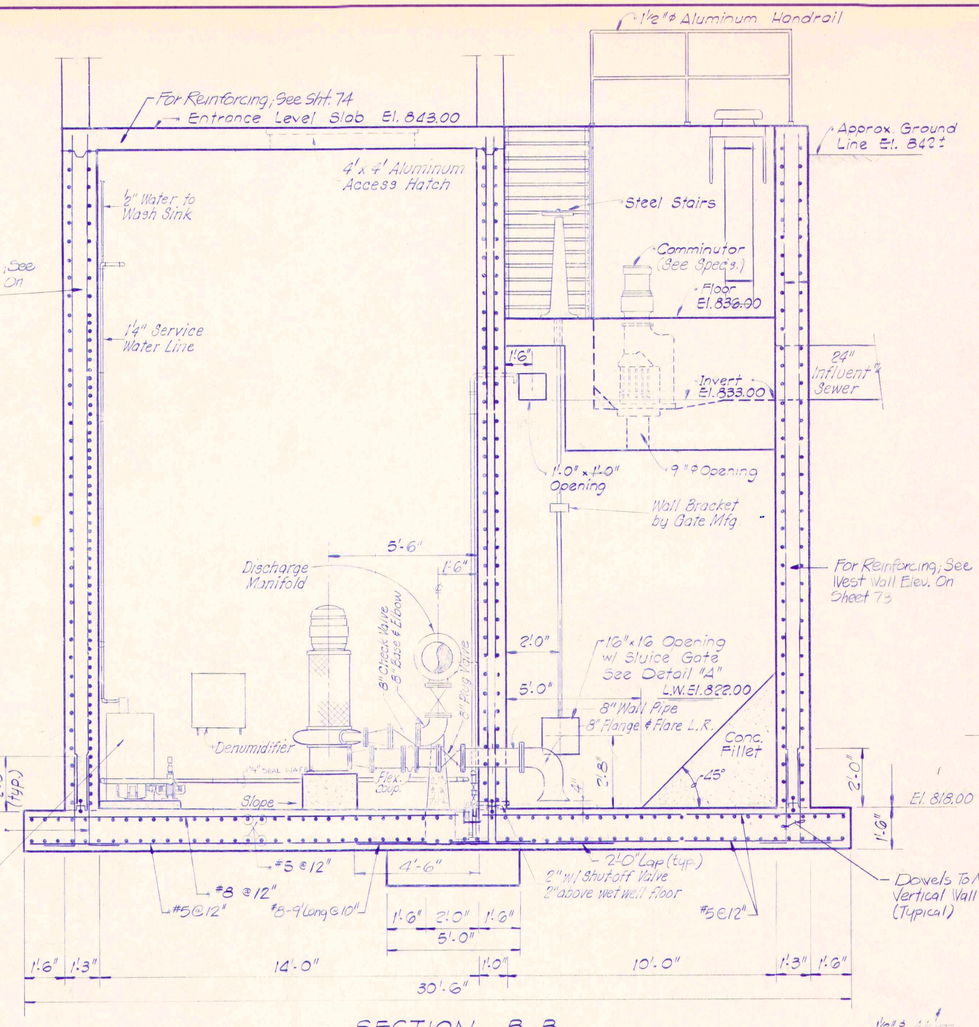
Scale: As Noted	FALL CREEK R.W.D.	Sheet
Drawn By: RBG	BEAM, LONGEST & NEFF	71
Designed By: AFS JP	Consulting Engineers 8136 Castleton Road Indianapolis In. 46250	
Certified By: E.R.		

MARBALIGH N26508



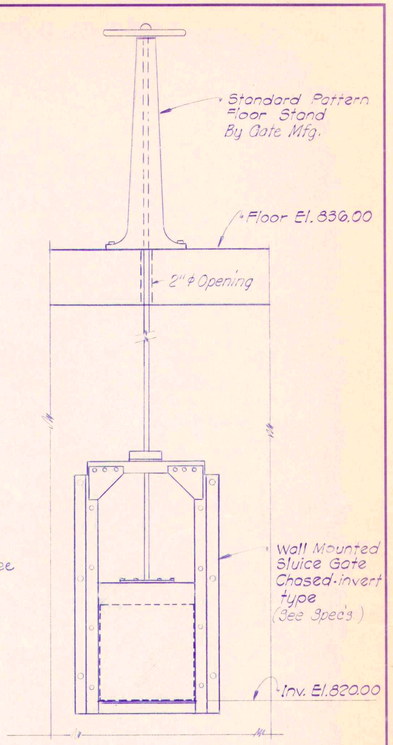
SECTION A-A

Scale : 3/8" = 1'-0"



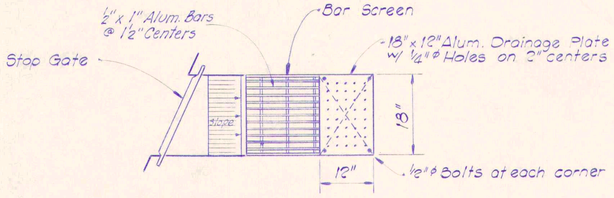
SECTION B-B

Scale : 3/8" = 1'-0"



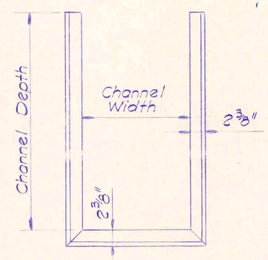
DETAIL "A"

Scale : 1" = 1'-0"

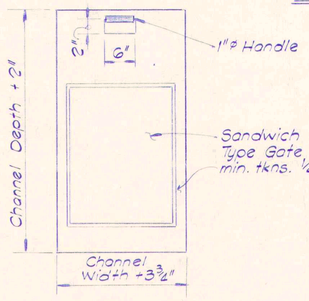


BAR SCREEN - PLAN

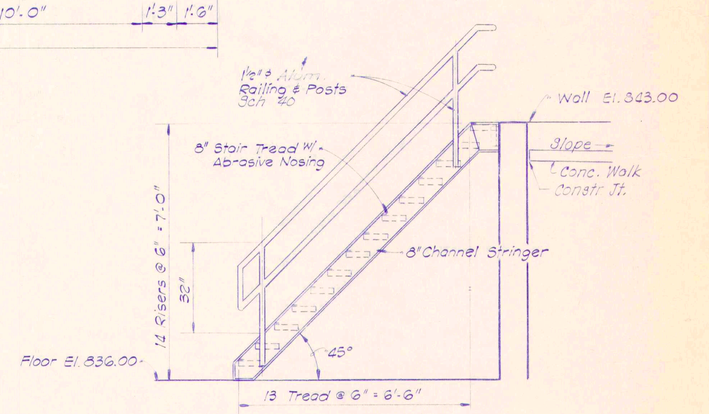
BY-PASS



GUIDE FRAME



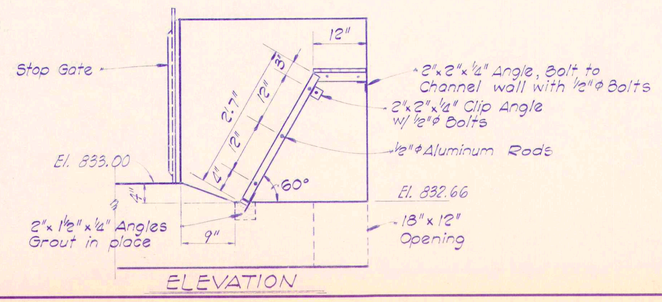
STOP GATE



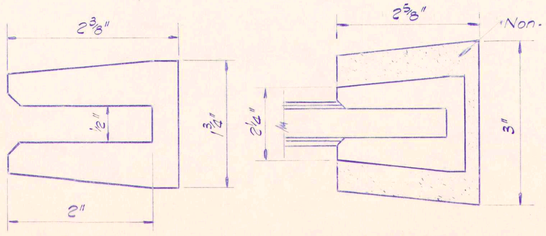
STAIR DETAILS

Scale : ½" = 1'-0"

NOTE :
STAIRS TO BE ANCHORED ACCORDING TO MANUFACTURERS RECOMMENDATIONS.



ELEVATION



GUIDE KEYOUT

FIBERGLASS STOP GATE DETAILS

No Scale

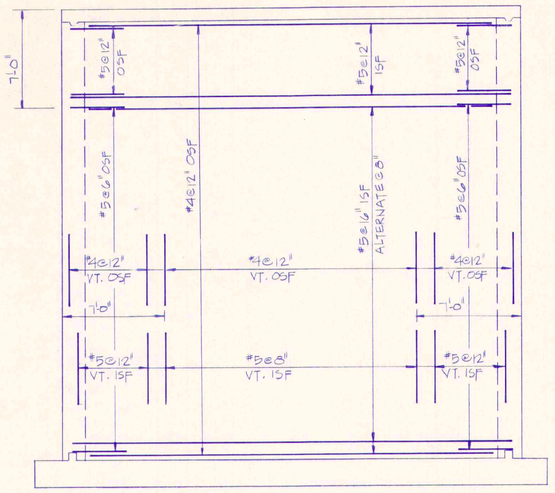
RECORD DRAWING

REFORMATORY MAIN LIFT STATION
SECTIONS & MISCELLANEOUS DETAILS

Scale: As Noted	FALL CREEK R.W.D.	Sheet
Drawn By: D.G.	BEAM, LONGEST & NEFF	72
Designed By: R.F.S. J.P.	Consulting Engineers	
Certified By: E.R.	8136 Castleton Road Indianapolis In. 46250	

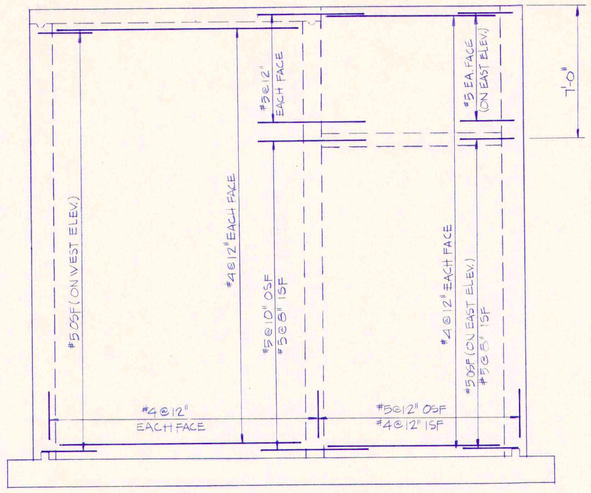
Rev 11-7-83

MARBAUGH N26508



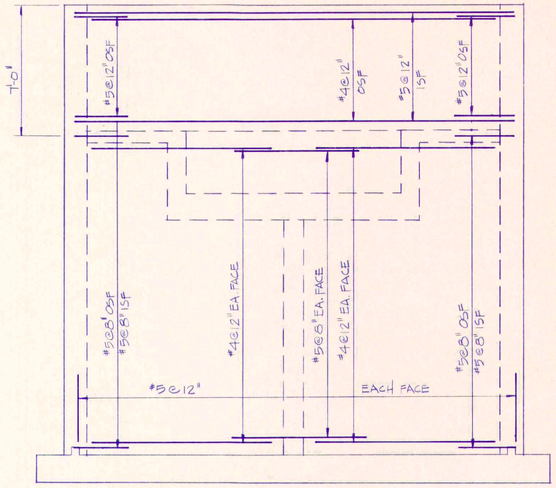
WEST WALL ELEVATION

SCALE 1/4" = 1'-0"



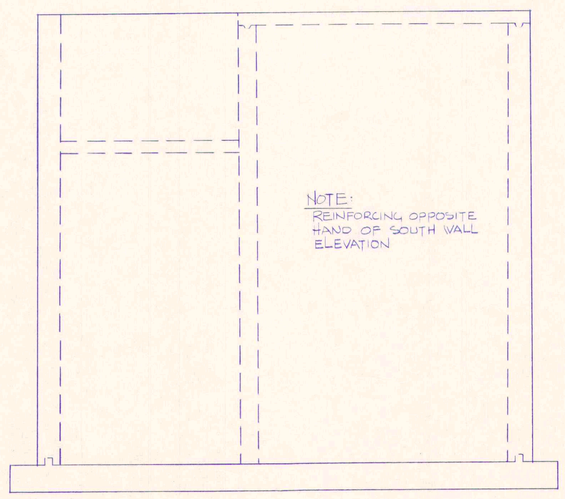
SOUTH WALL ELEVATION

SCALE 1/4" = 1'-0"



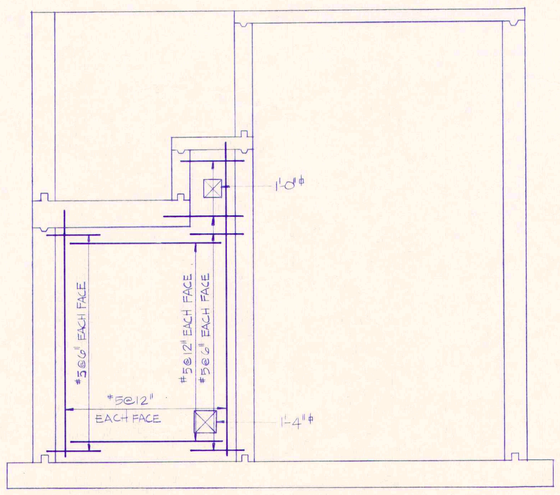
EAST WALL ELEVATION

SCALE 1/4" = 1'-0"



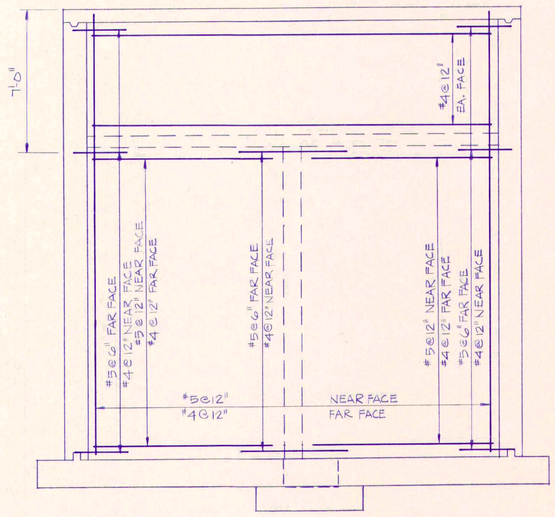
NORTH WALL ELEVATION

SCALE 1/4" = 1'-0"



INTERIOR WALL, LOOKING SOUTH

SCALE 1/4" = 1'-0"

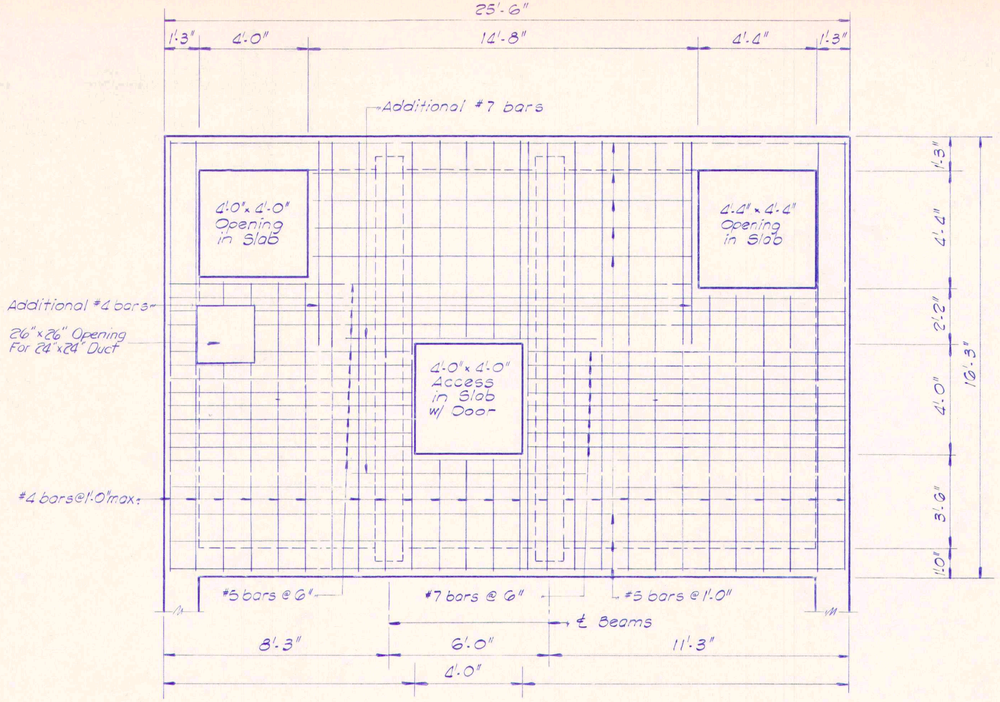


INTERIOR WALL, LOOKING EAST

SCALE 1/4" = 1'-0"

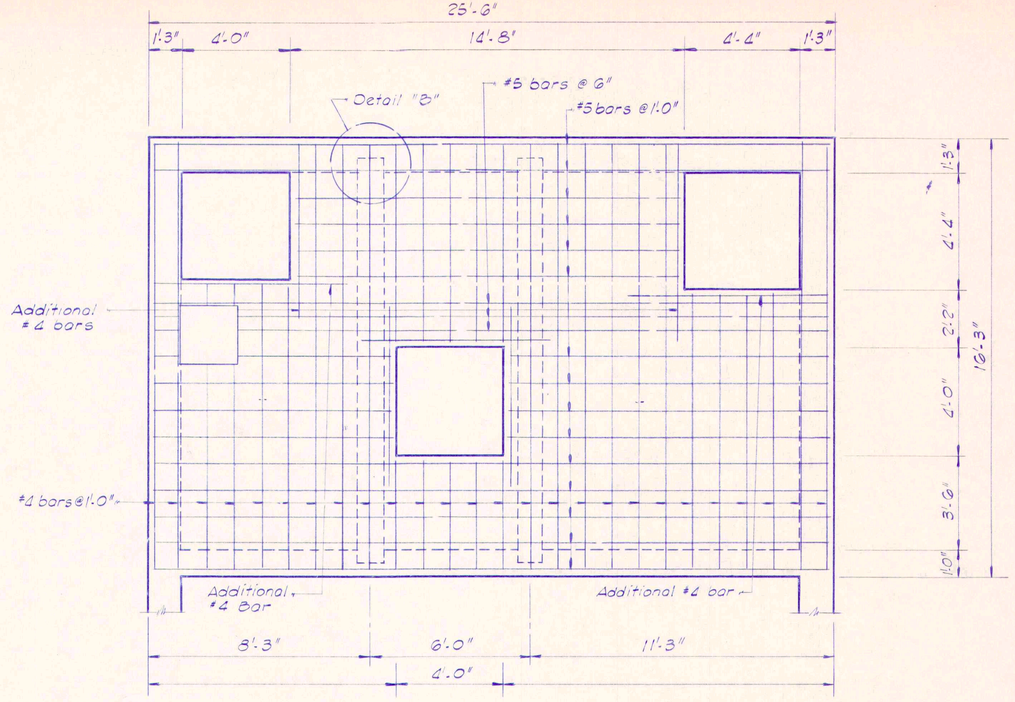
RECORD DRAWING

ER 3-30-83	REFORMATORY LIFT STATION STRUCTURAL ELEVATIONS		
	Scale: AS NOTED	FALL CREEK R.W.D.	Sheet 73
	Drawn By: GULLEY	BEAM, LONGEST & NEFF	
	Designed By: R.W.	Consulting Engineers 8136 Castleton Road Indianapolis In. 46250	
	Certified By: ER		



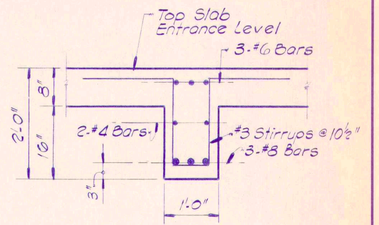
ENTRANCE LEVEL SLAB PLAN

SHOWING BOTTOM REINFORCING
Scale : 3/8" = 1'-0"



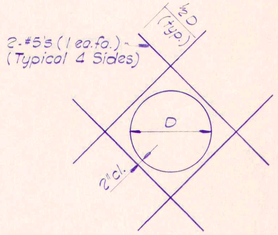
ENTRANCE LEVEL SLAB PLAN

SHOWING TOP REINFORCING
Scale : 3/8" = 1'-0"



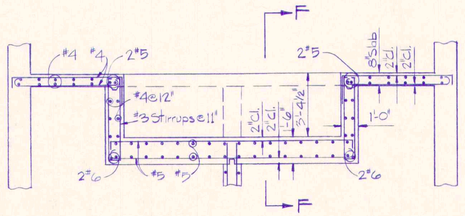
TYPICAL BEAM SECTION

Scale : 3/4" = 1'-0"



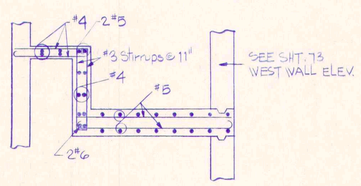
TYPICAL WALL OPENING REINFORCING DETAIL

No Scale



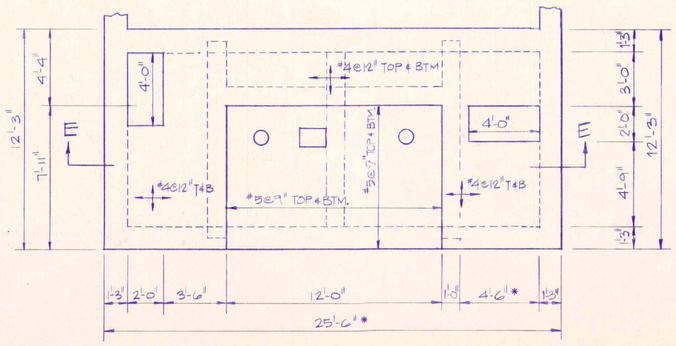
SECTION E-E

SCALE 1/4" = 1'-0"



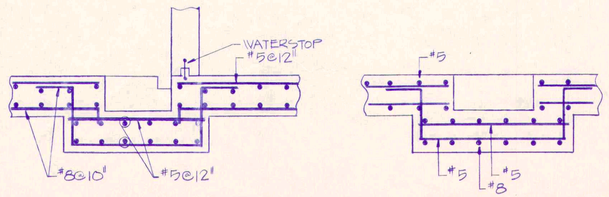
SECTION F-F

SCALE 1/4" = 1'-0"



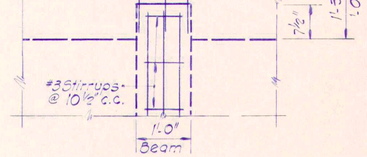
COMMINUTOR SLAB PLAN

SCALE 1/4" = 1'-0"



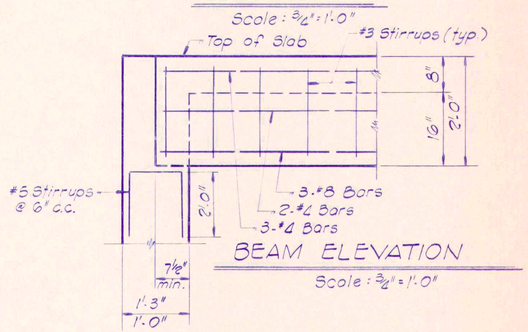
SUMP PIT SECTIONS

SCALE 3/8" = 1'-0"



DETAIL "B"

Scale : 3/4" = 1'-0"



BEAM ELEVATION

Scale : 3/4" = 1'-0"

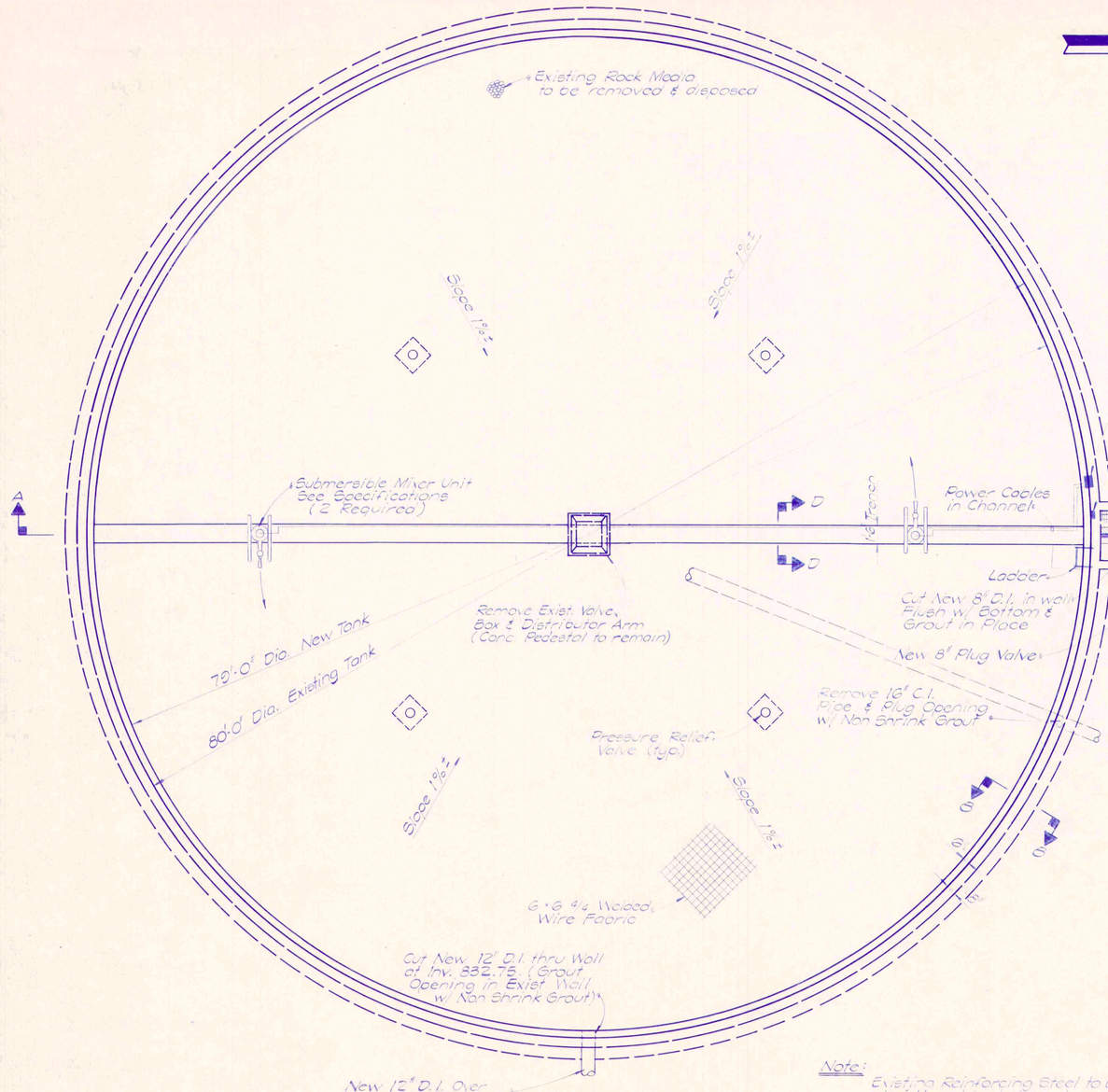
RECORD DRAWING

REV. 5-2-84 * DENOTES DIMENSIONS INCREASED BY 6" RLG
REV. 11-4-83 DUCT OPENINGS, RE-BAR

REFORMATORY LIFT STATION STRUCTURAL AND DETAILS

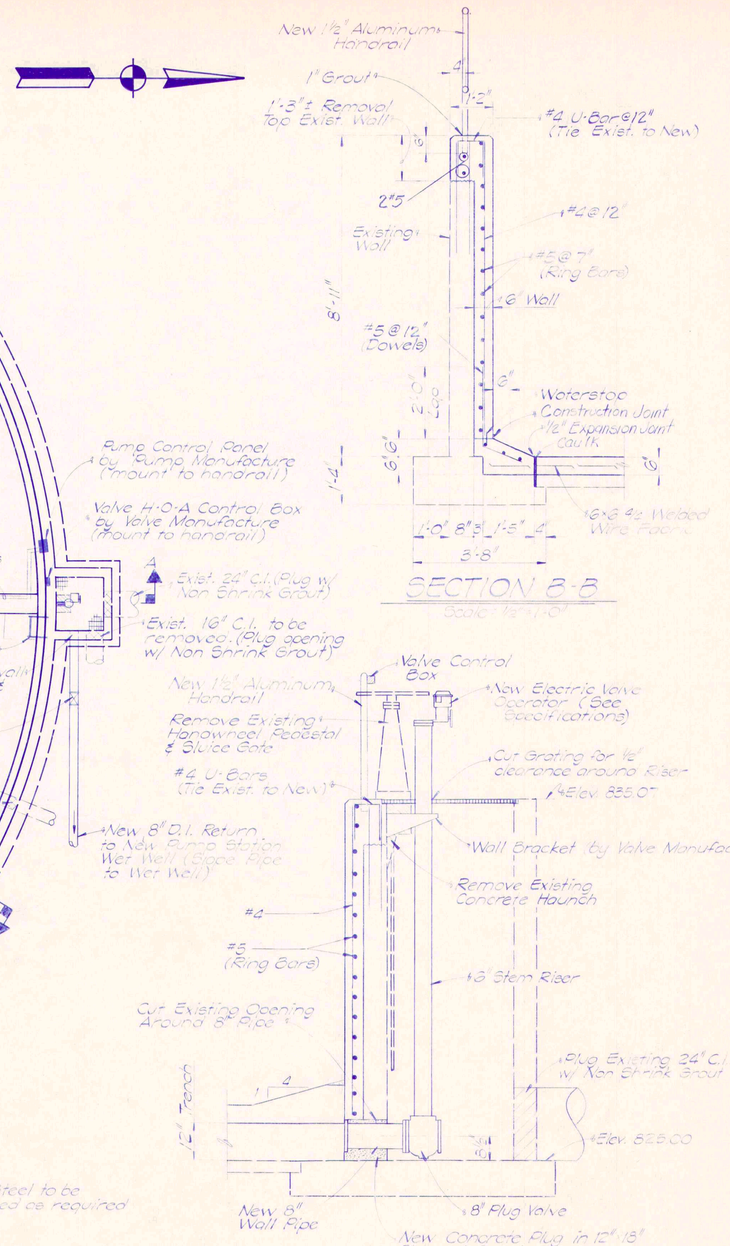
Scale: As Noted	FALL CREEK R.W.D.	Sheet
Drawn By: D.G.	BEAM, LONGEST & NEFF	74
Designed By: R.F.S.	Consulting Engineers	
Certified By: E.A.	8136 Castleton Road Indianapolis In. 46250	

MARBAUGH N26508



PLAN

Scale: 3/16"=1'-0"



DETAIL C

Scale: 1½"=1'-0"

SECTION A-A

Scale: 3/16"=1'-0"

SECTION B-B

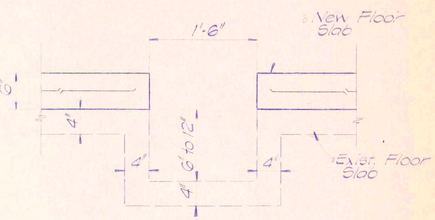
Scale: ¾"=1'-0"

DETAIL C

Scale: 1½"=1'-0"

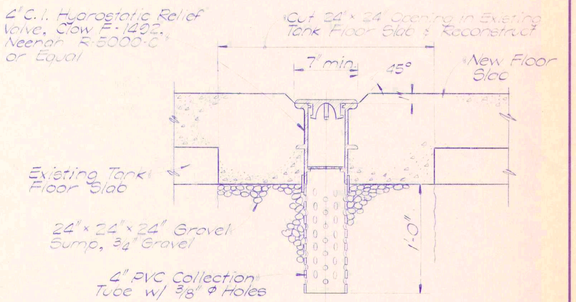
PARTIAL PLAN

Scale: 3/8"=1'-0"



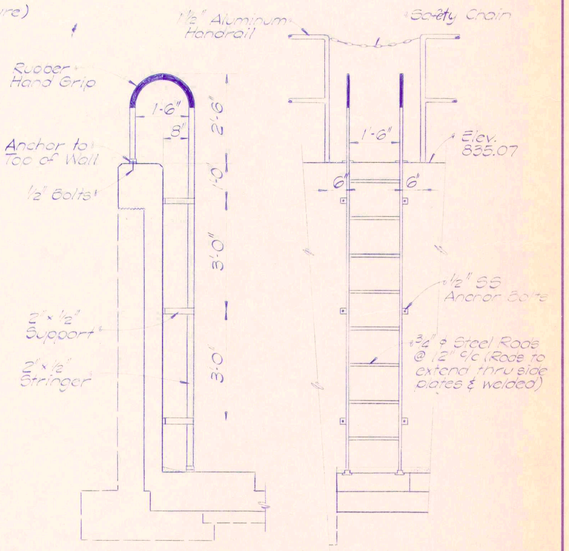
SECTION D-D

Scale: 1"=1'-0"



PRESSURE RELIEF VALVE DETAIL

2 Req'd.



LADDER DETAILS

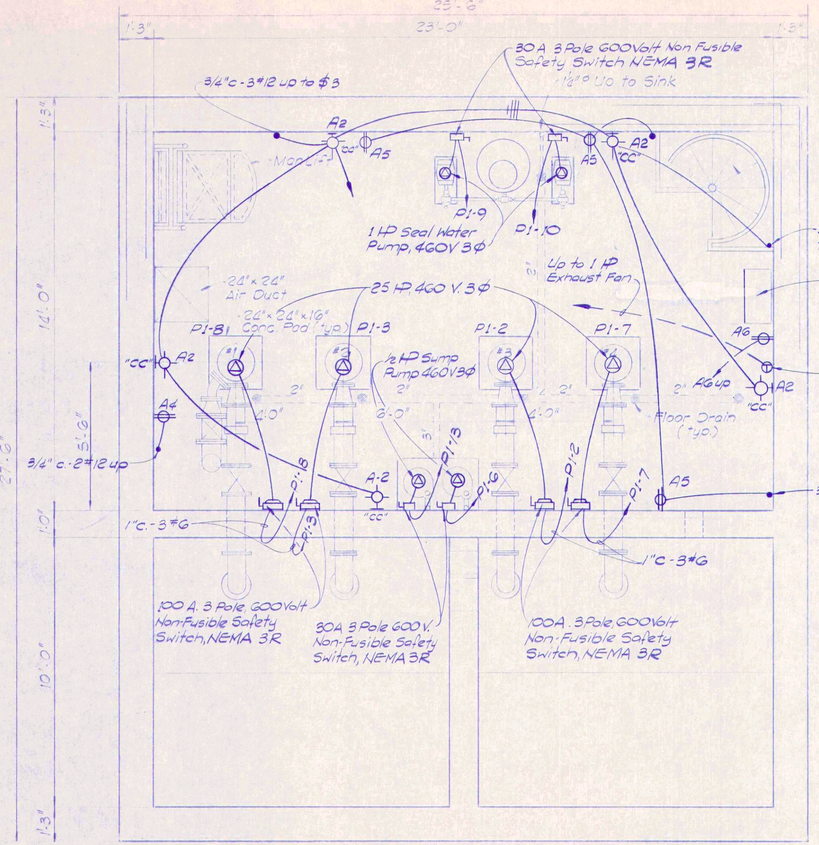
Scale: 1½"=1'-0"

RECORD DRAWING

SURGE HOLDING TANK
(EXIST. REFORMATORY TRICKLE FILTER)

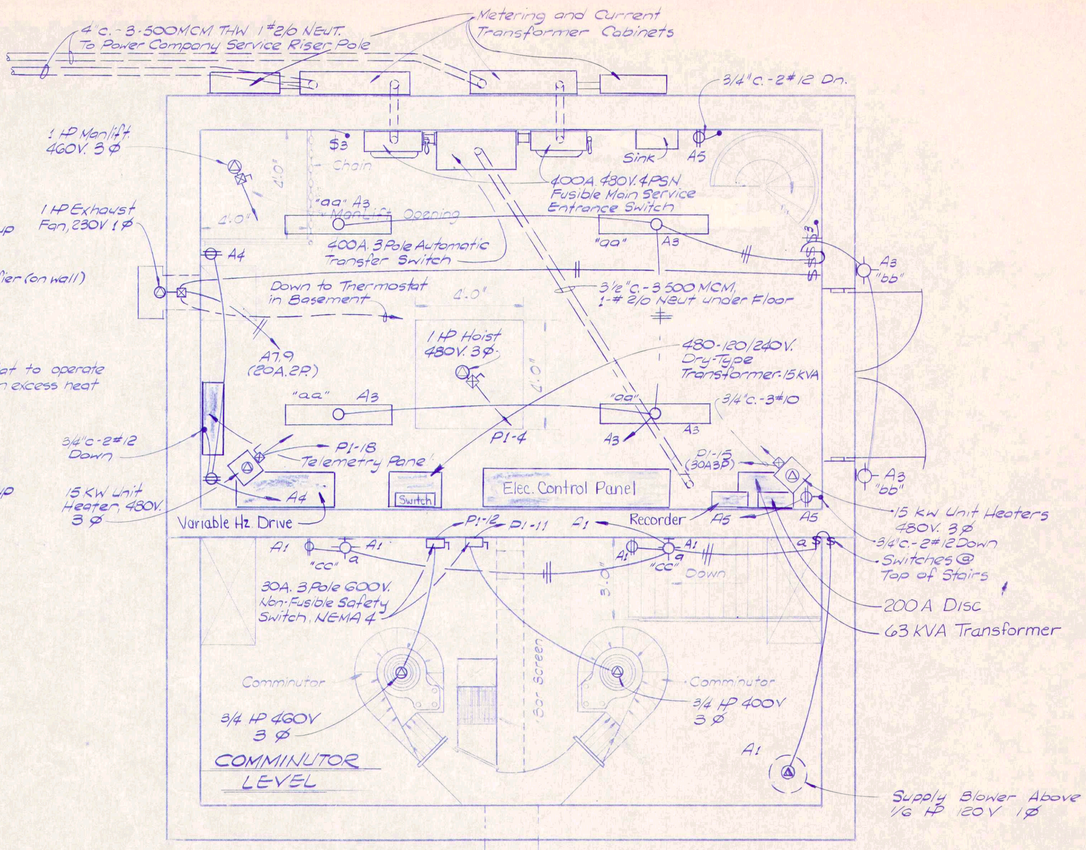
Scale: As Noted	FALL CREEK R.W.D.	Sheet 75
Drawn By: DG.	BEAM, LONGEST & NEFF	
Designed By: RFS. JP.	Consulting Engineers	
Certified By: E.R.	8136 Castleton Road Indianapolis In. 46250	

MAIBAUGH N26508



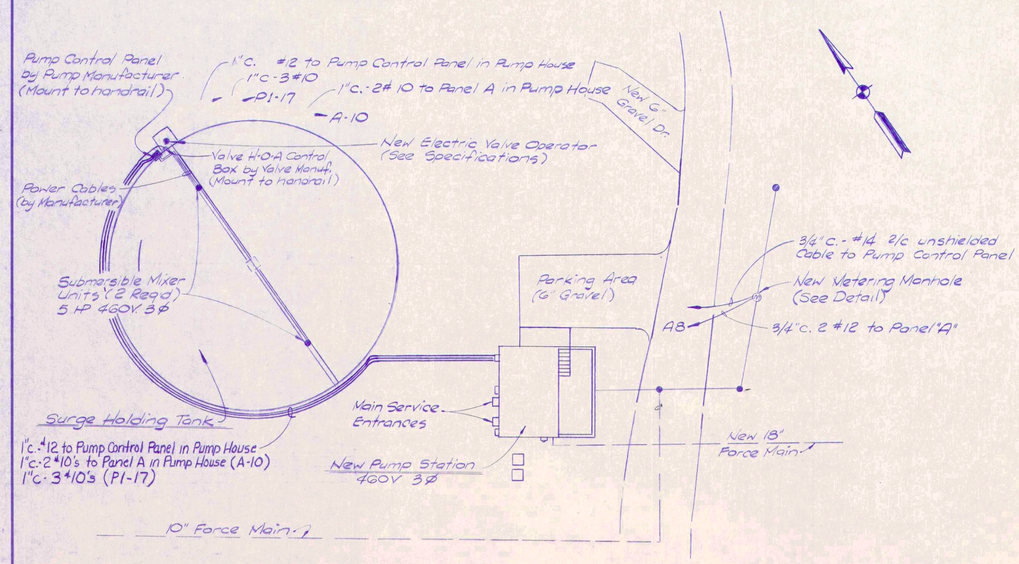
DRY PIT ELECTRICAL FLOOR PLAN

Scale 3/8"=1'-0"



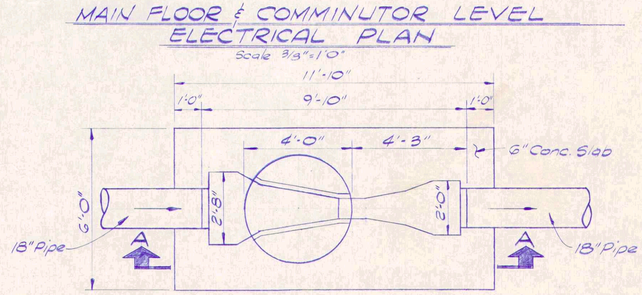
MAIN FLOOR & COMMINUTOR LEVEL ELECTRICAL PLAN

Scale 3/8"=1'-0"



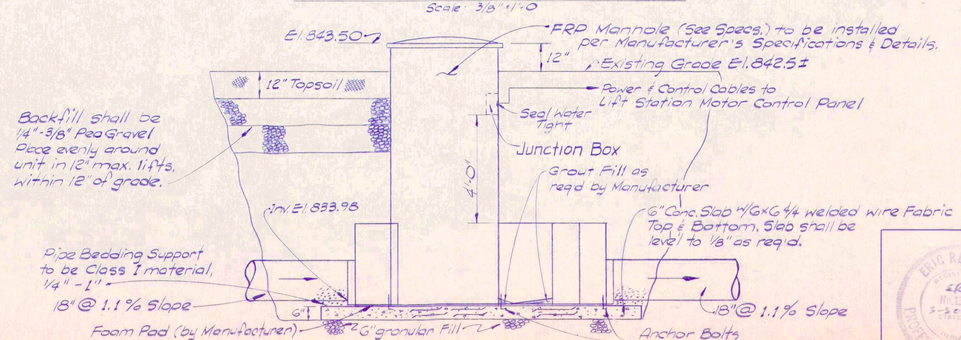
SITE PLAN

Scale 1"=20'



METERING MANHOLE PLAN

Scale 3/8"=1'-0"



SECTION A-A

Scale 3/8"=1'-0"

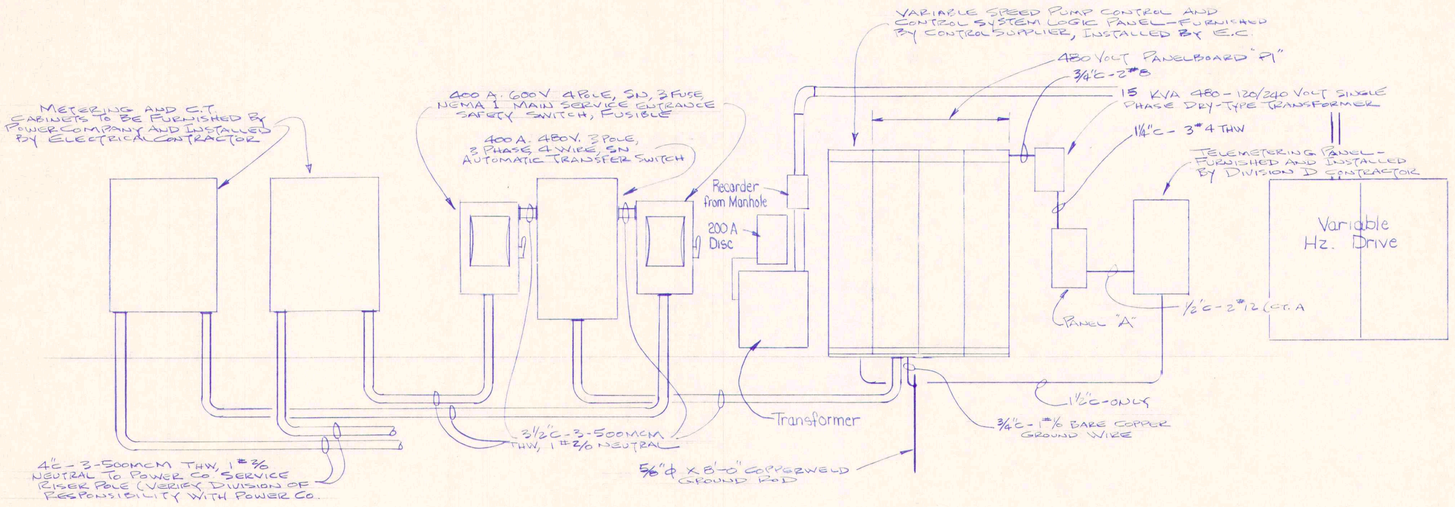
RECORD DRAWING 3/20/83

REFORMATORY MAIN LIFT STATION
ELECTRICAL PLANS & METERING MANHOLE DETAIL

Scale: As Shown	FALL CREEK R.W.D.	Sheet
Drawn By: VWS & J.B.	BEAM, LONGEST & NEFF	76
Designed By: J.P.	Consulting Engineers	
Certified By: E.R.	8136 Castleton Road, Indianapolis In. 46250	

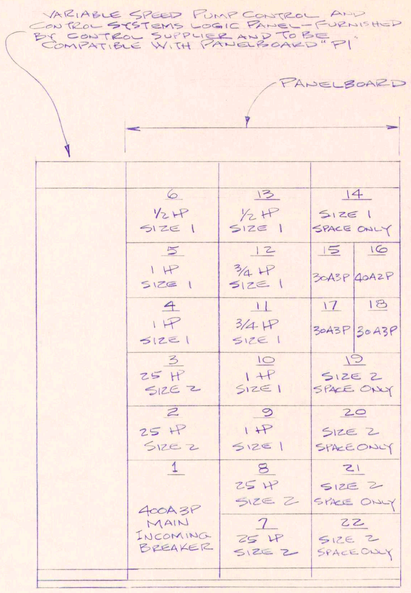
ERIC RESKE No. 13840 REGISTERED PROFESSIONAL ENGINEER

MARBAUGH N26308



SCHEMATIC SERVICE RISER DIAGRAM

277/480 VOLT 3ϕ 4W WYE

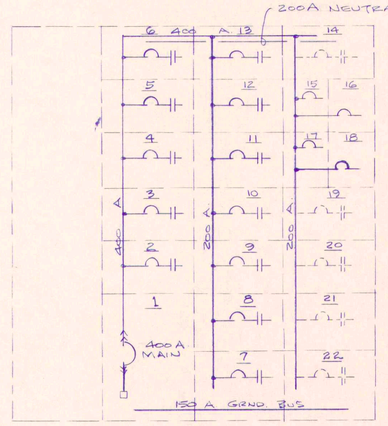


FRONT VIEW

480 VOLT PANELBOARD "P1"

CT. NO.	BRKR. SIZE	STARTER SIZE	BRANCH CIRCUIT CONDUIT	BRANCH CIRCUIT WIRE	SERVING	CONTROLS
1	400A3P	—	3 1/2"C	3-500MCM, 1-#3/0 NEUT	MAIN BREAKER	—
2	80A3P	2	1"C	3#6	25 HP SEWAGE PUMP	HOA, PB, PILOT LT
3	80A3P	2	1"C	3#6	25 HP SEWAGE PUMP	HOA, PB., PILOT LT.
4	15A3P	—	3/4"C	3#12	1 HP HOIST	—
5	15A2P	—	3/4"C	2#12	1 HP MAN LIFT	—
6	15A3P	1	3/4"C	3#12	1/2 HP SUMP PUMP	HOA, P.B. PILOT LT
7	80A3P	2	1"C	3#6	25 HP SEWAGE PUMP	HOA, PB. PILOT LT.
8	80A3P	2	1"C	3#6	25 HP SEWAGE PUMP	HOA, P.B. PILOT LT
9	15A3P	1	3/4"C	3#12	1 HP SEAL WATER PUMP	P.B., PILOT LT
10	15A3P	1	3/4"C	3#12	1 HP SEAL WATER PUMP	PB., PILOT LT
11	15A3P	1	3/4"C	3#12	3/4 HP COMMINUTOR	P.B. PILOT LT
12	15A3P	1	3/4"C	3#12	3/4 HP COMMINUTOR	P.B. PILOT LT
13	15A3P	1	3/4"C	3#12	1/2 HP SUMP PUMP	HOA, P.B., PILOT LT.
14	—	1	—	—	SPACE ONLY	—
15	30A3P	—	3/4"C	3#10	15 KW UNIT HEATER	—
16	40A2P	—	3/4"C	2#8	480 - 120/240 V XFORMER	—
17	30A3P	—	1"C	3#10	ASPIRATOR CONTROL PANEL	—
18	30A3P	—	3/4"C	3#10	15 KW UNIT HEATER	—
19	—	2	—	—	SPACE ONLY	—
20	—	2	—	—	SPACE ONLY	—
21	—	2	—	—	SPACE ONLY	—
22	—	2	—	—	SPACE ONLY	—

NOTES:
IN ADDITION TO THE "HAND-OFF-AUTO", "START STOP" PUSH BUTTONS AND PILOT LIGHT, ALL MOTOR STARTER UNITS SHALL HAVE CONTROL TRANSFORMERS FOR 120V CONTROL



SCHEMATIC DIAGRAM

480 VOLT PANELBOARD "P1"

RECORD DRAWING

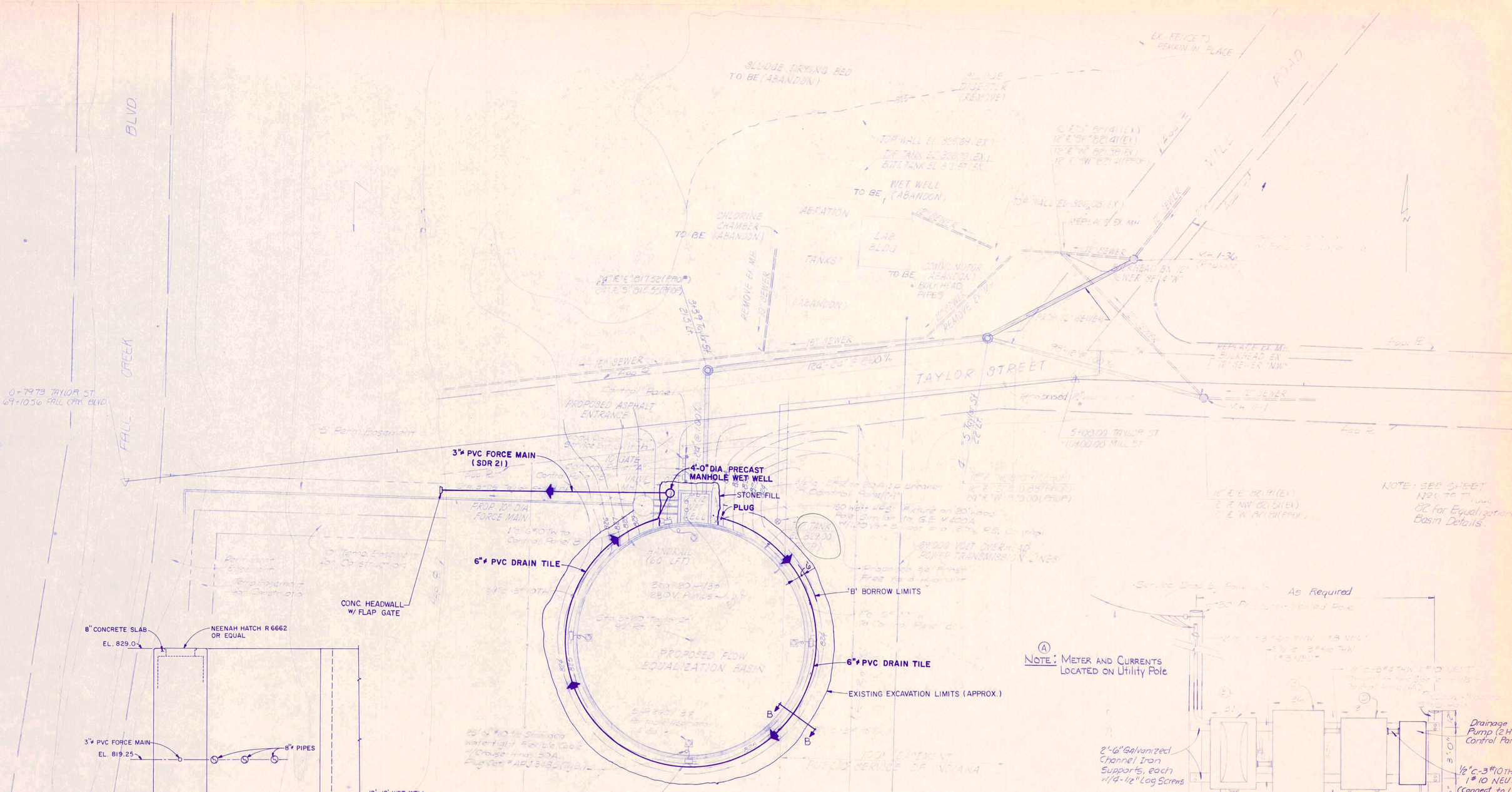
REFORMATORY WORKS ELECTRICAL

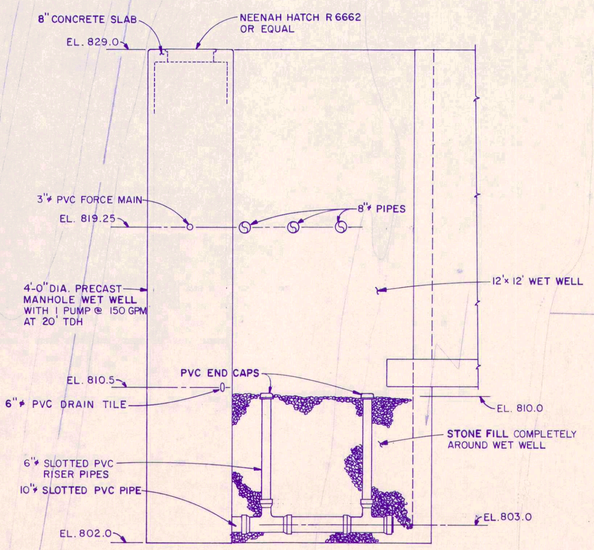
Scale: As Noted	FALL CREEK R.W.D.	Sheet 77
Drawn By: I.H.	BEAM, LONGEST & NEFF	
Designed By: I.H	Consulting Engineers	
Certified By: E.R. I.H.	8136 Castleton Road Indianapolis In. 46250	

J.M. Herman 8/30/83

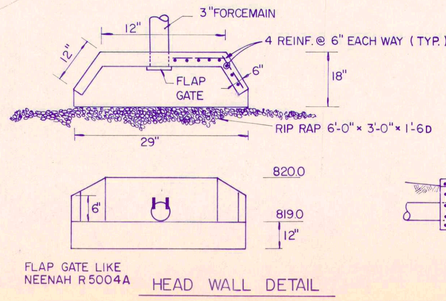
REFORM. V.S. DIV B

MARBAUGH N2650R





SECTION A-A(79)
SCALE: 1/4"=1'-0"



FLAP GATE LIKE NEENAH R5004A

HEAD WALL DETAIL

Ⓐ NOTE: METER AND CURRENTS LOCATED ON UTILITY POLE

LEGEND

Ⓐ Warning fence (max. 4' on center) By Contr. Installed by F.C.

Ⓑ 40 A. 3 Pole 3 Fuse 240 Volt Type 3 NF Double Throw Safety Switch Square D Cat. #H324RB 4P. Type of Enclosure Duplex Equipment By Contr. Installed by F.C.

Ⓒ Control Panel "A" For 20 H.P. Pump As Furnished by Equipment Supplier, Installed by F.C. NEMA 4

Ⓓ Control Panel "B" For 5 H.P. Aerators To be Furnished by Equipment Supplier, Installed by F.C.

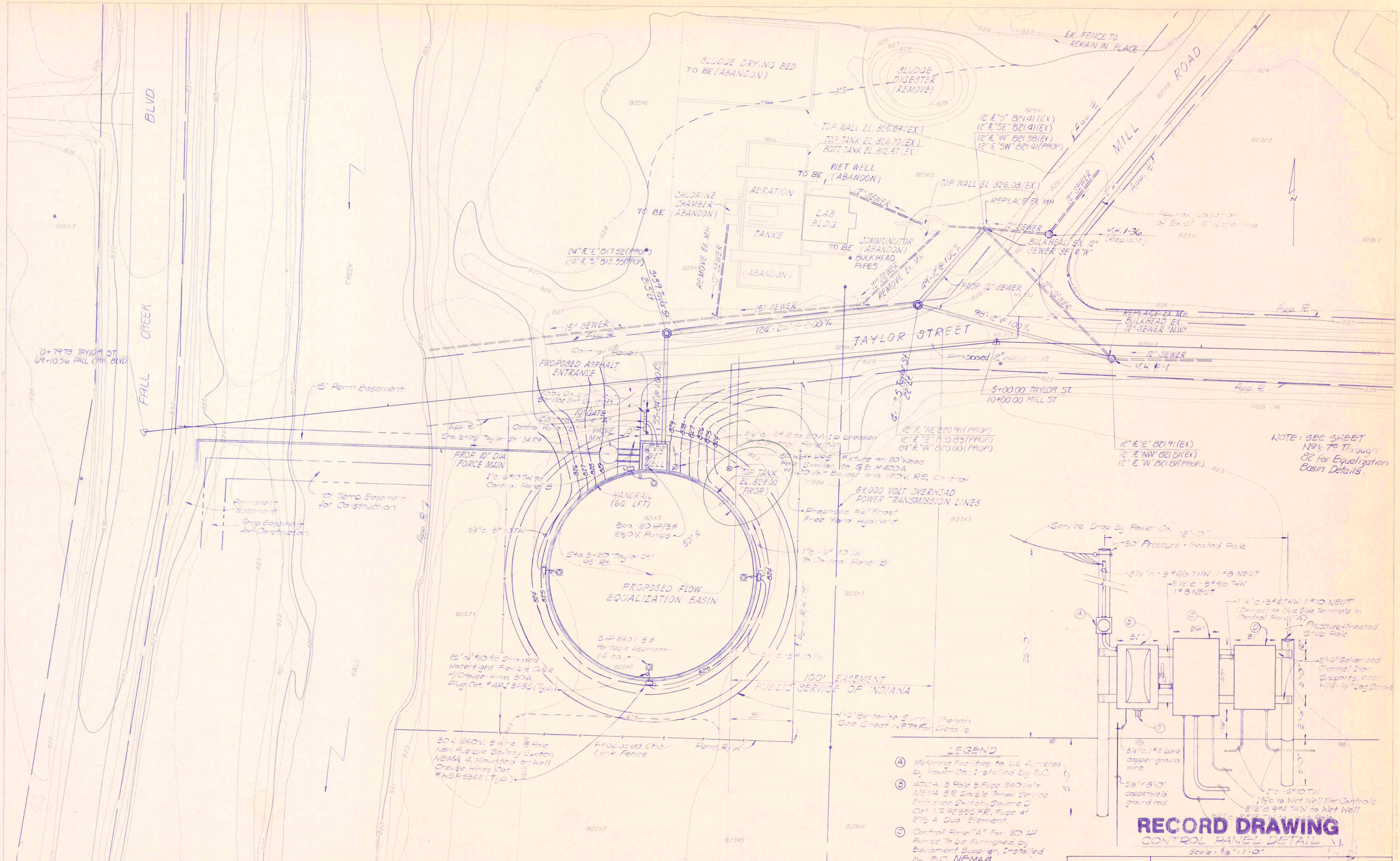
Ⓔ Emergency Generator Receptical Square D, Cat #AREA 204-226, Less Black Box

RECORD DRAWING

REVISED 10/11/84

PENDLETON EQUALIZATION BASIN
SITE & ELECTRICAL PLANS

Scale: 1"= 20'	FALL CREEK R.W.D.	Sheet 72
Drawn By: M.E.B.	BEAM, LONGEST & NEFF	
Designed By: S.D.L.	Consulting Engineers	
Certified By: E.R.	8136 Castleton Road Indianapolis, In. 46250	



LEGEND

(A) Metering Facilities to be furnished by Power Co.; Installed by E.C.

(B) 400A. 3 Pole 3 Fuse 240 V/o't NEMA 3R Double Throw Service Entrance Switch, Square D Cat. No. 92355 FR. Fuse at 275 A Dual Element.

(C) Control Panel "A" For 20 HP Pumps To be Furnished by Equipment Supplier, Installed by E.C. NEMA 4

(D) Control Panel "B" For 5 HP Aspirators to be furnished by Equipment Supplier, Installed by E.C.

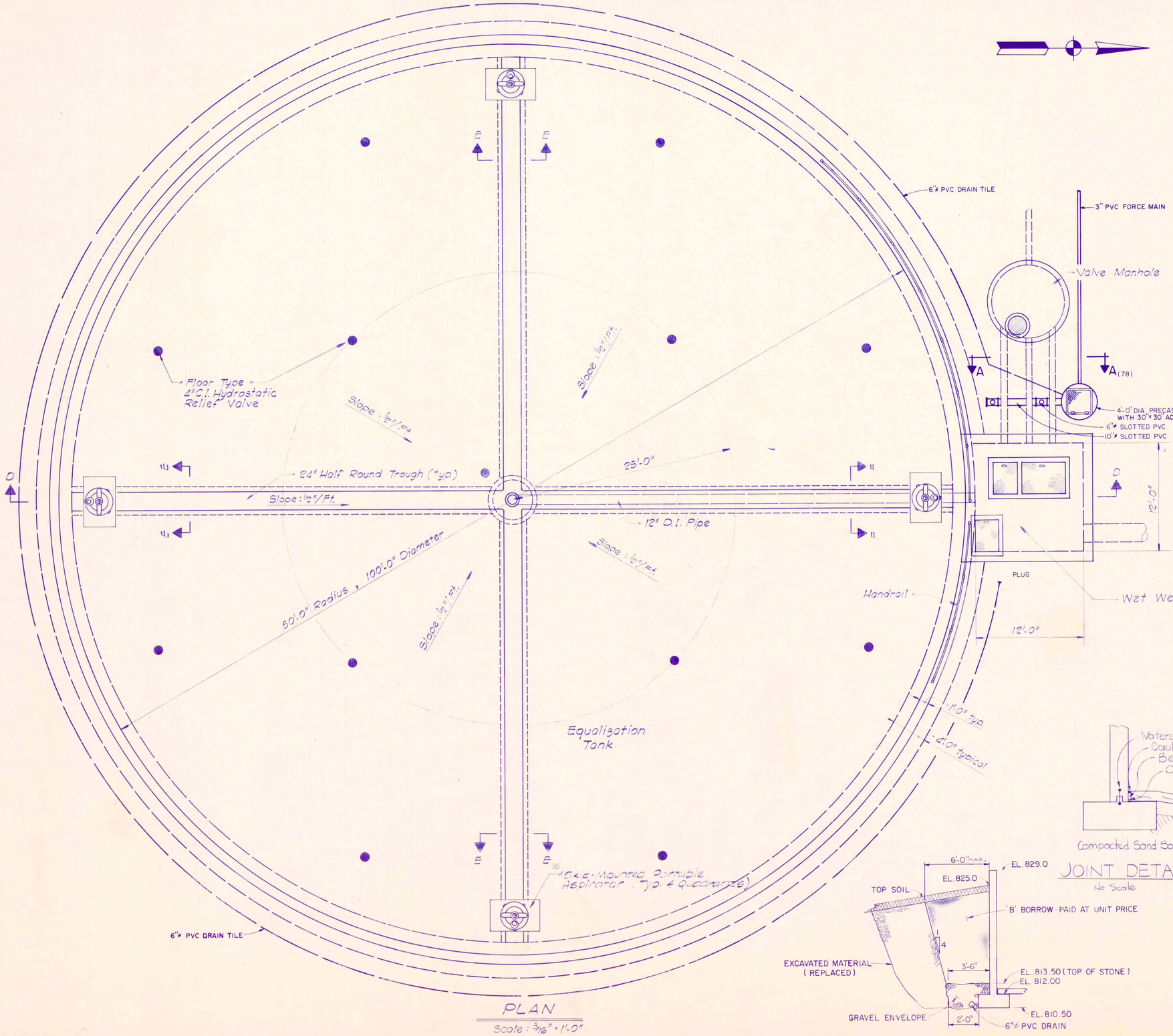
(E) Emergency Generator Receptical, Square D, Cat. #AREA 204-226, Less Black Box

RECORD DRAWING

CONTROL PANEL DETAIL

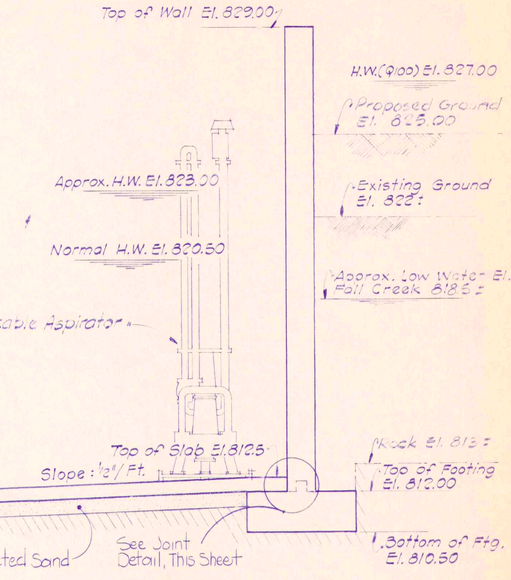
Scale: 3/8" = 1'-0"

PENDLETON EQUALIZATION BASIN SITE & ELECTRICAL PLANS		
Scale: 1" = 20'	FALL CREEK R.W.D.	Sheet
Drawn By: M.E.B.	BEAM, LONGEST & NEFF Consulting Engineers 8136 Castleton Road Indianapolis In. 46250	78
Designed By: G.D.L.		
Certified By: E.R.		



PLAN

Scale: 3/16" = 1'-0"



TYPICAL WALL SECTION

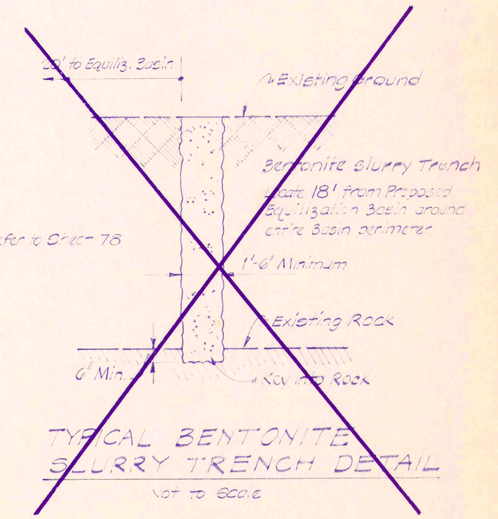
Scale: 3/8" = 1'-0"

JOINT DETAIL

No Scale

SECTION B-B (TYPICAL)

NO SCALE



TYPICAL BENTONITE SLURRY TRENCH DETAIL

NOT TO SCALE

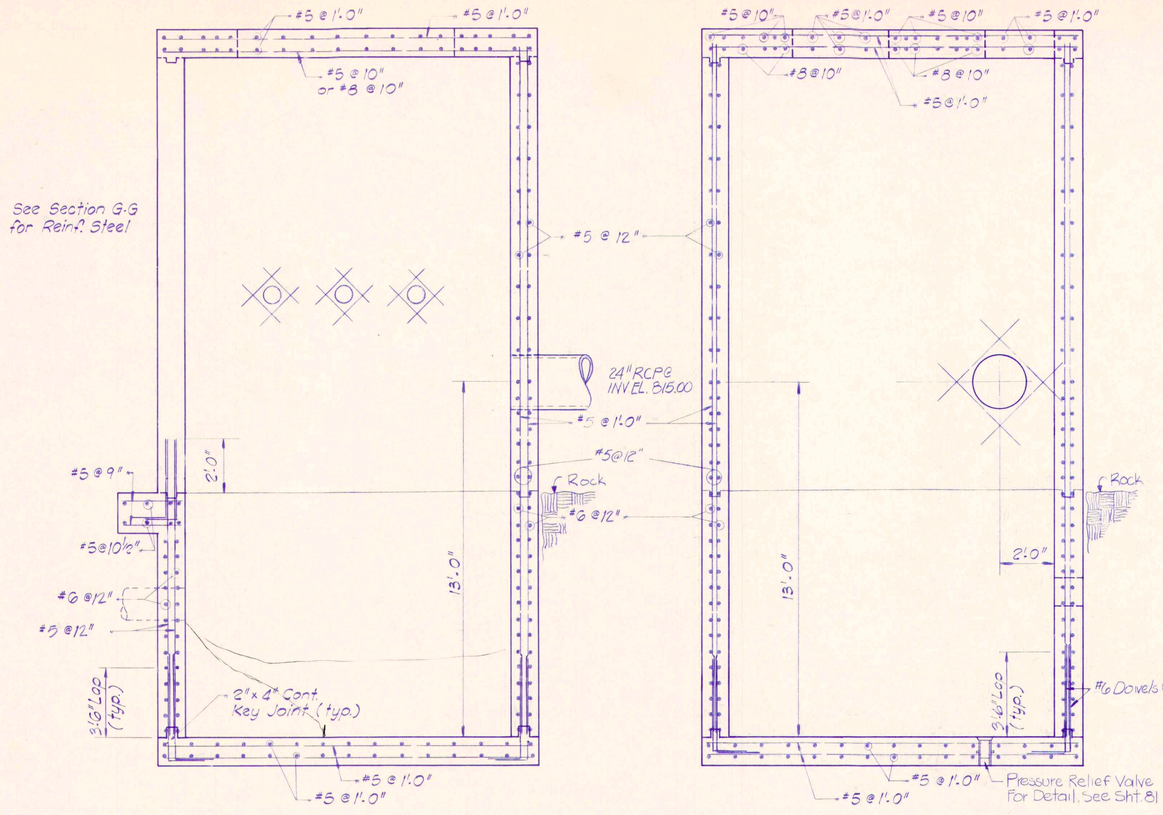
DELETED

RECORD DRAWING

EQUALIZATION TANK PLAN - STRUCTURAL		
Scale: 3/16" = 1'-0"	FALL CREEK R.W.D.	Sheet 79
Drawn By: J.B.	BEAM, LONGEST & NEFF	
Designed By: R.F.S.	Consulting Engineers	
Certified By: E.R.	8136 Castleton Road Indianapolis In. 46250	

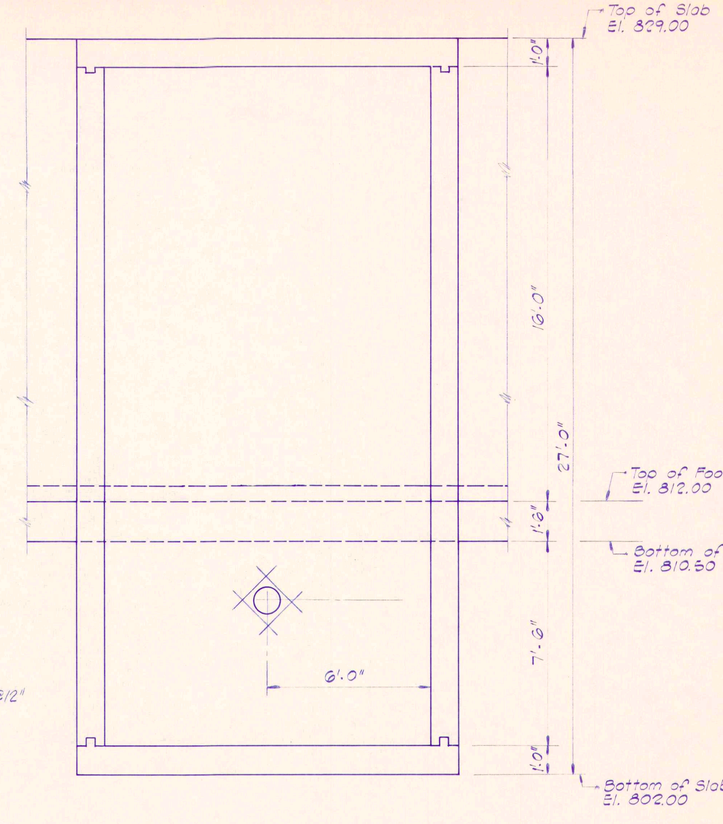
REVISED 10/11/84

MARBAUGH N26508



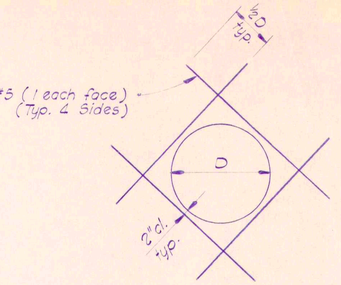
SECTION A-A

SECTION B-B



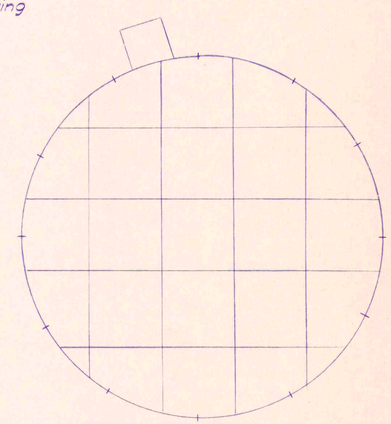
SECTION C-C

For Rein-forcing See Section B-B



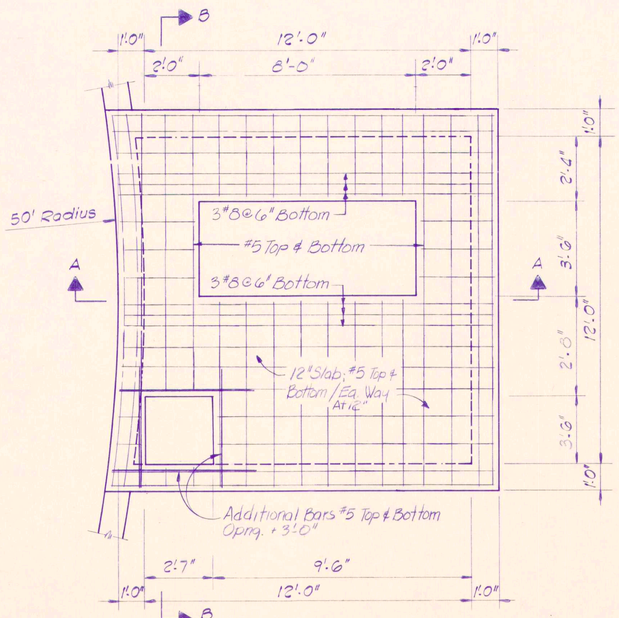
TYPICAL WALL OPENING REINFORCING DETAIL

No Scale



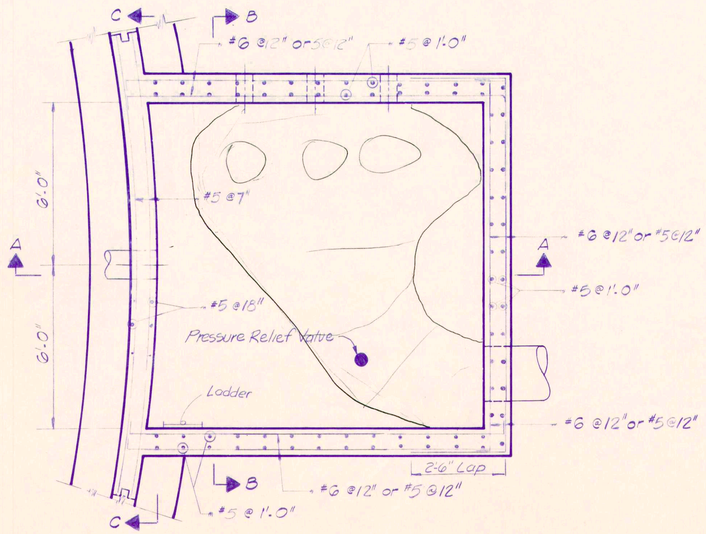
TANK CONSTRUCTION JOINTS

(Pour Constr. Joints in Checkered Board Pattern Approx. 20 x 20 Sq.)
No Scale



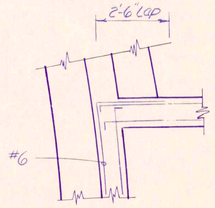
TOP SLAB - PLAN

(Verify Opening With Hatch Cover Manufacturer)



PLAN

(SHOWN WITH TOP SLAB REMOVED)



CORNER BELOW TANK FOOTING

No Scale

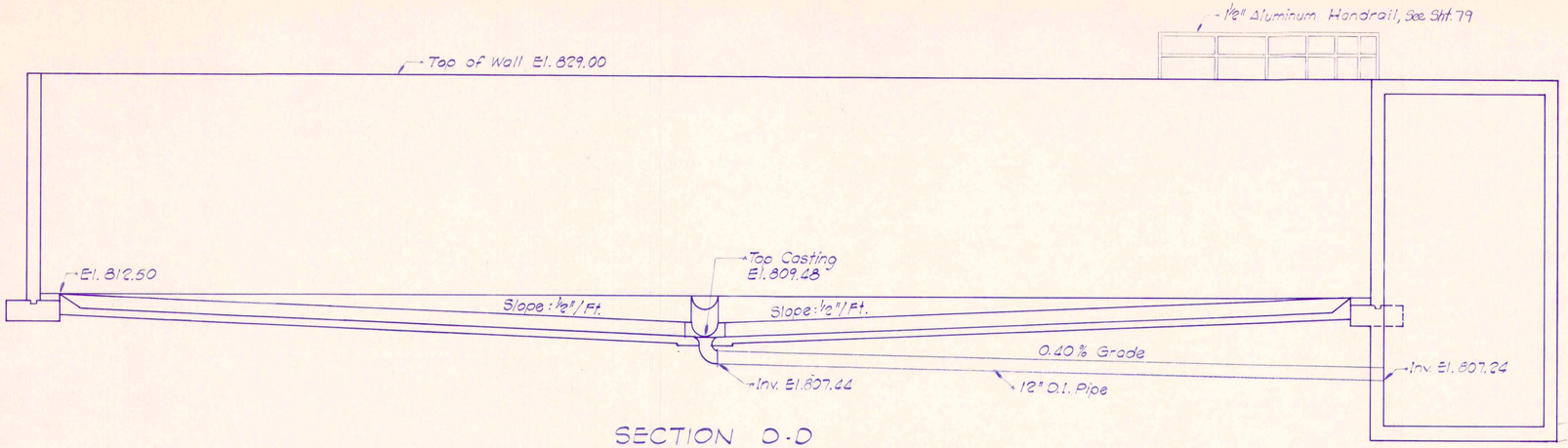
RECORD DRAWING

EQUALIZATION TANK SECTIONS - STRUCTURAL

Scale: 3/8"=1'-0"	FALL CREEK R.W.D.	Sheet 80
Drawn By: JFB	BEAM, LONGEST & NEFF	
Designed By: RFS	Consulting Engineers	
Certified By: E.R.	8136 Castleton Road Indianapolis In. 46250	

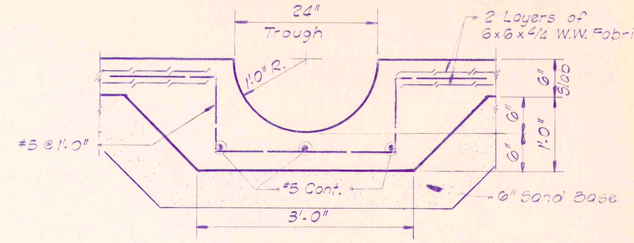
MARBALIGH N26508

Rev. 11-7-83 Retur



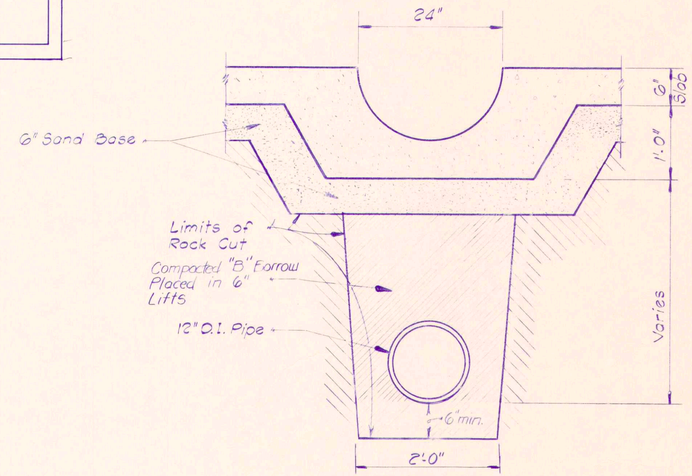
SECTION D-D

Scale: 3/16" = 1'-0"



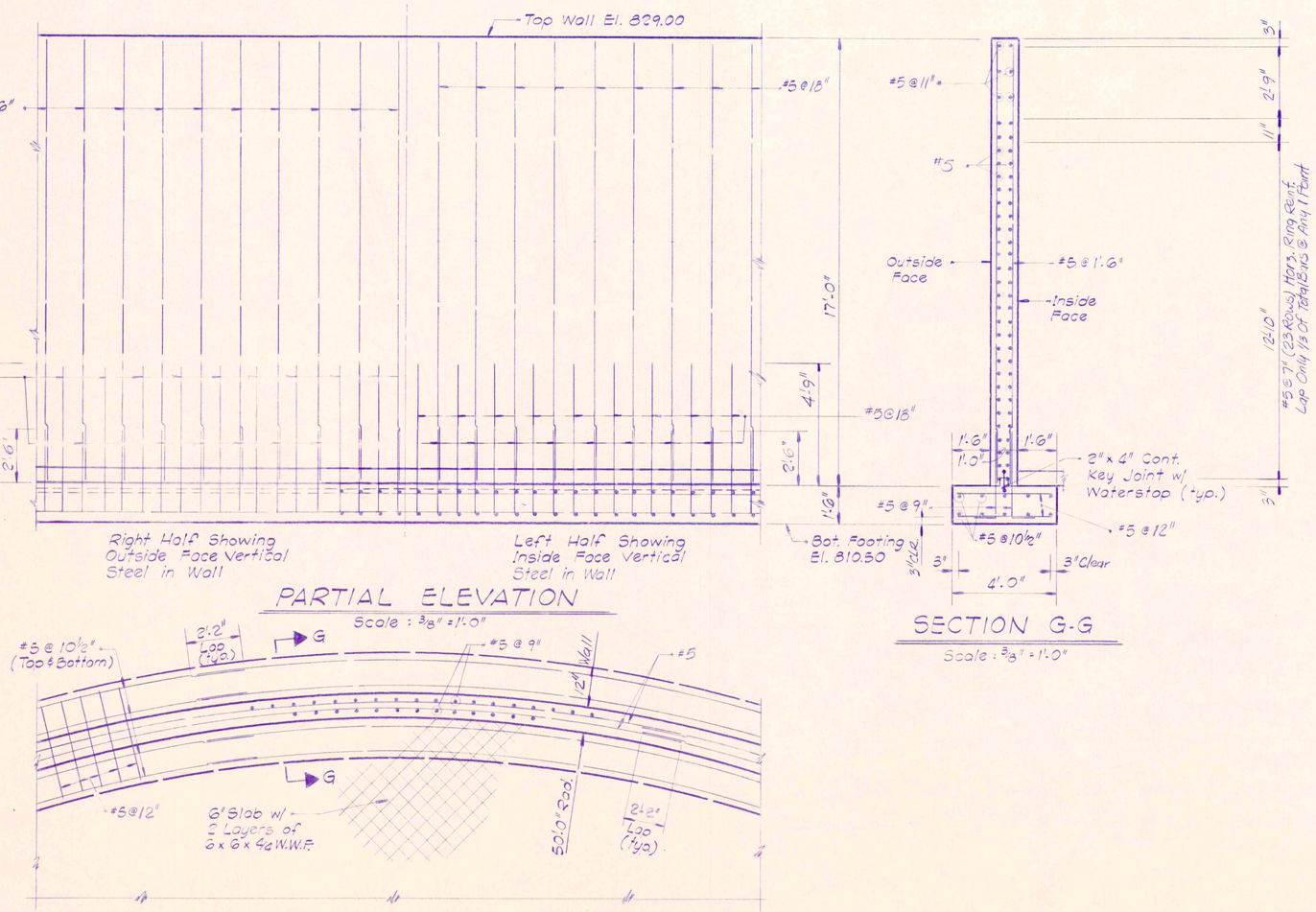
SECTION E-E

Scale: 1" = 1'-0"



SECTION F-F

Scale: 1" = 1'-0"
For Reinforcing Steel See Sec. E-E

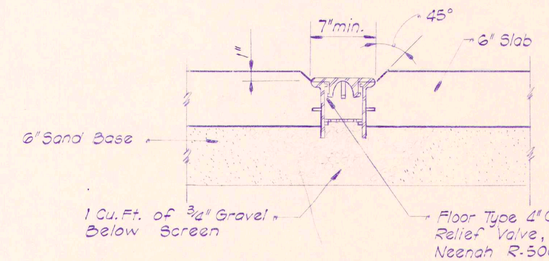


PARTIAL ELEVATION

Scale: 3/8" = 1'-0"

PARTIAL PLAN VIEW

Scale: None

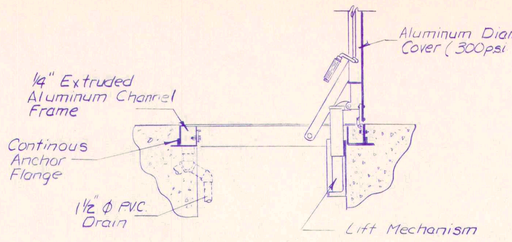


PRESSURE RELIEF VALVE DETAIL

RECORD DRAWING

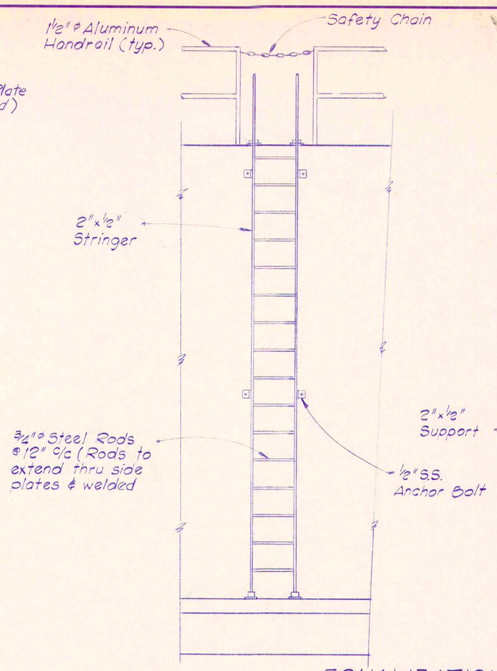
EQUALIZATION TANK DETAILS - STRUCTURAL	
Scale: As Shown	FALL CREEK R.W.D.
Drawn By: JB	BEAM, LONGEST & NEFF
Designed By: RFS	Consulting Engineers 8136 Castleton Road Indianapolis In. 46250
Certified By: E.R.	Sheet 81

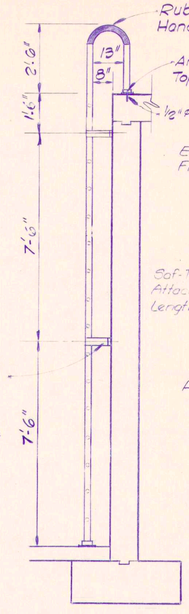
MARBAUGH N26508



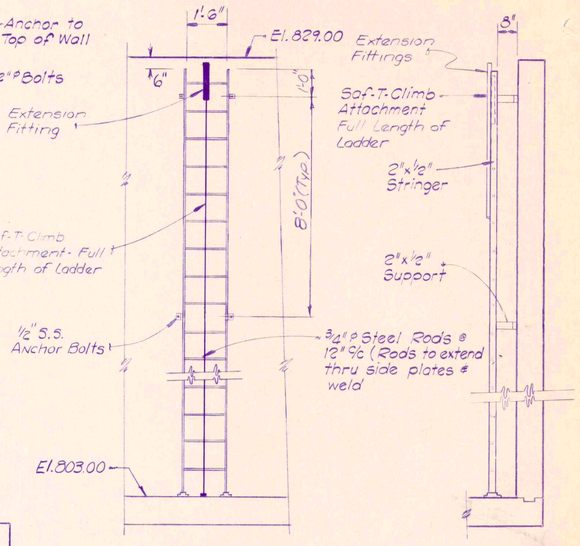
ACCESS DOOR FRAME DETAIL

No Scale



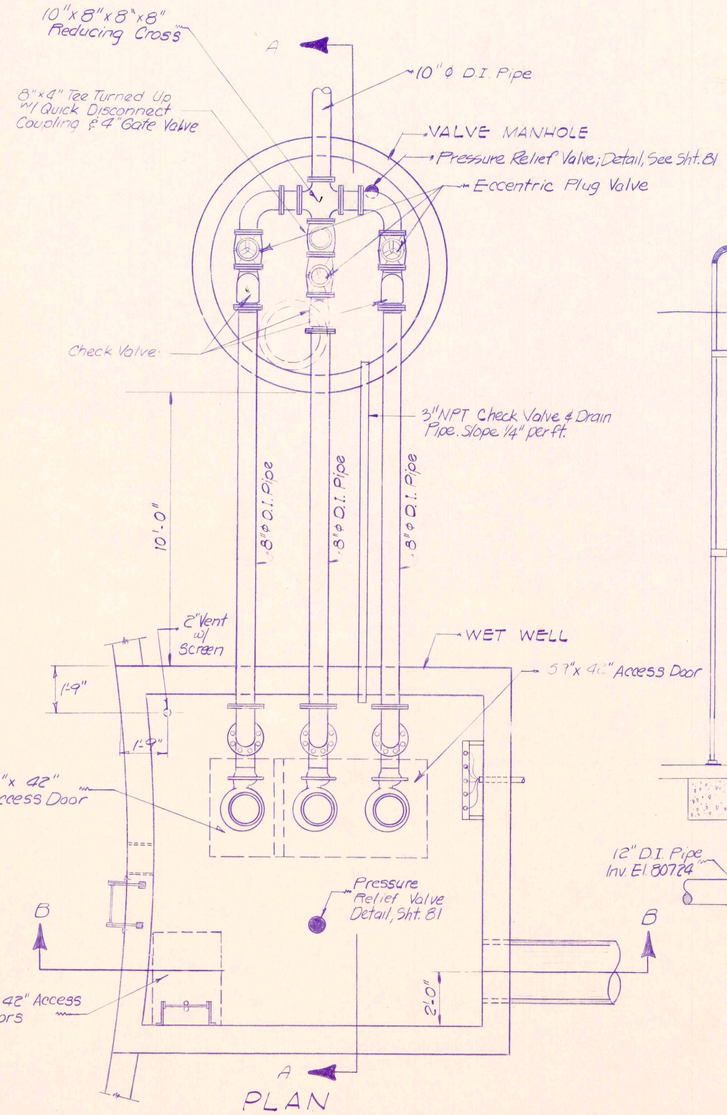


EQUALIZATION TANK LADDER DETAILS

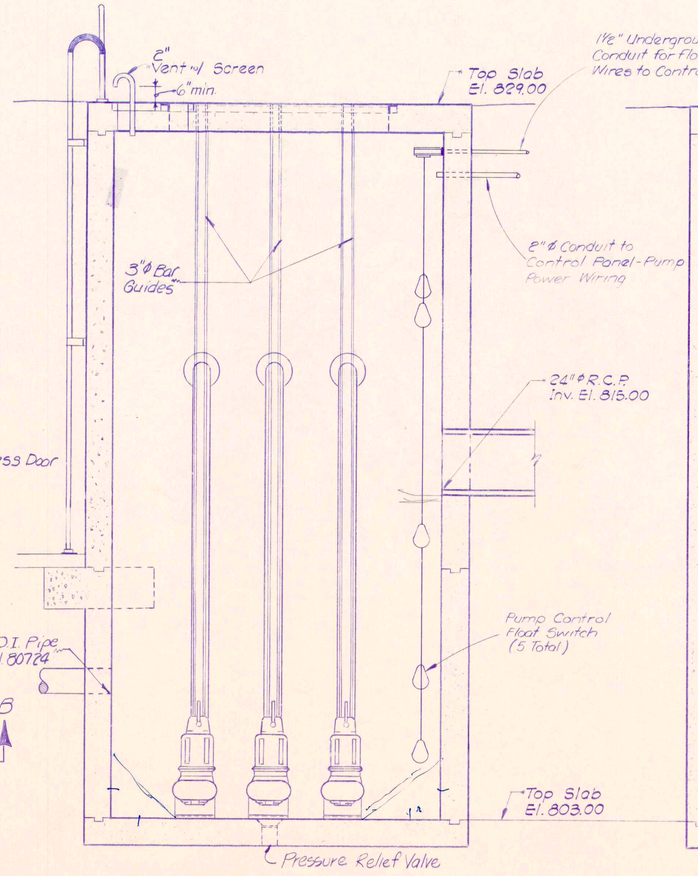


WET WELL LADDER DETAILS

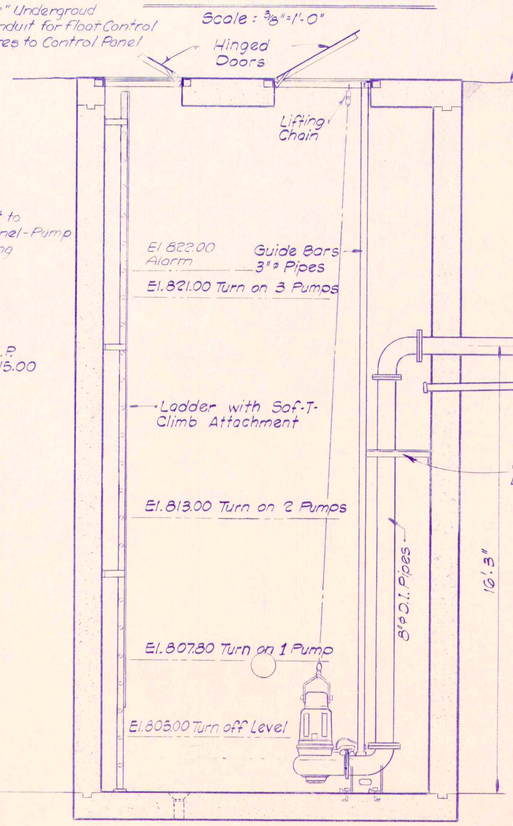
Scale : ⅜" = 1'-0"



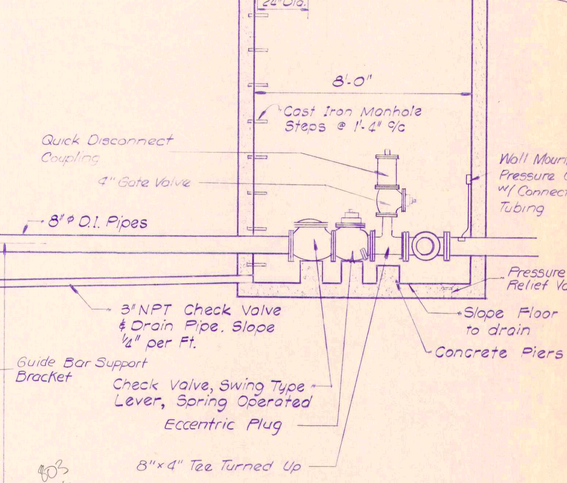
PLAN
WET WELL AND VALVE MANHOLE



SECTION B-B



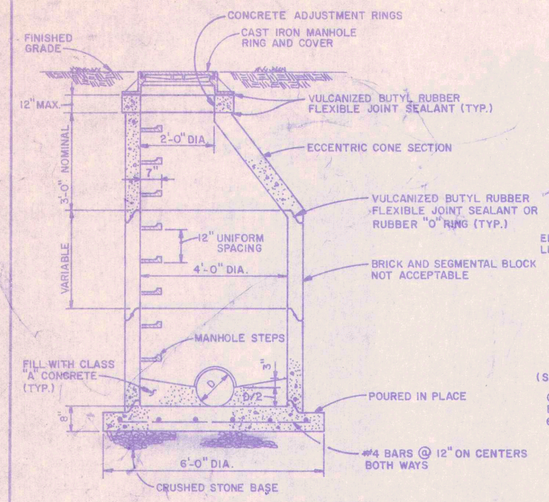
SECTION A-A



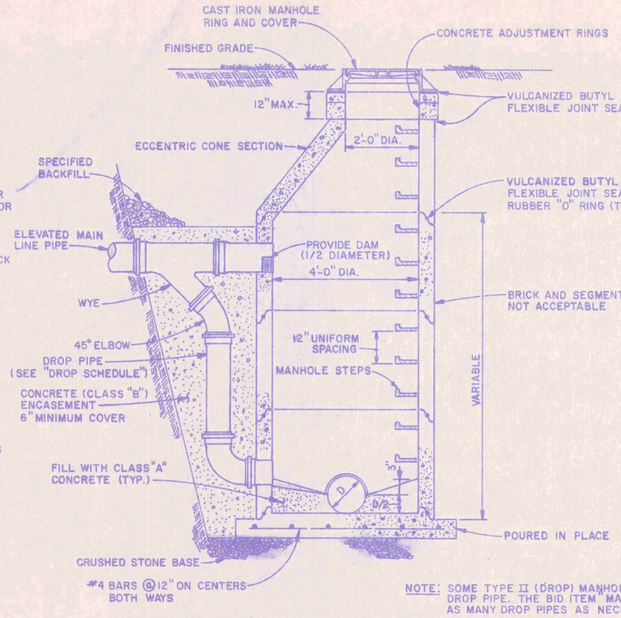
RECORD DRAWING

EQUALIZATION TANK DETAILS - MECHANICAL		
Scale: ⅜" = 1'-0"	FALL CREEK R.W.D.	Sheet
Drawn By: JB	BEAM, LONGEST & NEFF	82
Designed By: RFS	Consulting Engineers	
Certified By: E.R.	8136 Castleton Road Indianapolis In. 46250	

MARBAUGH N26508



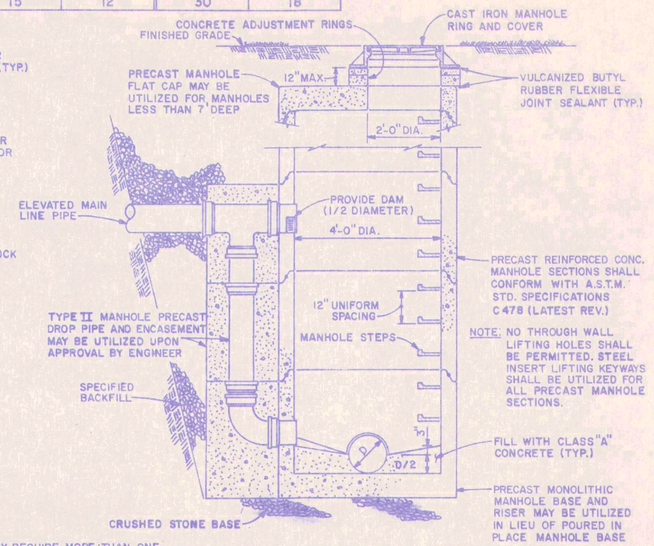
TYPE I
STANDARD MANHOLE FOR SEWERS
21" OR LESS IN DIAMETER



TYPE II
DROP MANHOLE FOR SEWERS
21" OR LESS IN DIAMETER

DROP PIPE SCHEDULE			
ELEV. MAIN	DROP PIPE	ELEV. MAIN	DROP PIPE
8"	6"	18"	12"
10"	8"	21"	15"
12"	10"	24"	15"
15"	12"	30"	18"

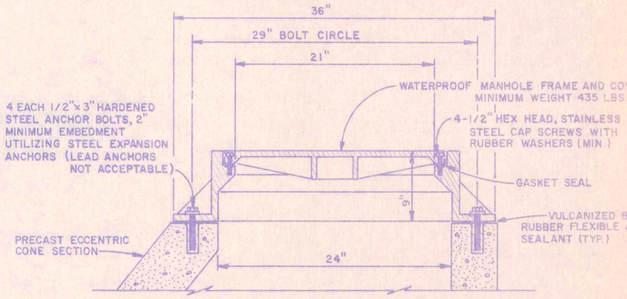
NOTE: SOME TYPE II (DROP) MANHOLES MAY REQUIRE MORE THAN ONE DROP PIPE. THE BID ITEM "MANHOLE TYPE II" SHALL INCLUDE AS MANY DROP PIPES AS NECESSARY.



TYPE II
PRECAST DROP MANHOLE FOR SEWERS
21" OR LESS IN DIAMETER

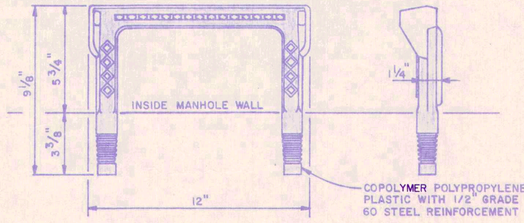
GENERAL NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE LATEST A.S.T.M. SPECIFICATIONS.
2. CONTRACTOR MUST RESTORE ALL PUBLIC AND PRIVATE FACILITIES DISTURBED DURING CONSTRUCTION TO THEIR ORIGINAL OR BETTER CONDITION.
3. ALL HOUSE CONNECTIONS SHALL BE 6" DIA. SEWER PIPE.
4. THE CONTRACTOR SHALL INCLUDE IN HIS "IN PLACE" COST FOR SEWERS, WHATEVER COSTS ARE NECESSARY FOR EXCAVATING, BACKFILLING, SHEETING, SHORING, BRACING, CLEARING OR OTHER PROCEDURES REQUIRED TO INSTALL THE SEWERS IN THE LOCATIONS SHOWN AND WITHIN AVAILABLE R/W.
5. PARTICULAR ATTENTION MUST BE PAID TO SIDE DITCH DRAINAGE DURING FINAL GRADING TO INSURE PROPER SURFACE DRAINAGE FOR THE AREA.
6. UTILITIES INDICATED ON THE DRAWINGS ARE LOCATED TO THE BEST INFORMATION AVAILABLE WHERE CONSTRUCTION TAKES PLACE NEAR ANY UTILITY, THE CONTRACTOR SHALL HAVE THE UNDERGROUND UTILITY FIELD LOCATED BEFORE STARTING WORK.
7. EXISTING CULVERTS REMOVED DURING CONSTRUCTION MAY BE RE-USED UPON ENGINEERS INSPECTION AND APPROVAL; NEW CULVERT PIPE SHALL BE USED WHEN IN STATE HIGHWAY OR COUNTY RIGHT OF WAY.
8. MANHOLE ADJUSTMENT RINGS TO BE ADJUSTED TO MATCH FINAL GROUND OR PAVEMENT GRADE, UNLESS OTHERWISE NOTED ON PLANS.
9. MANHOLE BOTTOMS SHALL BE FORMED TO PROVIDE CHANNELS CONFORMING IN SIZE AND SHAPE TO THE INCOMING AND OUTGOING SEWERS WITH SMOOTH CHANNEL INVERTS SLOPED AND FILLETED IN A MANNER TO PREVENT DEPOSITION OF SOLIDS IN THE MANHOLE.
10. WHEN MAIN SEWER DIAMETER IS 24" TO 33", THE INSIDE DIAMETER OF THE MANHOLE BASE SHALL BE 60" MINIMUM.

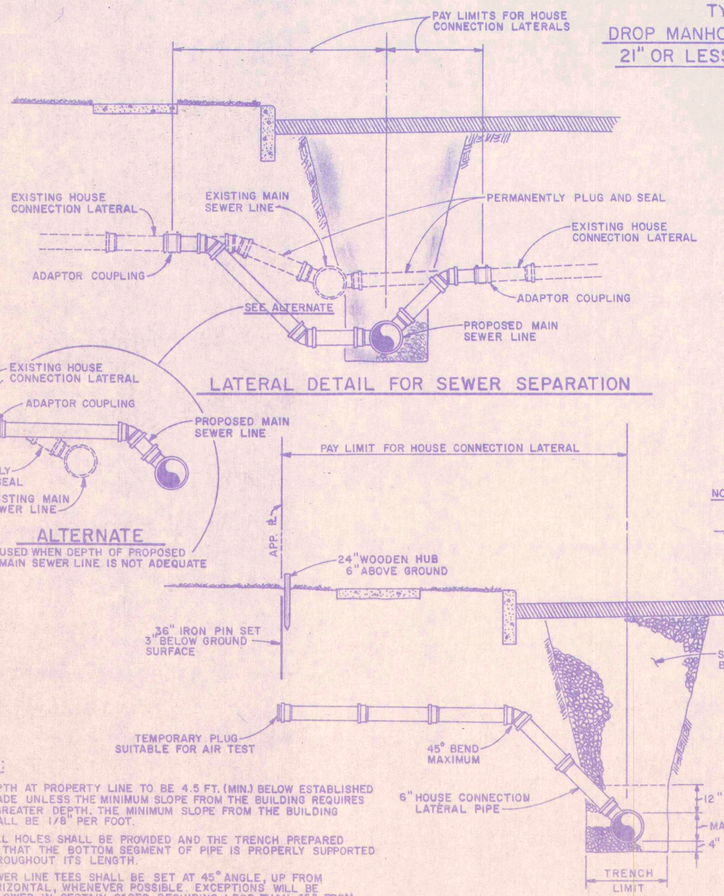


NOTE: ANCHOR BOLTS AND BOLT HOLES SHA
FURNISHED AS PART OF INSTALLATION
WATERPROOF AND FLOODPROOF SHALL
CONSIDERED AS BEING THE SAME.

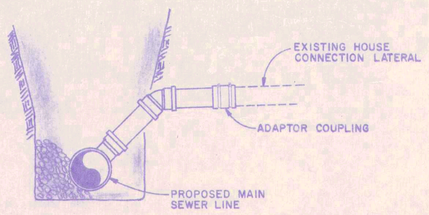
FLOODPROOF MANHOLE DETAIL



MANHOLE STEP DETAIL



LATERAL DETAIL FOR SEWER SEPARATION



LATERAL DETAIL MAIN SEWER
REMOVE AND REPLACE

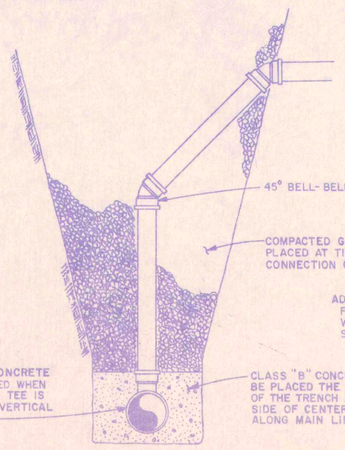
ALTERNATE
USED WHEN DEPTH OF PROPOSED MAIN SEWER LINE IS NOT ADEQUATE

NOTES:

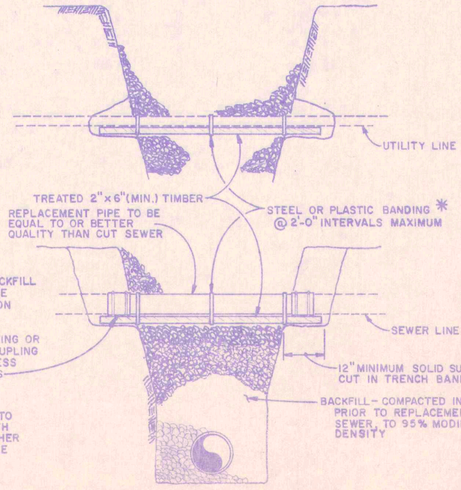
1. DEPTH AT PROPERTY LINE TO BE 4.5 FT. (MIN.) BELOW ESTABLISHED GRADE UNLESS THE MINIMUM SLOPE FROM THE BUILDING REQUIRES A GREATER DEPTH. THE MINIMUM SLOPE FROM THE BUILDING SHALL BE 1/8" PER FOOT.
2. BELL HOLES SHALL BE PROVIDED AND THE TRENCH PREPARED SO THAT THE BOTTOM SEGMENT OF PIPE IS PROPERLY SUPPORTED THROUGHOUT ITS LENGTH.
3. SEWER LINE TEES SHALL BE SET AT 45° ANGLE, UP FROM HORIZONTAL, WHENEVER POSSIBLE. EXCEPTIONS WILL BE ALLOWED IN CERTAIN CASES REQUIRING LESS THAN 45° FROM HORIZONTAL TEE PLACEMENT. (eg. SHALLOW MAIN LINE SEWERS, LESS THAN 8 FEET DEEP) (eg. NEW HOUSE CONNECTIONS MUST GO UNDER EXISTING SEWER)
4. DEPTH OF HOUSE LATERAL AT PROPERTY LINE SHALL BE SUFFICIENT TO SERVE EXISTING DRAINS IN BASEMENTS AND OTHER EXISTING DEEP HOUSE DRAINS AND WHEN REQUESTED BY HOMEOWNER.

TYPICAL LATERAL DETAIL

NOTE:
FOR PIPE TRENCH DETAILS SEE "MISCELLANEOUS DETAILS" SHEET

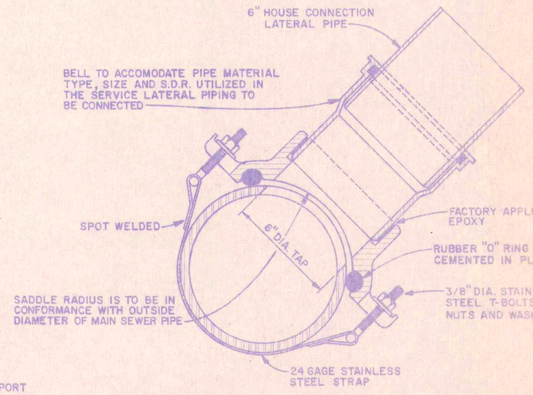


LATERAL DETAIL FOR DEEP SEWERS



* BANDING TO BE MINIMUM 1" WIDTH MATERIAL AND TO BE INSTALLED WITH STANDARD BANDING TOOLS

DETAIL FOR REPAIR AND SUPPORT
OF EXPOSED UTILITIES AND SEWERS



SEWER PIPE SADDLE DETAIL

RECORD DRAWING

SEWER DETAILS

ERIC W. ESKE — STATE OF INDIANA — No. 13402 — PROFESSIONAL ENGINEER — E.R. — 3-30-83

Scale: As Noted	FALL CREEK R.W.D.	Sheet
Drawn By: P.B.	BEAM, LONGEST & NEFF	8
Designed By: R.C.	Consulting Engineers	
Certified By: E.R.	8136 Castleton Road Indianapolis, IN 46250	

VOID

3

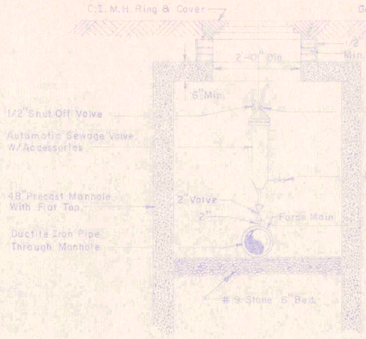


THRUST BLOCK FOR HORIZONTAL BEND

THRUST BLOCK FOR VERTICAL ELBOW

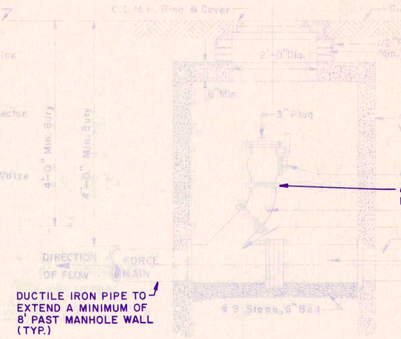
Scale: None

(Thrust Blocks To Be Provided At All Bends In Force Mains)



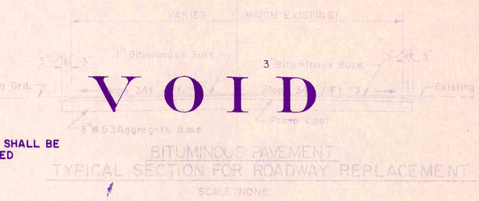
FORCE MAIN AIR RELEASE

SCALE: NONE



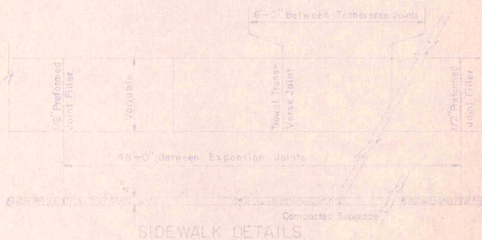
CLEANOUTS FOR FORCE MAINS

SCALE: NONE



BITUMINOUS PAVEMENT TYPICAL SECTION FOR ROADWAY REPLACEMENT

SCALE: NONE

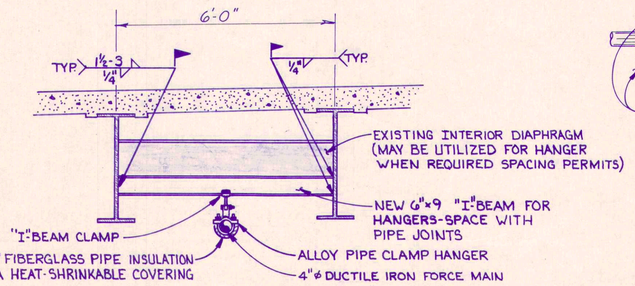


SIDEWALK DETAILS

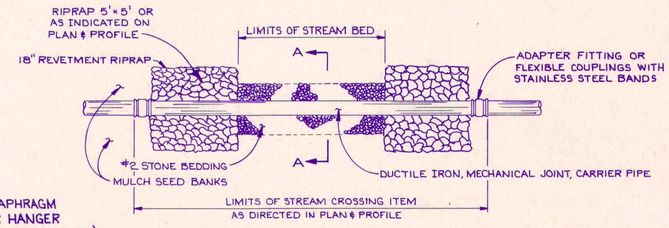
-NO SCALE-

FORCE MAIN TRENCH DETAIL

SCALE: NONE

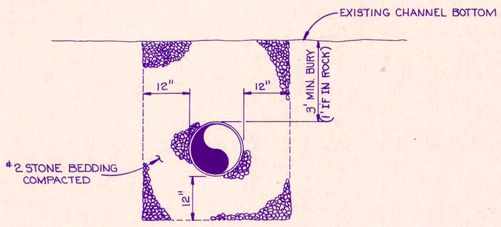


AERIAL FORCE MAIN CROSSING



PLAN VIEW

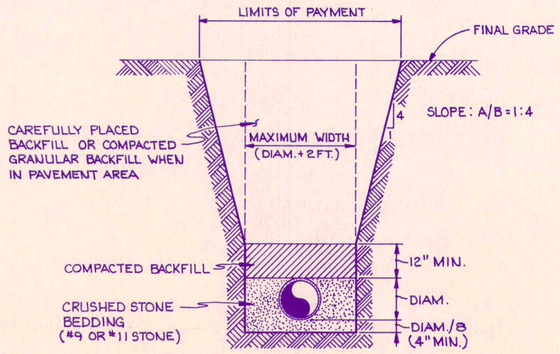
NO SCALE



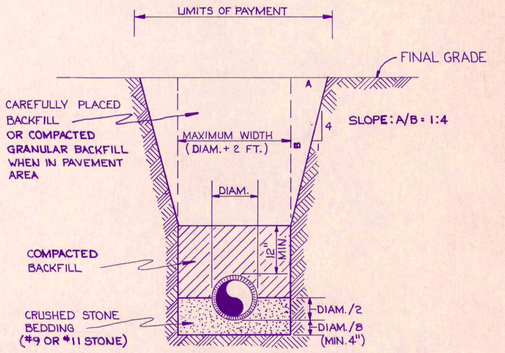
SECTION A-A

NO SCALE

STREAM CROSSING DETAIL



FLEXIBLE PIPE GRAVITY SEWER TYPICAL TRENCH DETAIL



RIGID PIPE GRAVITY SEWER TYPICAL TRENCH DETAIL

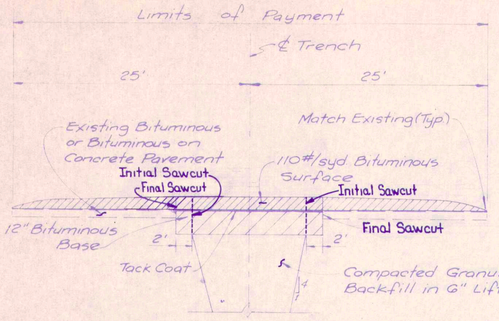
RECORD DRAWING

FALL CREEK R.W.D.

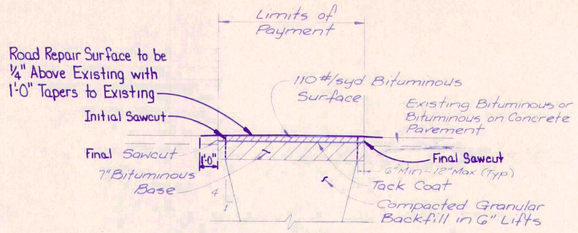
JOB NO. 825	MISC. DETAILS	SHEET NO.
DATE 3-30-83		
DR BY: J.C.B.	BEAM, LONGEST & NEFFLING CONSULTING ENGINEERS 8136 CASTLETON ROAD INDIANAPOLIS, INDIANA	84
CERTIFIED BY: E.R.		

ERIC RESKE REGISTERED No. 13342 STATE OF INDIANA 3-30-83 PROFESSIONAL ENGINEER

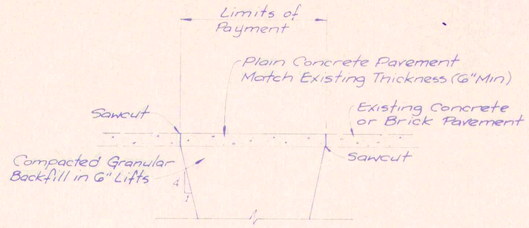
1976



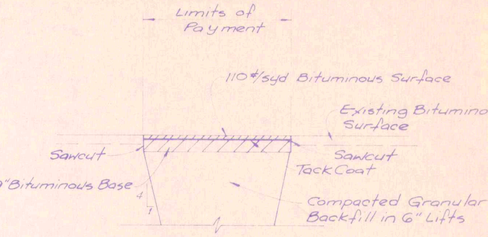
HIGHWAY REPAIR FOR BITUMINOUS PAVEMENT or BITUMINOUS ON CONCRETE PAVEMENT
(No Scale)



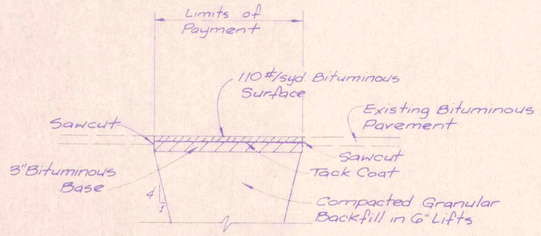
COUNTY ROAD REPAIR FOR BITUMINOUS PAVEMENT
(No Scale)



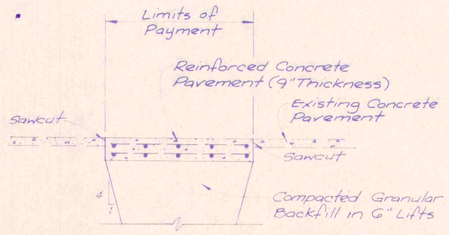
PAVEMENT REPAIR DETAIL *
(No Scale)
* For County Road, Street & Residential Driveway Repair (Within Highway R/W) - Concrete or Brick Pavement



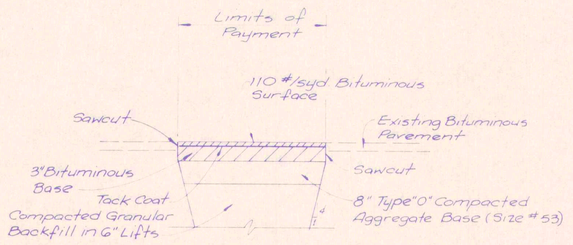
BITUMINOUS COMMERCIAL DRIVEWAY REPAIR, WITHIN HIGHWAY R/W
(No Scale)



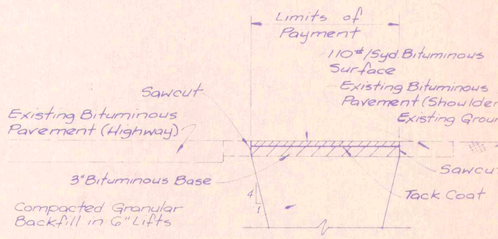
BITUMINOUS RESIDENTIAL DRIVEWAY REPAIR *
(No Scale)
*For Driveways in Street, County & Highway R/W



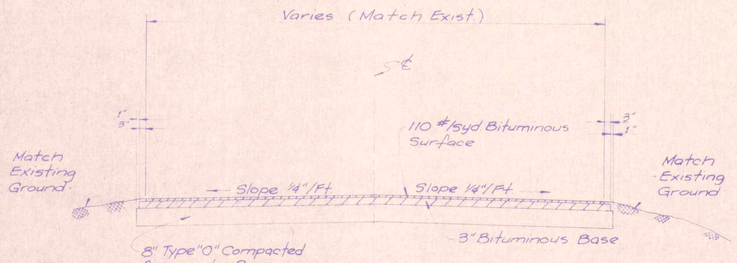
CONCRETE COMMERCIAL DRIVEWAY REPAIR, WITHIN HIGHWAY OR COUNTY R/W
(No Scale)



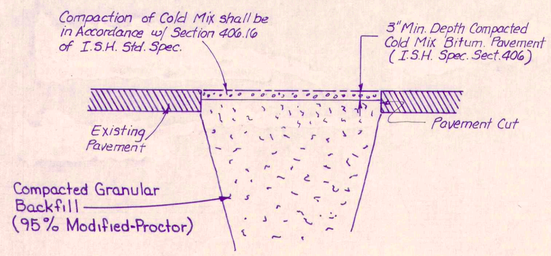
STREET REPAIR FOR BITUMINOUS PAVEMENT
(No Scale)



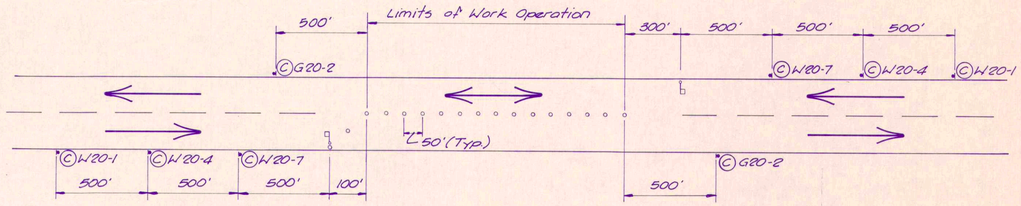
SHOULDER REPAIR ALONG HIGHWAYS
(No Scale)



TYPICAL SECTION FOR ROADWAY REPLACEMENT BITUMINOUS PAVEMENT
(No Scale)



TEMPORARY ROAD REPAIR
For All Pavement During Sewer Main Installation



TYPICAL WORK SECTION
(No Scale)

LEGEND

- ℄ Construction Sign, Type A
  - G20-2 End Construction
  - W20-1 Road Construction Ahead
  - W20-4 One Lane Road Ahead
  - W20-7 Flagman Ahead
- Flagman
- Cones, Drums, or Barricades, Type I or II

GENERAL NOTES

1. MAINTENANCE OF TRAFFIC SHALL BE IN ACCORDANCE WITH SECTION 104.04 THE INDIANA STATE HIGHWAY STANDARD SPECIFICATIONS, DATED 1978, THE INDIANA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, DATED 1975 AND MAINTAINING TRAFFIC SEQUENCE FOR INDIVIDUAL SEGMENTS AS DETAILED.
2. CONTRACTOR SHALL BE REQUIRED TO ERECT AND MAINTAIN ALL CONSTRUCTIO SIGNS AS SHOWN.
3. THE MAINTENANCE OF TRAFFIC LISTED HERE IS ONLY A RECOMMENDATION AN SHOULD THE CONTRACTOR DESIRE TO ADOPT ANOTHER METHOD OF MAINTAININ TRAFFIC DURING CONSTRUCTION, IT SHALL BE SUBMITTED TO THE ENGINEER REVIEW AND APPROVAL IN ADVANCE OF THE COMMENCEMENT OF WORK IN THE AFFECTED AREA.
4. LENGTH OF WORK OPERATION SHALL BE LIMITED AS SET OUT IN SECTION 9. GENERAL CONSTRUCTION SPECIFICATIONS.
5. MAINTENANCE OF TRAFFIC AS SHOWN IN THE DETAIL ABOVE SHALL BE REQUI ONLY WHEN CONSTRUCTION IS WITHIN 12 FEET OF EDGE OF PAVEMENT.

MAINTENANCE OF TRAFFIC

RECORD DRAWING

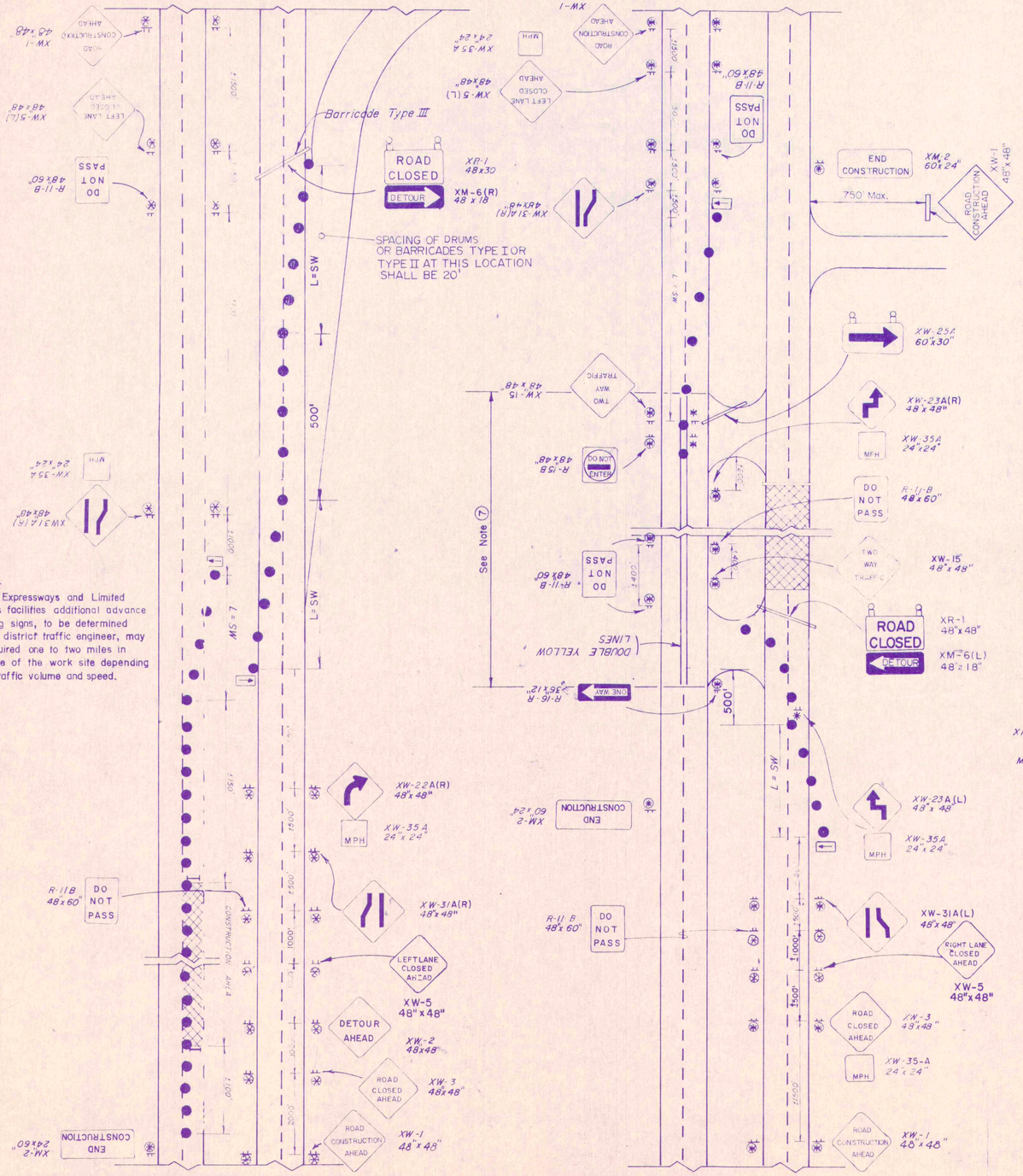
ERIC RESKE — REGISTERED — ER — 3-20 — DATE — PROFESSIONAL ENGINEER

PAVEMENT REPAIR DETAILS

Scale: None	FALL CREEK R.W.D.	Sheet
Drawn By: V.M.S.	BEAM, LONGEST & NEFF	
Designed By: G.D.L.	Consulting Engineers	
Certified By: E.R.	8136 Castleton Road, Indianapolis, In. 46250	8

DIV 4+3

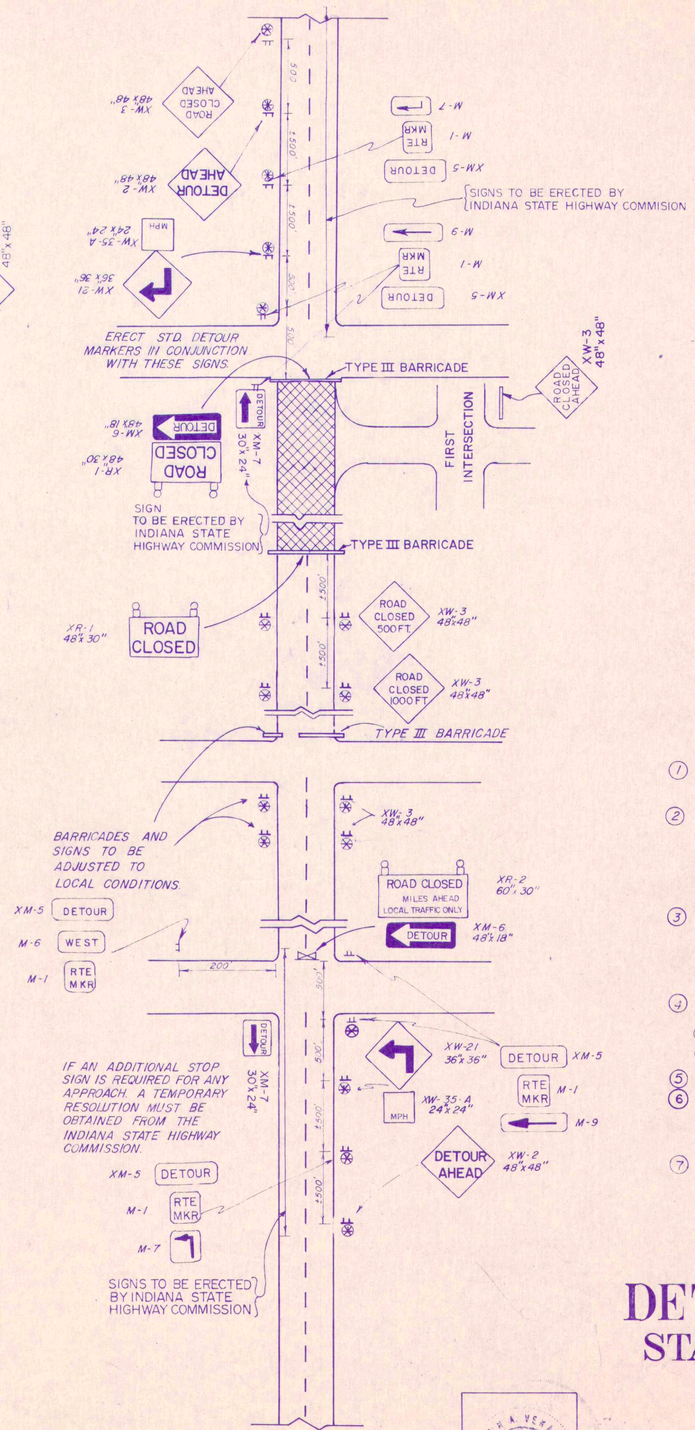
HARBAUGH N26308



NOTE:-
On Expressways and Limited Access facilities additional advance warning signs, to be determined by the district traffic engineer, may be required one to two miles in advance of the work site depending upon traffic volume and speed.

TYPICAL APPLICATIONS OF TRAFFIC CONTROL DEVICES ON INTERSTATE HIGHWAYS

TYPICAL APPLICATIONS OF TRAFFIC CONTROL DEVICES ON 4-LANE DIVIDED HIGHWAY WHERE ONE ROADWAY IS CLOSED



TYPICAL APPLICATIONS OF TRAFFIC CONTROL DEVICES WHERE A ROAD IS CLOSED BEYOND A DETOUR POINT

LEGEND

- FLASHING ARROW SIGN TO BE PLACED AT TYPE III BARRICADE (BEGINNING OF TAPER)
- DRUM OR BARRICADES TYPE I OR II WITH TYPE "C" STEADY BURNING LIGHT.
- LOW INTENSITY FLASHING YELLOW LIGHT (TYPE 'A')
- HIGH INTENSITY FLASHING YELLOW LIGHT (TYPE 'B')

F.F.T.F. - FARM FIELD TYPE FENCE
C.L.T.F. - CHAIN LINK TYPE FENCE
L.A.R/W - LIMITED ACCESS RIGHT-OF-WAY
A.C.L. - ACCESS CONTROL LINE
L - MINIMUM LENGTH OF TAPER
S - POSTED SPEED LIMIT
W - WIDTH OF OFFSET IN FEET
- BARRICADE TYPE V WITH TWO HIGH INTENSITY FLASHING YELLOW LIGHTS (TYPE "B")

NOTE

(1) APPROVED LIGHTS SHALL MARK BARRICADES, DRUMS AND SIGNS CONTINUOUSLY AT NIGHT; EXCEPT FOR HIGH INTENSITY FLASHING LIGHTS WHICH SHALL OPERATE CONTINUOUSLY OVER A 24-HOUR PERIOD.

(2) ALL SIGNS SHALL BE MOUNTED IN SUCH A MANNER THAT THE VERTICAL DISTANCE BETWEEN THE BOTTOM OF THE SIGN AND THE EDGE OF THE PAVEMENT SHALL BE NOT LESS THAN 5 FEET AND THE HORIZONTAL DISTANCE FROM THE EDGE OF PAVEMENT TO THE EDGE OF SIGN SHALL NOT BE LESS THAN 12 FEET (R/W Permiting) OR 6 FEET FROM THE EDGE OF A PAVED SHOULDER.

(3) IN CURBED AREA ALL SIGNS SHALL BE MOUNTED IN SUCH A A MANNER THAT THE VERTICAL DISTANCE BETWEEN THE BOTTOM OF THE SIGN AND THE EDGE OF THE PAVEMENT SHALL BE NOT LESS THAN 7 FEET AND THE HORIZONTAL DISTANCE FROM THE EDGE OF PAVEMENT TO THE EDGE OF SIGN SHALL NOT BE LESS THAN [illegible] FEET.

(4) The Spacing of drums and Barricades Type I & II shall be as follows:
(A) For tapers, the spacing shall be numerically equal to the posted speed limit with a minimum spacing of 20'.
(B) For tangents when the posted speed limit is 40 MPH or greater, the spacing shall be 100 feet.
(C) For tangents, when the posted speed limit is less than 40 MPH, the spacing shall be 50 feet.

(5) High Intensity Flashing Yellow Lights (Type "B") To Be omitted.

(6) FOR TEMPORARY LANE CLOSURE DURING DAYLIGHT HOURS, CONES MAY BE USED IN LIEU OF BARRELS OR TYPE I OR II BARRICADES. THE CONES SHALL BE A MINIMUM OF 28"(INCHES) IN HEIGHT WITH BALLAST IN THE BOTTOM OR OTHER APPROVED DEVICE TO PREVENT TIPPING.

(7) POSITIVE SEPARATION OF TWO-WAY TRAFFIC BETWEEN THE X-OVERS SHALL BE REQUIRED AS DIRECTED BY THE PROJECT ENGINEER. ALL ITEMS NECESSARY TO PROVIDE THIS POSITIVE SEPARATION SHALL BE INCLUDED IN THE COST OF MAINTENANCE OF TRAFFIC. REFER TO STANDARD DETOUR SIGNS SHEET 2-A FOR THE DETAIL OF A TYPICAL APPLICATION.

STANDARD DETOUR SIGNS

STATE OF INDIANA

APRIL 1972

CLIFFORD A. VENABLE — REGISTERED PROFESSIONAL ENGINEER — STATE OF INDIANA

RECOMMENDED FOR APPROVAL: Donald F. Kelly, ENGINEER OF TRAFFIC — 5-15-72
APPROVED: Clinton A. Venable, CHIEF, DIVISION OF TRAFFIC — 5/15/72
APPROVED: [illegible], CHIEF HIGHWAY ENGINEER

REVISIONS	
5-1-73	Legend
6-2-73	Sign Size
3-1-76	TEMPORARY CLOSURE AND LEGEND
6-1-76	New MUTCD
7-1-76	New MUTCD
12-1-76	XW-5 Sign
5-1-78	NOTE 6

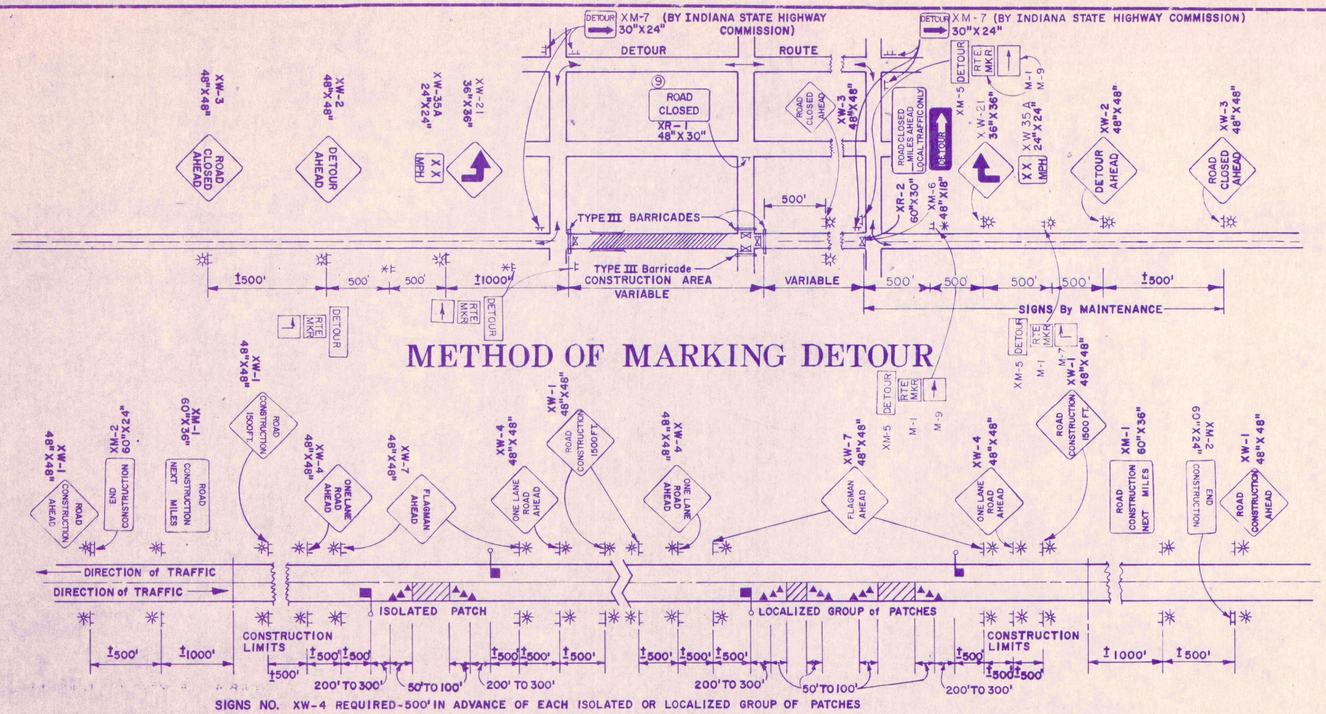
REVISIONS	
8-1-79	Note (6) & Location of Type "A" Light
	E XW-1
10-1-79	Location of Flashing Arrow's
11-1-79	X-Over Protection Note (7) & XM-1 Detour Sign
12-3-79	Spacing at Ramps
5-1-80	Cone Size (Note 6)
4-1-81	Signing at Intersecting Roads

SHEET 1 DETOURS

62

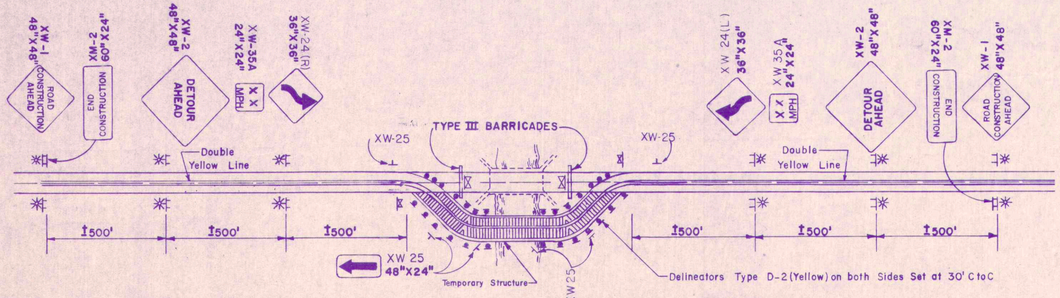
RECORD DRAWING

Sheet No 136



SIGNS NO. XW-4 REQUIRED-500' IN ADVANCE OF EACH ISOLATED OR LOCALIZED GROUP OF PATCHES

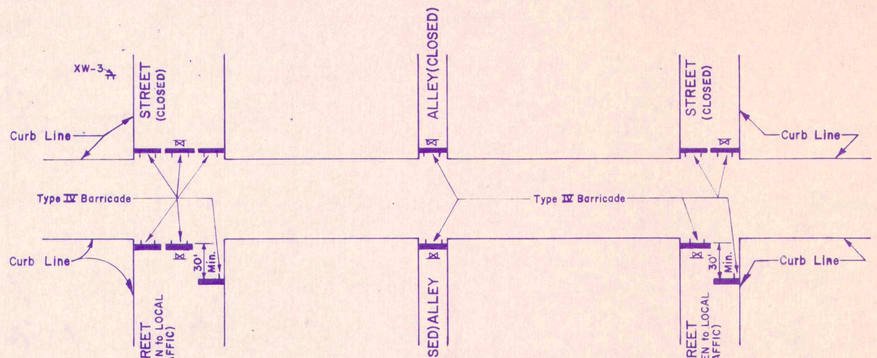
METHOD OF MARKING CONSTRUCTION UNDER TRAFFIC
(FOR SINGLE LANE TWO-WAY TRAFFIC)



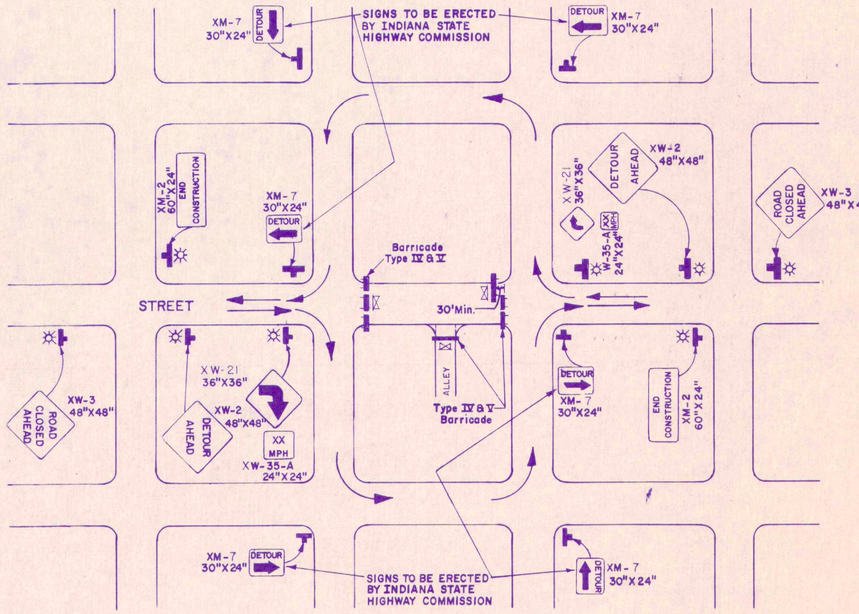
METHOD OF MARKING RUN-AROUND

NOTE:

1. APPROVED LIGHTS SHALL MARK BARRICADES, DRUMS AND SIGNS CONTINUOUSLY AT NIGHT, EXCEPT FOR HIGH INTENSITY FLASHING LIGHTS WHICH SHALL OPERATE CONTINUOUSLY OVER A 24-HOUR PERIOD.
2. ALL SIGNS SHALL BE MOUNTED IN SUCH A MANNER THAT THE VERTICAL DISTANCE BETWEEN THE BOTTOM OF THE SIGN AND THE EDGE OF THE PAVEMENT SHALL BE NOT LESS THAN 5 FEET AND THE HORIZONTAL DISTANCE FROM THE PAVEMENT EDGE TO THE EDGE OF SIGN SHALL NOT BE LESS THAN 12 FEET (R/W PERMITTING) OR 6 FEET FROM THE EDGE OF A PAVED SHOULDER.
3. IN CURBED AREAS ALL SIGNS SHALL BE MOUNTED IN SUCH A MANNER THAT THE VERTICAL DISTANCE BETWEEN THE BOTTOM OF THE SIGN AND THE EDGE OF THE PAVEMENT SHALL BE NOT LESS THAN 7 FEET AND THE HORIZONTAL DISTANCE FROM THE EDGE OF PAVEMENT TO THE EDGE OF SIGN SHALL NOT BE LESS THAN 2 FEET.
4. SIGNS AND BARRICADES ARE TO BE PROVIDED AND MAINTAINED BY THE CONTRACTOR AT SUCH POINTS AS MAY BE DESIGNATED ON THE PLANS OR BY THE ENGINEER.
5. THE INDIANA STATE HIGHWAY COMMISSION WILL DESIGNATE THE DETOUR ROUTE AND WILL ERECT AND MAINTAIN DIRECTION SIGNS AROUND THE DETOUR. IF TRAFFIC IS DETOURED IN ADVANCE OF THE FIRST TYPE III BARRICADE, THE INDIANA STATE HIGHWAY COMMISSION SHALL PLACE THE SIGNS, AS SHOWN, IN ADVANCE OF THE MARKED DETOUR.
6. SIGNS ARE TO BE MOUNTED ON TYPICAL SIGN STANDARDS OR ON POSTS AS INDICATED ON DETOUR SHEET No. 5. and 5A
7. ALL DRUMS AND BARRICADES ARE TO BE REFLECTORIZED BY USING REFLECTIVE SHEETING, AS SPECIFIED IN THE CURRENT "INDIANA STATE HIGHWAY STANDARD SPECIFICATIONS" THE ORANGE AND WHITE DEVICES SHALL HAVE BOTH COLORS REFLECTORIZED
8. BARRICADE TYPE V SHALL NOT BE PAID FOR WHEN USED IN CONJUNCTION WITH BARRICADE TYPE III, BUT SHALL BE INCLUDED IN THE COST OF THE BARRICADE.
9. TWO TYPE II HIGH INTENSITY YELLOW FLASHING WARNING LIGHTS SHALL BE MOUNTED ABOVE THE "ROAD CLOSED" SIGN



METHOD OF MARKING DETOUR -URBAN-



LEGEND

- Type III Barricade
- Metal Drum or Barricades Type I or II with Steady Burning Light (Type "C")
- Delineator Type D-2 (Yellow)
- Low Intensity Flashing Yellow Light (Type "A")
- Metal Drum or Barricades Type I or II with low Intensity Flashing Yellow Light (Type "A")
- Barricade Type V - with Two High Intensity Flashing Yellow Lights (Type "B") - see "STANDARD DETOUR" Sheet No. 2A
- Flagman

REVISIONS	
DATE	REMARKS
10-28-75	NOTES NO. 6 AND 7
3-1-76	LEGEND ● ▲ ⋈
6-1-76	NEW M.U.T.C.D.
7-1-76	NEW M.U.T.C.D.

STANDARD DETOUR SIGNS
STATE OF INDIANA
NOVEMBER 1974

RECOMMENDED FOR APPROVAL _____ ENGINEER OF TRAFFIC DESIGN & CONSTRUCTION

APPROVED _____ CHIEF, DIVISION OF TRAFFIC

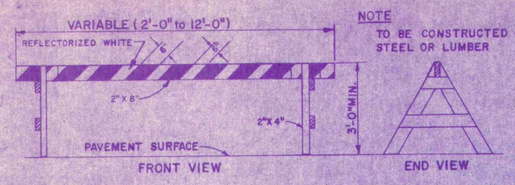
APPROVED _____ CHIEF, HIGHWAY ENGINEER

SHEET 2 DETOURS

DECEMBER 260

Sheet No. 87 63

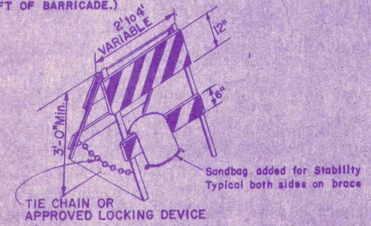
RECORD DRAWING



NOTE
TO BE CONSTRUCTED OF STEEL OR LUMBER

TYPE I

NOTE:
STRIPES SHALL SLOPE DOWNWARD TOWARDS THAT SIDE OF THE BARRICADE ON WHICH THE APPROACHING VEHICLE MUST PASS. (STRIPES AS SHOWN INDICATE VEHICLE MUST PASS TO LEFT OF BARRICADE.)



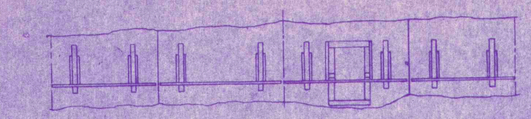
TYPE II

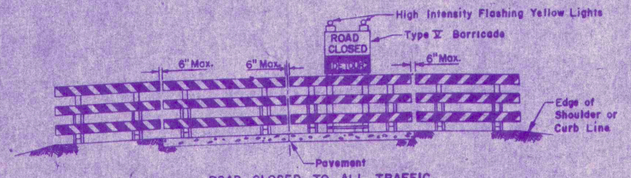
STANDARD METAL DRUM *

THE PREDOMINANT COLOR ON DRUMS SHALL BE BLACK OR ORANGE WITH AT LEAST TWO HORIZONTAL CIRCUMFERENTIAL WHITE STRIPES 4" TO 6" WIDE. DRUMS SHALL BE REFLECTORIZED. FOR USE AT NIGHT AND ADJUSTMENT DUE TO ODD SIZE DRUMS SHOULD BE DIVIDED BETWEEN THE UPPER AND LOWER STRIPES. THE WIDTH OF THE REFLECTIVE STRIPES SHOULD BE ADJUSTED TO PERMIT THE STRIPES TO BE PLACED ON FLAT SURFACES BETWEEN THE RAISED RIDGES IN AN ALTERNATING COLOR PATTERN. THIS WILL NORMALLY REQUIRE USE OF 5"(INCH) STRIPES. USE OF REFLECTIVE MATERIAL WILL NOT BE REQUIRED ON THE RAISED RIDGES OR ON FLAT SURFACES LESS THAN 5"(INCHES) WIDE. THE RAISED RIDGES AND SURFACES LESS THAN 5"(INCHES) IN WIDTH MAY BE PAINTED ORANGE OR WHITE.

* UNTIL A NATIONAL POLICY HAS BEEN ADOPTED ATTENDING IS DIRECTED TO THE "INSTRUCTION TO BIDDERS" OF THE CONTRACT PROPOSAL FOR THE USE AND COLOR COMBINATION OF REFLECTIVE SHEETING ON BARRELS.

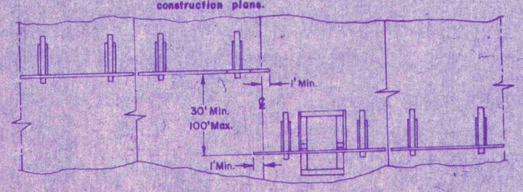
TYPICAL APPLICATIONS OF TYPE IV BARRICADES

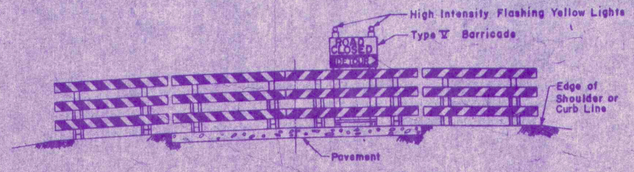




ROAD CLOSED TO ALL TRAFFIC

The Barricade shall be to the edge of the shoulders except when otherwise directed by the Engineer or shown on the detailed construction plans.





ROAD CLOSED TO THRU TRAFFIC

Reflectorized striping shall appear on both sides of barricades. The barricades shall be to the edge of the shoulders, except when otherwise directed by the Engineer or shown on the detailed construction plans.

NOTES

1.- For Installation of Barricades See Detour Sign Sheet No. 2.

2.- Barricade Type IV shall be paid for at the Contract Unit Price per each for each 12'(foot) section used.

3.- Barricade Type V shall not be paid for when used in conjunction with Barricade Type III, but shall be included in the cost of the barricade.

4.- Barricade Type V shall be paid for at the Contract Unit Price per each when used in conjunction with the Barricade Type IV.

5.- Wood materials are to be untreated "Dimension Lumber" in accordance with the STANDARD SPECIFICATIONS.

6.- Typical Sign STANDARD shall be constructed same as that shown for Barricade Type V with the exception of the signs and Strap Iron brackets.

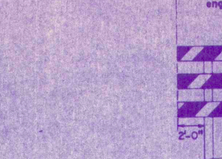
7.- The width of stripes on all Barricades shall be 6" or as shown and slope downward at a 45° angle toward that side of barricade on which the approaching vehicle must pass.

8.- For color of stripes on Barricades see Note No.7 on Detour Signs Sheet No. 2.

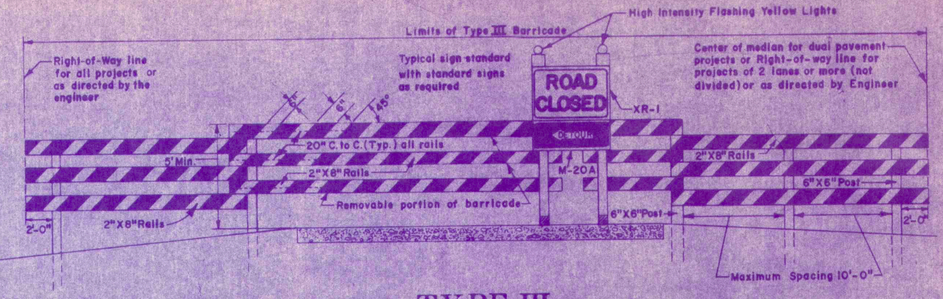
9.- For Type III and Type IV Barricades the stripes should slope downward in the direction toward which traffic must turn in Detouring, and where both Right and Left turns are provided for, the chevron stripping should slope downward in both directions from the center of the Barricade.

10.- As of Dec. 31, 1975 the only color combination that will be permitted on Barricades and Drums is White and Orange.

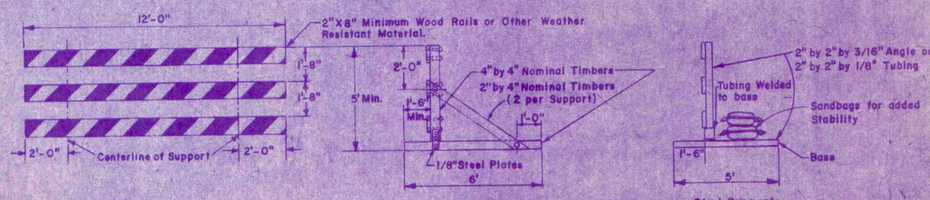
STANDARD BARRICADES



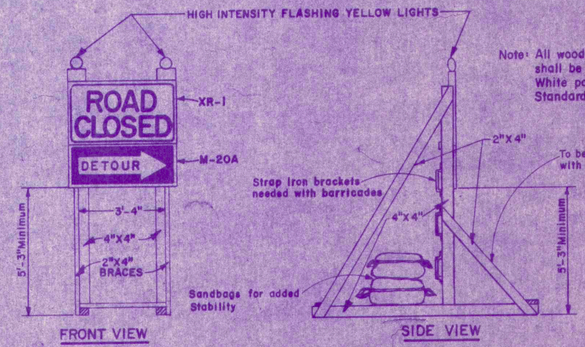
STANDARD CONE



TYPE III



TYPE IV



TYPE V

REVISIONS	
DATE	REMARKS

STANDARD DETOUR SIGNS
STATE OF INDIANA
NOVEMBER 1974

RECOMMENDED FOR APPROVAL _____ ENGINEER OF TRAFFIC DESIGN & CONSTRUCTION

APPROVED _____ CHIEF, DIVISION OF TRAFFIC

APPROVED _____ CHIEF-HIGHWAY ENGINEER

SHEET 2A DETOURS

RECORD DRAWING

63A SHEET 88



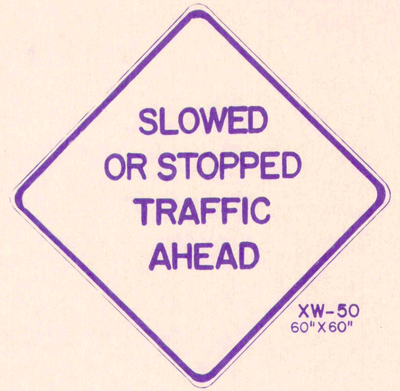
XW-14
48"X48"



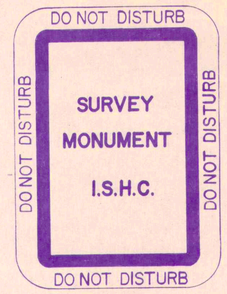
XW-44
36"X36"
XW-44A
48"X48"



XW-45
36"X36"
XW-45A
48"X48"



XW-50
60"X60"



D-25
9"X12"



XW-103
48"X48"



XW-105
48"X48"



XW-34
36"X36"



XW-43
36"X36"



XW-37
36"X36"
XW-37A
48"X48"



XW-51
60"X24"
TO BE USED BELOW A "XW-50" SIGN ONLY.

SIGN NUMBER	SIGN MESSAGE	SIGN SIZE	SIGN COLOR		BORDER WIDTH	MARGIN WIDTH	LETTER HEIGHT SERIES-LINE 1	LETTER HEIGHT SERIES-LINE 2	LETTER HEIGHT SERIES-LINE 3	LETTER HEIGHT SERIES-LINE 4	CORNER RADIUS	METHOD OF POST MOUNTING	
			BACKGROUND	COPY								SINGLE POST	DUAL POSTS
XW-14	BRIDGE OUT	48"X48"	ORANGE	BLACK	1-1/4"	3/4"	10"-SERIES "C"	10"-SERIES "C"			3"		X
D-25	SURVEY MONUMENT MARKER	9"X12"	WHITE	BLACK	1"	1/2"	1/2"-SERIES "D"	1"-SERIES "B"	1"-SERIES "B"	1"-SERIES "B"	1-1/2"	X	
XW-34	PAVEMENT ENDS	36"X36"	ORANGE	BLACK	7/8"	5/8"	6"-SERIES "C"	6"-SERIES "C"			2-1/4"		X
XW-37	RIGHT (LEFT) LANE ENDS	36"X36"	ORANGE	BLACK	7/8"	5/8"	6"-SERIES "D"	6"-SERIES "D"	6"-SERIES "D"		2-1/4"		X
XW-37A	RIGHT (LEFT) LANE ENDS	48"X48"	ORANGE	BLACK	1-1/4"	3/4"	8"-SERIES "D"	8"-SERIES "D"	8"-SERIES "D"		3"		X
XW-43	UTILITY WORK AHEAD	36"X36"	ORANGE	BLACK	7/8"	5/8"	6"-SERIES "D"	6"-SERIES "D"	6"-SERIES "D"		2-1/4"		X
XW-44	MOWING CREWS AHEAD	36"X36"	ORANGE	BLACK	7/8"	5/8"	6"-SERIES "C"	6"-SERIES "C"	6"-SERIES "C"		2-1/4"		X
XW-44A	MOWING CREWS AHEAD	48"X48"	ORANGE	BLACK	1-1/4"	3/4"	8"-SERIES "C"	8"-SERIES "C"	8"-SERIES "C"		3"		X
XW-45	MOWING CREWS NEXT ____ MILES	36"X36"	ORANGE	BLACK	7/8"	5/8"	6"-SERIES "C"	6"-SERIES "C"	4"-SERIES "C"	4"-SERIES "C"	2-1/4"		X
XW-45A	MOWING CREWS NEXT ____ MILES	48"X48"	ORANGE	BLACK	1-1/4"	3/4"	8"-SERIES "C"	8"-SERIES "C"	6"-SERIES "C"	6"-SERIES "C"	3"		X
XW-50	SLOWED OR STOPPED TRAFFIC AHEAD	60"X60"	ORANGE	BLACK	1-1/4"	3/4"	6"-SERIES "C"	6"-SERIES "C"	6"-SERIES "C"	6"-SERIES "C"	3"		X
XW-51	OVERHEAD SIGN INSTALLATION	60"X24"	ORANGE	BLACK	5/8"	3/8"	6"-SERIES "C"	6"-SERIES "C"			1-1/2"		X
XW-103	ALL TRAFFIC EXIT	48"X48"	ORANGE	BLACK	1-1/4"	3/4"	8"-SERIES "D"	8"-SERIES "D"	8"-SERIES "D"		3"		X
XW-105	ROAD REPAIRS NEXT ____ MILES	48"X48"	ORANGE	BLACK	1-1/4"	3/4"	8"-SERIES "C"	8"-SERIES "C"	6"-SERIES "C"	6"-SERIES"C"	3"		X

GENERAL NOTES:

1. SIGN LETTERING SHALL BE IN CLEAR OPEN CAPITAL LETTERS OF THE TYPE APPROVED BY THE JOINT COMMITTEE ON UNIFORM TRAFFIC CONTROL DEVICES AND ITS SPONSORING AGENCIES. COMPLETE DETAILS MAY BE FOUND IN THE FEDERAL HIGHWAY ADMINISTRATION STANDARD ALPHABETS FOR HIGHWAY SIGNS, COPIES MAY BE OBTAINED BY WRITING THE "FEDERAL HIGHWAY ADMINISTRATION", DEPARTMENT of TRANSPORTATION, WASHINGTON, D.C. 20025.
2. THESE SIGN DESIGN DETAILS TO BE USED WITH THE STANDARD DETOUR SIGN SHEETS.
3. ALL SIGNS SHALL BE MOUNTED IN SUCH A MANNER THAT THE VERTICAL DISTANCE BETWEEN THE BOTTOM OF THE SIGN AND THE EDGE OF THE PAVEMENT SHALL BE NOT LESS THAN 5 FEET AND THE HORIZONTAL DISTANCE FROM THE EDGE OF PAV'T. TO THE EDGE OF SIGN SHALL NOT BE LESS THAN 12 FEET (R/W PERMITTING) OR 6 FEET FROM THE EDGE OF A PAVED SHOULDER.
4. ALL WARNING SIGNS USED FOR CONSTRUCTION AND MAINTENANCE SHALL BE BLACK ON FEDERAL ORANGE (HIGH INTENSITY) REFLECTIVE SHEETING.
5. ALL SIGNS WITH WHITE BACKGROUND SHALL HAVE ENCLOSED LENS REFLECTIVE SHEETING (ENGINEER GRADE).

REVISIONS	
DATE	REMARKS
10-28-75	XW-43
3-1-76	XW-43
6-1-76	NEW M.U.T.C.D.
4-1-77	NOTES 3,4&5

STANDARD DETOUR SIGNS
STATE OF INDIANA
FEBRUARY 1975

RECOMMENDED for APPROVAL _____ ENGINEER OF TRAFFIC DESIGN & CONSTRUCTION

APPROVED _____ CHIEF, DIVISION of TRAFFIC

APPROVED _____ CHIEF, HIGHWAY ENGINEER

RECORD DRAWING

SHEET 3A DETOURS

64A

JULY 1974

Sheet No. 90



XW-1
48" X 48"
XW-1A
72" X 72"



XW-2
48"X48"



XW-3
48"X48"



XW-4
48"X48"



XW-5
R & L
48"X48"



XW-7
48" X 48"



XW-8A
36"X36"



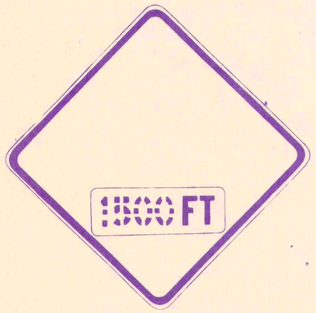
XW-9
30"x30"
XW-9A
36"x36"



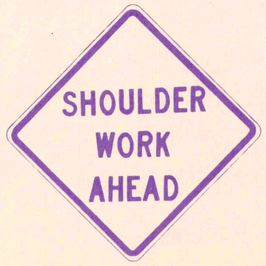
XW-10A
48"x48"



XW-11A
48"X48"



NOTE:
28"X10" METAL PLATE, COVERED WITH FEDERAL ORANGE REFLECTIVE MATERIAL WITH BLACK NUMERALS DESIGNATING PREDETERMINED DISTANCE, MAY BE ATTACHED OVER THE WORD "AHEAD".
TO MORE SPECIFICALLY LOCATE THE SUBJECT HAZARD.



XW-12A
36"X36"



XW-13A
36"X36"



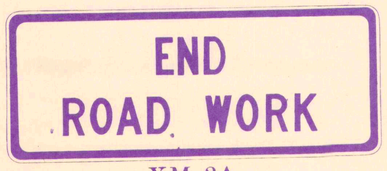
XW-63
48"x48"



XM-4
36" X 18"



XM-1
60"X36"



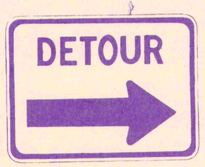
XM-3A
60" X 24"



XM-2
60"X24"



R-34A
24"x30"
R-34B
36"x48"



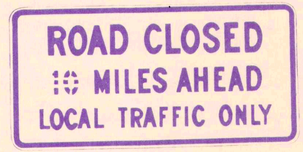
XM-120
30" x 24"
XM-120A
60" x 48"



XM-20A
48"X18"
R or L



XR-1
48" X 30"



XR-2
60"X 30"

NOTES:

1. DESIGN DETAILS OF ALL SIGNS WILL BE FURNISHED ON WRITTEN REQUEST.
   THE 'BACKGROUND' FOR WARNING AND GUIDE SIGNS, (XW AND XM SERIES) SHALL BE FEDERAL ORANGE.
   THE BACKGROUND FOR ALL OTHER SIGNS SHOWN (R-34A, XR-1, AND XR-2) SHALL BE WHITE. ALL LETTERING AND BORDERS SHALL BE BLACK, NEATLY DONE, AND OF THE SIZE AND TYPE SPECIFIED.
2. ALL SIGNS ARE TO BE REFLECTORIZED BY USING REFLECTIVE SHEETING, AS SPECIFIED IN "INDIANA STANDARD SPECIFICATIONS", APPLIED TO THE ENTIRE BACKGROUND AREA OF THE SIGNS. THE REFLECTIVE SHEETING SHALL BE OF THE COLOR INDICATED IN THE DESIGN DETAILS.
3. ALL SIGNS SHALL BE MOUNTED IN SUCH A MANNER THAT THE VERTICAL DISTANCE BETWEEN THE BOTTOM OF THE SIGN AND THE EDGE OF THE PAVEMENT SHALL BE NOT LESS THAN 5 FEET AND THE HORIZONTAL DISTANCE FROM THE EDGE OF PAV'T TO THE EDGE OF SIGN SHALL NOT BE LESS THAN 12 FEET (R/W PERMITTING) OR 6 FEET FROM THE EDGE OF A PAVED SHOULDER.
4. SIGN NO. XW-10A SHALL BE PLACED AS DIRECTED BY THE ENGINEER WHERE ROAD MACHINERY IS OPERATING ON OR ACROSS PAVEMENT OPEN TO TRAFFIC, ALL AS PROVIDED BY THE SPECIFICATION.
5. THE FOLLOWING SIGNS XW-7, XW-8, XW-9, XW-10A AND XW-13 SHALL BE REMOVED, COVERED OR TURNED TO FACE AWAY FROM THE ROADWAY DURING NON-WORKING HOURS ALL OTHER SIGNS SHALL BE REMOVED, COVERED OR TURNED TO FACE AWAY FROM THE ROADWAY WHEN THE MESSAGE IS NOT APPLICABLE.
6. SIGNS CAN BE ORDERED TO READ, 500FT, 1000FT OR 1500 FT, IN PLACE OF THE WORD "AHEAD" THESE SIGNS CAN BE USED IN PLACE OF OR IN CONJUNCTION WITH SIGNS XW-1, 2, 3, 4, 5, 6, 8 7.

STANDARD DETOUR SIGNS
STATE OF INDIANA
APRIL 1972

RECOMMENDED FOR APPROVAL _____ ENGINEER OF TRAFFIC

APPROVED _____ CHIEF - DIVISION OF TRAFFIC 5.5.72

APPROVED _____ CHIEF HIGHWAY ENGINEER

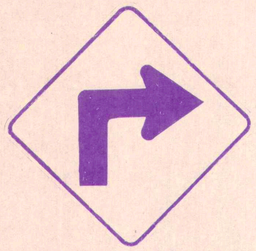
REVISIONS	
10-1-72	XW16-3A
4-2-73	SIGN SIZE

SHEET 3 DETOURS

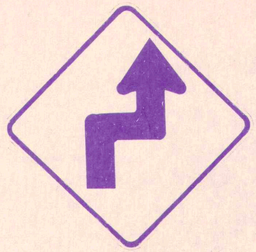
DECEMBER 1976

RECORD DRAWING

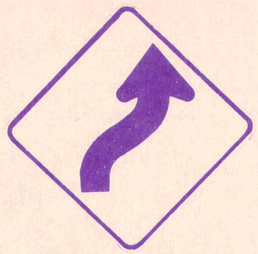
SHEET 64



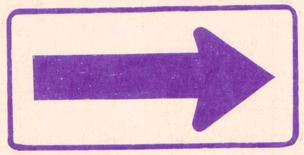
XWI-I-A(R or L)
36"X36"
XWI-I-B(R or L)
48"X48"



XWI-3-A(R or L)
36"X36"
XWI-3-B(R or L)
48"X48"



XWI-4-A(R or L)
36"X36"
XWI-4-B(R or L)
48"X48"



XWI-6
48"X24"
XWI-6-A
60"X30"



XW8-I-A
36"X36"
XW8-I-B
48"X48"



XW8-2-A
36"X36"
XW8-2-B
48"X48"



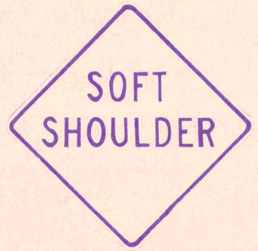
R2-I
24"X30"
R2-I-A
48"X60"



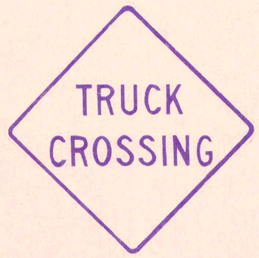
XW6-2a-A
36"X36"
XW6-2a-B
48"X48"



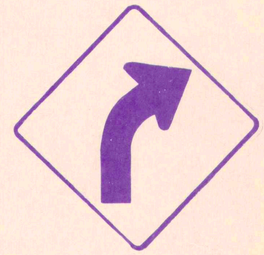
XW8-3-A
36"X36"



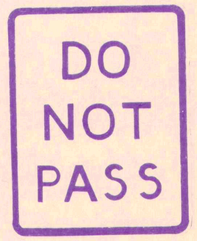
XW8-4-A
36"X36"
XW8-4-B
48"X48"



XWII-I0-A
36"X36"
XWII-I0-B
48"X48"



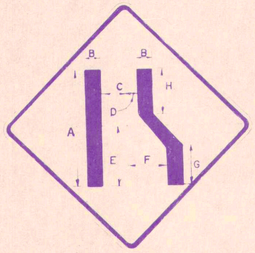
XWI-2-A(R or L)
36"X36"
XWI-2-B(R or L)
48"X48"



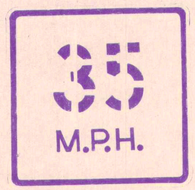
R4-I-A
36"X48"
R4-I-B
48"X60"

LANE ENDS

	XW4-2	XW4-2-A
A	28"	37 3/8"
B	4"	5 5/16"
C	4"	5 5/16"
D	1"	1 3/8"
E	14"	18 11/16"
F	4"	5 5/16"
G	10"	13 5/16"
H	10"	13 5/16"



XW4-2(R or L)
36"X36"
XW4-2-A(R or L)
48"X48"



XWI3-I
18"X18"
XWI3-I-A
24"X24"
TO BE USED BELOW
A WARNING SIGN ONLY



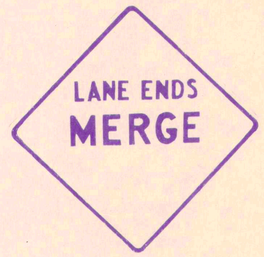
R6-I(R or L)
36"X12"
R6-I-B(R or L)
72"X24"



R6-2-A(R or L)
24"X30"



* R5-I
Red Circle with white letters and white background
30"X30"
* R5-I-A
36"X36"



XW9-2-A(R or L)
48"X48"

STANDARD DETOUR SIGNS
STATE OF INDIANA
APRIL 1972

NOTE:
1. ALL SIGNS SHALL BE MOUNTED IN SUCH A MANNER THAT THE VERTICAL DISTANCE BETWEEN THE BOTTOM OF THE SIGN AND THE EDGE OF THE PAVEMENT SHALL BE NOT LESS THAN 5 FEET AND THE HORIZONTAL DISTANCE FROM THE EDGE OF PAVEMENT TO THE EDGE OF SIGN SHALL NOT BE LESS THAN 12 FEET (R/W PERMITTING) OR 6 FEET FROM THE EDGE OF A PAVED SHOULDER.
2. ALL NOTES ON STANDARD DETOUR SIGNS SHEET (3) ALSO APPLY TO SIGNS ON THIS SHEET.
3. REFERENCE IS MADE TO "INDIANA STANDARD SPECIFICATIONS" FOR INSTALLATION AND PAYMENT PROCEEDURES.
4. ALL SIGNS ARE TO BE REFLECTORIZED BY USING REFLECTIVE SHEETING, AS SPECIFIED IN "INDIANA STANDARD SPECIFICATIONS", APPLIED TO THE ENTIRE BACKGROUND AREA OF THE SIGNS. THE REFLECTIVE SHEETING SHALL BE OF THE COLOR INDICATED IN THE DESIGN DETAILS.
5. ALL SIGNS WITH ORANGE BACKGROUNDS SHALL HAVE ENCAPSULATED LENS (HIGH INTENSITY) REFLECTIVE FEDERAL ORANGE SHEETING.
6. ALL SIGNS WITH WHITE BACKGROUNDS SHALL HAVE ENCLOSED LENS REFLECTIVE SHEETING (ENGINEER GRADE.)

* SIGNS R5-I AND R5-I-A TO BE HIGH INTENSITY ENCAPSULATED SHEETING.

RECOMMENDED FOR APPROVAL _____ ENGINEER OF TRAFFIC

APPROVED _____ CHIEF DIVISION OF TRAFFIC

APPROVED _____ CHIEF HIGHWAY ENGINEER

REVISIONS		
3-1-73	W-35B	
4-2-73	SIGN SIZE	
6-1-74	X NOTE	
6-1-76	NEW MUTCD	
4-1-77	NOTES 5,6	
7-1-80	NEW MUTCD	

SHEET 4 DETOUR

SEPTEMBER 1963

RECORD DRAWING Sheet No 91

OTHER THAN EXPRESSWAYS AND FREEWAYS

SIGN NUMBER	SIGN MESSAGE	POST DESIGN 4"x4" WOOD	POST DESIGN GALVANIZED STEEL	SIGN SIZE	SIGN COLOR BACKGROUND	SIGN COLOR COPY	BORDER WIDTH	MARGIN WIDTH	LETTER HEIGHT SERIES – LINE 1	LETTER HEIGHT SERIES – LINE 2	LETTER HEIGHT SERIES – LINE 3	LETTER HEIGHT SERIES – LINE 4	ARROW SIZE HEAD	ARROW SIZE SHAFT	CORNER RADIUS	NUMBER OF POSTS ONE	NUMBER OF POSTS TWO
XW-1	ROAD CONSTRUCTION AHEAD	*	A	48" X 48"	ORANGE	BLACK	1¼"	¾"	7"- SERIES C	7"- SERIES C	7"- SERIES C				3"		X
XW-64	LANE ENDS MERGE _____ (LEFT OR RIGHT)	*	A	36" X 36"	ORANGE	BLACK	⅞"	⅝"	6"- SERIES C	8"- SERIES D	8"- SERIES D				2¼"		X
XW-2	DETOUR AHEAD	*	A	48" X 48"	ORANGE	BLACK	1¼"	¾"	8"- SERIES D	8"- SERIES D					3"		X
XW-3	ROAD CLOSED AHEAD	*	A	48" X 48"	ORANGE	BLACK	1¼"	¾"	7"- SERIES D	7"- SERIES D	7"- SERIES D				3"		X
XW-4	ONE LANE ROAD AHEAD	*	A	48" X 48"	ORANGE	BLACK	1¼"	¾"	7"- SERIES C	7"- SERIES C	7"- SERIES C				3"		X
XW-5 (RT OR LT)	RIGHT LANE CLOSED AHEAD	*	A	48" X 48"	ORANGE	BLACK	1¼"	¾"	7"- SERIES B	7"- SERIES C	7"- SERIES C				3"		X
XW-7	FLAGMAN AHEAD	*	A	48" X 48"	ORANGE	BLACK	1¼"	¾"	7"- SERIES C	7"- SERIES C					3"		X
XW-8A	MEN WORKING	*	A	36" X 36"	ORANGE	BLACK	⅞"	⅝"	6"- SERIES D	6"- SERIES D					2¼"		X
XW-9	FRESH OIL	*	A	30" X 30"	ORANGE	BLACK	¾"	½"	6"- SERIES D	6"- SERIES D					1⅞"	X	
XW-10A	ROAD MACHINERY AHEAD	*	A	48" X 48"	ORANGE	BLACK	1¼"	¾"	7"- SERIES D	7"- SERIES D	7"- SERIES D				3"		X
XW-11A	ROAD WORK AHEAD	*	A	48" X 48"	ORANGE	BLACK	1¼"	¾"	7"- SERIES D	7"- SERIES D	7"- SERIES D				3"		X
XW-12A	SHOULDER WORK AHEAD	*	A	36" X 36"	ORANGE	BLACK	⅞"	⅝"	5"- SERIES C	5"- SERIES C	5"- SERIES C				2¼"		X
XW-13A	SURVEY CREW	*	A	36" X 36"	ORANGE	BLACK	⅞"	⅝"	6"- SERIES D	6"- SERIES D					2¼"		X
XR-1	ROAD CLOSED	*	A	48" X 30"	WHITE	BLACK	¾"	½"	8"- SERIES D	8"- SERIES D					1⅞"		X
XR-2	ROAD CLOSED ___ MILES AHEAD LOCAL TRAFFIC ONLY	*	A	60" X 30"	WHITE	BLACK	¾"	½"	6"- SERIES C	5"- SERIES C	4"- SERIES C				1⅞"		X
XW-63	TWO WAY TRAFFIC	*	A	48" X 48"	ORANGE	BLACK	1¼"	¾"	8"- SERIES C	8"- SERIES C	8"- SERIES C				3"		X
XM-1	ROAD CONSTRUCTION _____ MILES	*	A	60" X 36"	ORANGE	BLACK	⅞"	⅝"	6"- SERIES C	6"- SERIES C	6"- SERIES C				2¼"		X
XM-2	END CONSTRUCTION	*	A	60" X 24"	ORANGE	BLACK	⅝"	⅜"	6"- SERIES C	6"- SERIES C					1½"		X
XM-3	END ROAD WORK	*	A	60" X 24"	ORANGE	BLACK	⅝"	⅜"	6"- SERIES C	6"- SERIES C					1½"		X
XM-4	PILOT CAR FOLLOW ME	—	—	36" X 18"	ORANGE	BLACK	⅝"	⅜"	5"- SERIES C	5"- SERIES C					1½"		X
XM-6	SECONDARY SYSTEM SIGN (COUNTY)	SEE SHEET 1 CONSTRUCTION IDENTIFICATION SIGNS		8'-0" X 4'-0"	WHITE	BLACK	1½"		ALL LETTERING TO CONFORM TO NOTES NO. 3 & 4 OF NOTES ON SHEET NO. 1 OF CONSTRUCTION IDENTIFICATION SIGNS.						8"	SEE SHEET 1 CONSTRUCTION IDENTIFICATION SIGNS	
XM-7	PRIMARY-SECONDARY SYSTEM SIGN(STATE)			8'-0" X 4'-0"	WHITE	BLACK	1½"								9"		
XM-8	INTERSTATE SYSTEM SIGN			12'-0" X 6'-0"	WHITE	BLACK	2"								12"		
W-1A (RT OR LT)	TURN SIGN	*	A	36" X 36"	ORANGE	BLACK	⅞"	⅝"					10⅝" X 12"	5¼"	2¼"		X
W-3A (RT OR LT)	REVERSE TURN SIGN	*	A	36" X 36"	ORANGE	BLACK	⅞"	⅝"					10⅝" X 12"	5¼"	2¼"		X
W-4A (RT OR LT)	REVERSE CURVE SIGN	*	A	36" X 36"	ORANGE	BLACK	⅞"	⅝"					10⅝" X 12"	5¼"	2¼"		X
W-11	LARGE ARROW SIGN	*	A	48" X 24"	ORANGE	BLACK	⅞"	¾"					13⅜" X 15"	25 13/16" X 6½"	1½"		X
W-16	BUMP	*	A	36" X 36"	ORANGE	BLACK	⅞"	⅝"	10"- SERIES D						2¼"		X
W-17A	DIP	*	A	36" X 36"	ORANGE	BLACK	⅞"	⅝"	10"- SERIES E						2¼"		X
W-21A	DIVIDED HIGHWAY ENDS	*	A	36" X 36"	ORANGE	BLACK	⅞"	⅝"	5"- SERIES D	5"- SERIES D	5"- SERIES D				2¼"		X
W-25A	PAVEMENT ENDS	*	A	36" X 36"	ORANGE	BLACK	⅞"	⅝"	6"- SERIES C	6"- SERIES C					2¼"		X
W-28A	SOFT SHOULDER	*	A	36" X 36"	ORANGE	BLACK	⅞"	⅝"	6"- SERIES C	6"- SERIES C					2¼"		X
W-35A	ADVISORY SPEED SIGN	*	A	24" X 24"	ORANGE	BLACK	⅝"	⅜"	10"- SERIES E	4"- SERIES E					1½"		
W-45A	TRUCK CROSSING	*	A	36" X 36"	ORANGE	BLACK	⅞"	⅝"	6"- SERIES C	6"- SERIES C					2¼"		X
W-2A (RT OR LT)	CURVE SIGN	*	A	36" X 36"	ORANGE	BLACK	⅞"	⅝"					10⅝" X 12"	5¼"	2¼"		X
R-2A	SPEED LIMIT	*	A	30" X 36"	WHITE	BLACK	¾"	½"	5"- SERIES E	5"- SERIES E	12"- SERIES D				1⅞"	X	
W-119A	LANE ENDS	*	A	36" X 36"	ORANGE	BLACK	⅞"	⅝"	SEE STANDARD DETOUR SHEET NO. 4						2¼"		X
R-11A	DO NOT PASS	*	A	30" X 36"	WHITE	BLACK	¾"	½"	7"- SERIES D	7"- SERIES D	7"- SERIES D				1⅞"		X
R-15A	DO NOT ENTER	*	A	36" X 36"	RED	WHITE	RADIUS	17½"	5"- SERIES D	6" X 30" BAR	5"- SERIES D				2¼"	X	
R-16 (RT OR LT)	ONE WAY ARROW	*	A	36" X 12"	BLACK & WHITE	BLACK		½"	4"- SERIES D				7½" X 8½"	22½" X 5¼"	1½"		X
R-34A	WEIGHT LIMIT __ TONS	*	A	24" X 30"	WHITE	BLACK	⅝"	⅜"	4"- SERIES D	4"- SERIES D	5"- SERIES E	5"- SERIES D			1½"	X	
XM-20A (RT OR LT)	DETOUR ARROW	*	A	48" X 18"	BLACK & ORANGE	BLACK		⅜"	6"- SERIES D				12" X 13½"	29¾" X 8¼"	1½"		X
XM-120 (RT OR LT)	DETOUR ARROW	*	A	30" X 24"	ORANGE	BLACK	⅝"	⅜"	5"- SERIES D				7⅛" X 8"	10⅞" X 3½"	1½"		X
R-116A (RT OR LT)	ONE WAY	*	A	24" X 30"	WHITE	BLACK	⅝"	⅜"	6"- SERIES D	6"- SERIES D			5¼" X 6"	8" X 2⅜"	1½"	X	

* SIZE OF WOOD POST REQUIRED.

GENERAL NOTES

1. SIGN LETTERING SHALL BE IN CLEAR OPEN CAPITAL LETTERS OF THE TYPE APPROVED BY THE JOINT COMMITTEE ON UNIFORM TRAFFIC CONTROL DEVICES AND ITS SPONSORING AGENCIES. COMPLETE DETAILS MAY BE FOUND IN THE FEDERAL HIGHWAY ADMINISTRATION STANDARD ALPHABETS FOR HIGHWAY SIGNS.
2. ALL REFERENCES TO LETTER SERIES (A,B,C, ETC.) REFER TO THE STANDARD ALPHABET AS PUBLISHED BY THE FEDERAL HIGHWAY ADMINISTRATION. COPIES MAY BE OBTAINED BY WRITING THE FEDERAL HIGHWAY ADMINISTRATION, DEPARTMENT OF TRANSPORTATION, WASHINGTON, D.C. 20025.
3. THESE SIGN DESIGN DETAILS TO BE USED WITH THE STANDARD DETOUR SIGN SHEETS.
4. THE WORD "CONSTRUCTION" WHEN USED ON 48"X48" DIAMOND SIGNS IN 7"C LETTERS, REQUIRES THAT THE SPACING BETWEEN LETTERS BE REDUCED TO 67% OF A.G.A. STANDARDS.
5. THE MINIMUM DEPTH FOR WOOD OR STEEL POSTS SHALL BE 36" FOR A, 40" FOR B, 42" FOR C, AND 36" FOR 4"X4".
6. BB MEANS BACK TO BACK POSTS.
7. TYPE A,B, AND C POSTS ARE SPECIFIED IN INDIANA STANDARD SPECIFICATIONS.
8. SIGN R15A TO BE HIGH INTENSITY ENCAPSULATED LENS SHEETING.

SIGN DESIGN DETAILS STATE OF INDIANA

APRIL 1972

RECOMMENDED FOR APPROVAL Ernest Hitty 5-5-72
ENGINEER OF TRAFFIC

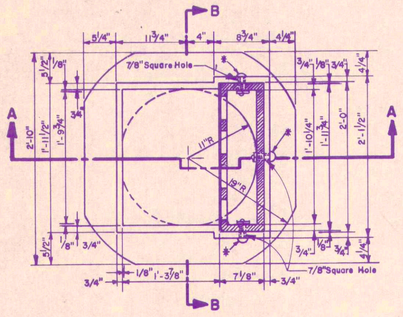
APPROVED Clinton A Venable 5/5/72
CHIEF DIVISION OF TRAFFIC

APPROVED M W Christy 5-5-72
CHIEF HIGHWAY ENGINEER

REVISIONS	
3-1-73	W-35B
4-2-73	SIGN SIZE
10-1-74	NOTE 8

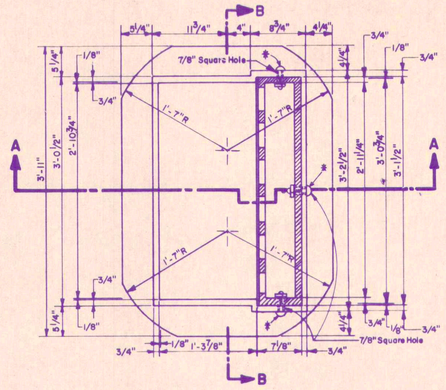
SHEET 5 DETOU

RECORD DRAWING SHEET 92



PLAN

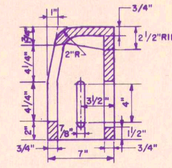
PLAN of CASTINGS TYPE 8 & 9 ARE SIMILAR.
FRAME and GRATING ARE THE SAME



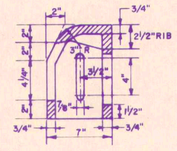
PLAN

PLAN of CASTINGS TYPE 10 & 11 ARE SIMILAR.
FRAME and GRATING ARE THE SAME

* 3/4" x 3 1/2" Galvanized, Round-Head Square Shoulder Bolt with Lock Washer.



CURB CASTING SECTION
CASTINGS TYPE 8 & 10

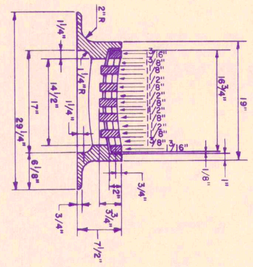


CURB CASTING SECTION
CASTINGS TYPE 9 & 11

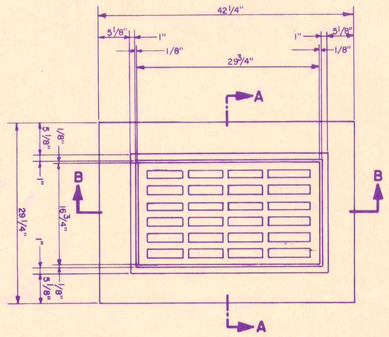
GENERAL NOTES

— All Grates and Manhole Covers shall be Cast of Ductile Iron or Steel and all Frames, Rings and Curb Boxes shall be cast of Gray Iron. Unless otherwise specified. See Section 909.05 of the STANDARD SPECIFICATION.

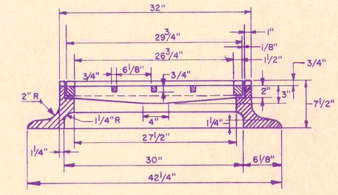
— Grates shall be placed with the MAXIMUM dimension of the RECTANGULAR OPENING parallel to the DIRECTION of FLOW, (CASTINGS TYPE 13 and 14).



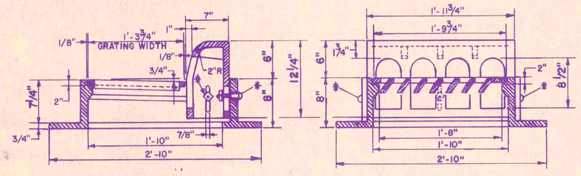
SECTION "A-A"



PLAN

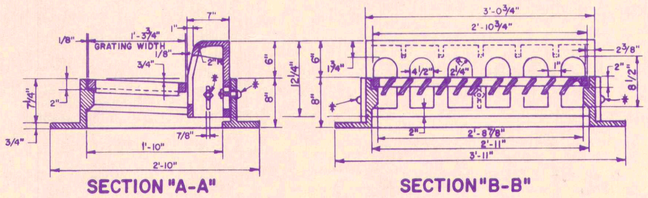


SECTION "B-B"



SECTION "A-A" **SECTION "B-B"**

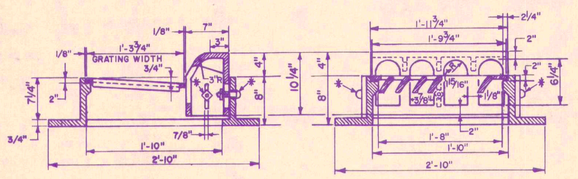
CASTING TYPE 8



SECTION "A-A" **SECTION "B-B"**

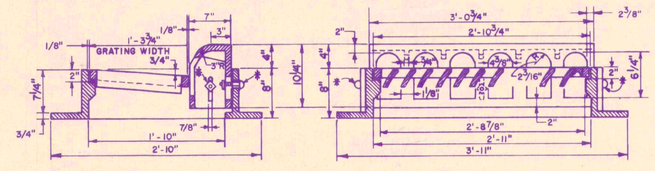
CASTING TYPE 10

CASTING TYPE 13



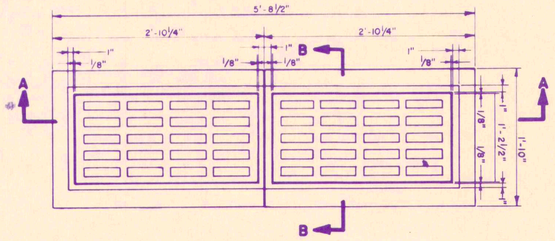
SECTION "A-A" **SECTION "B-B"**

CASTING TYPE 9

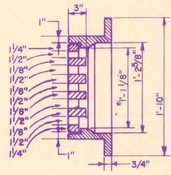


SECTION "A-A" **SECTION "B-B"**

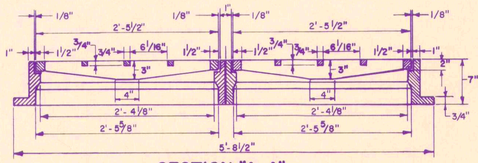
CASTING TYPE 11



PLAN

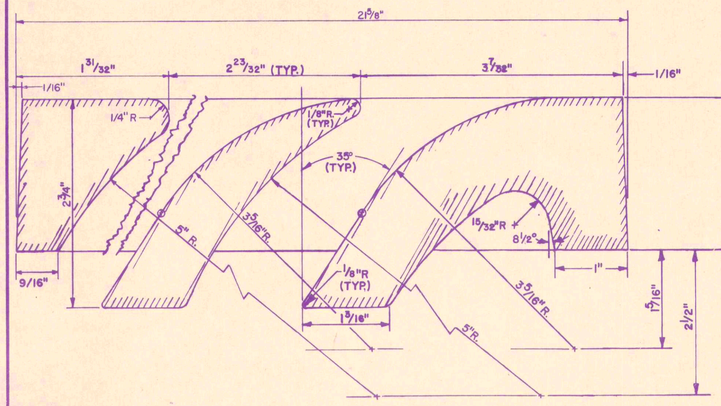


SECTION "B-B"

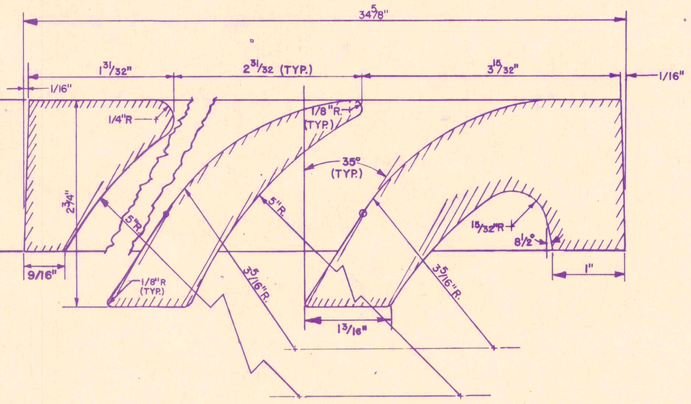


SECTION "A-A"

CASTING TYPE 14



FIN DETAIL FOR CASTINGS TYPE 8 & 9



FIN DETAIL FOR CASTINGS TYPE 10 & 11

REVISIONS	
DATE	REMARKS

MISCELLANEOUS STANDARDS
STATE OF INDIANA
SEPT. 1974

RECOMMENDED for APPROVAL Byron L. Bunch 9/4/74
ENGINEER of ROAD DESIGN

APPROVED J R Yoder 9/25/74
CHIEF-DIVISION of DESIGN

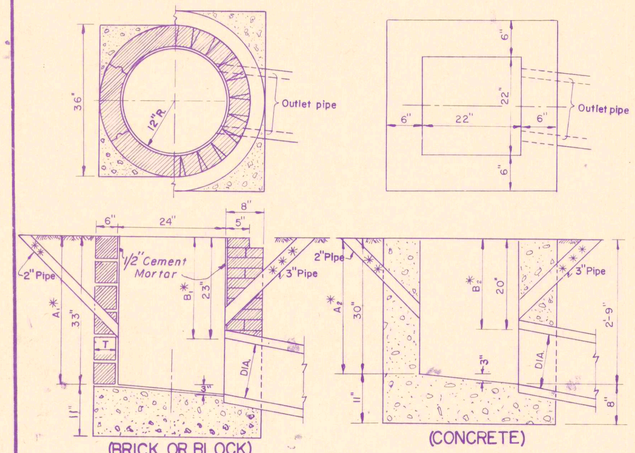
APPROVED J K Hallock 9-26-74
CHIEF HIGHWAY ENGINEER

SH

MC

DECEMBER 1963

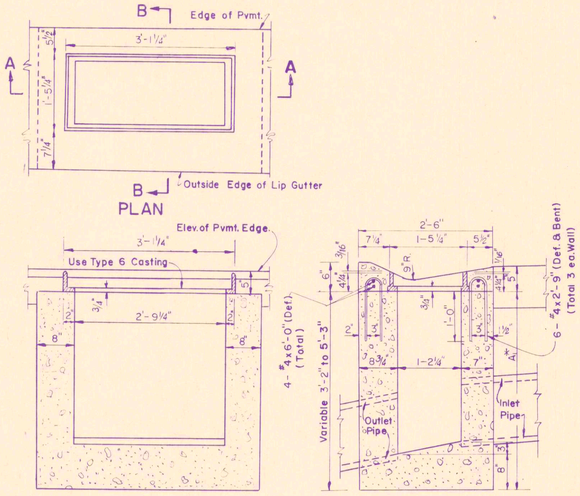
RECORD DRAWING SHEET NO. 94



(BRICK OR BLOCK) (CONCRETE)

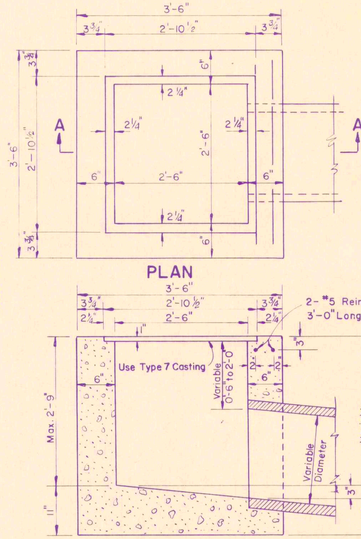
NOTE:- Use of Brick, Block or Concrete permissible.

Type A

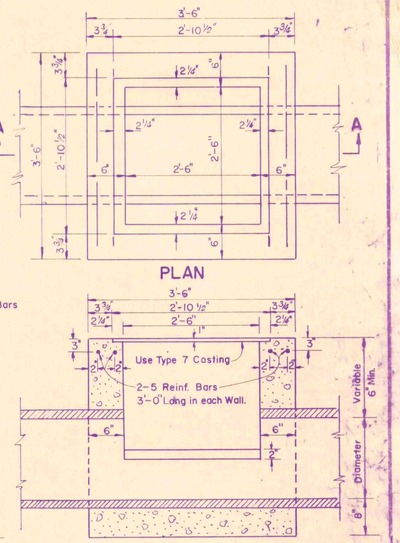


Type D (Conc.)

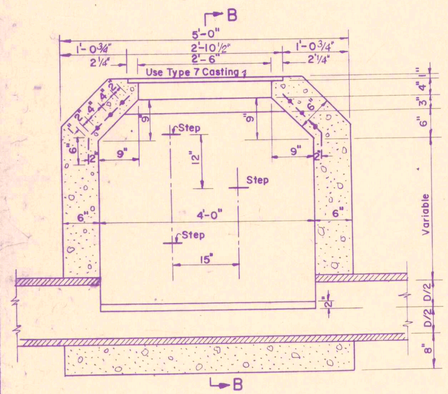
NOTE:
T = 8" For Brick Structure
T = 6" For Segmental Block Structure



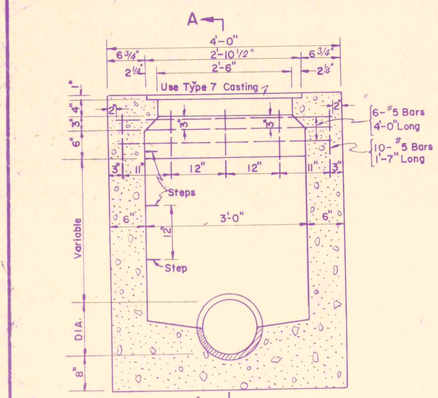
Type E (Conc.)



Type F (Conc.)

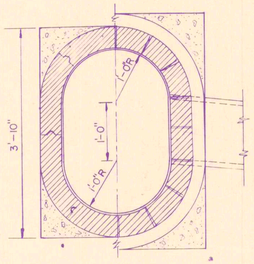


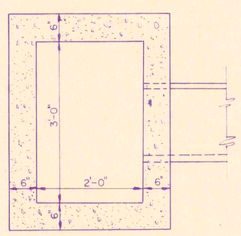
SECTION A-A

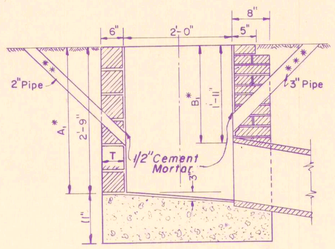


SECTION B-B

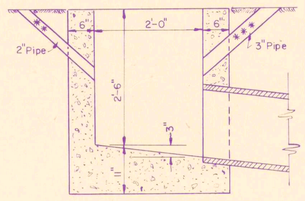
Type G (Conc.)







(BRICK OR BLOCK)



(CONCRETE)

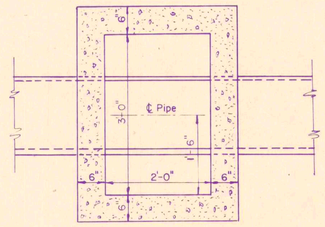
NOTE:- Use of Brick, Block or Concrete permissibe.

Type J

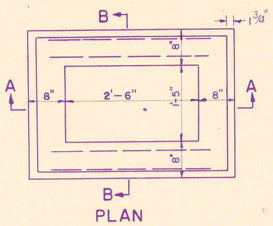
* In special cases or where inlet pipe is required dimensions A_1, B_1, A_2 & B_2 shall be increased or decreased 12" as directed.

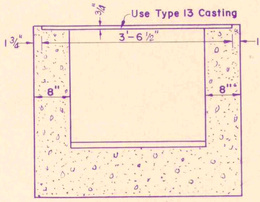
** 2" Pipe drain from bottom of curb to inlet. Aggregate to be placed around inlet end of pipe.

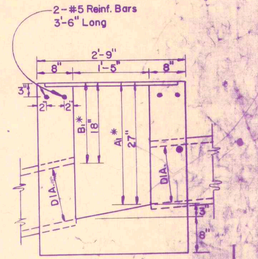
*** 3" Min. Dia. Pipe to be kept open for drainage of subgrade or base until surface is placed



Type M (Conc.)







Type R (Conc.)

NOTE.

THE CONTRACTOR MAY BE PERMITTED TO PRECAST INLETS SUBJECT TO THE APPROVAL OF THE ENGINEER AND IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.

MISCELLANEOUS STANDARDS
STATE OF INDIANA
DEC. 1964

INLETS

SCALE:- 3/4" = 1'-0"

RECOMMENDED FOR APPROVAL C.O. Kroeckelberger
ENGINEER OF PLANS & SPECIFICATIONS

APPROVED [signature]
CHIEF DIVISION OF DESIGN

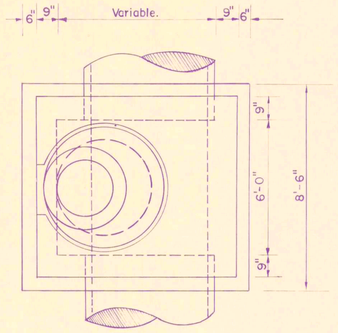
APPROVED [signature]
CHIEF ENGINEER

REVISIONS	
8-31-65	TYPE "R"
10-18-65	TYPE "M"
5-6-66	TYPE "A" & "J"
4-1-70	REMOVAL OF TYPE "C" & "L"
10-1-70	½" MORTAR
3-1-71	NOTE
11-2-74	1974 Spec.

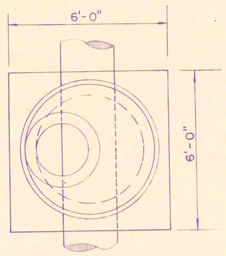
SHEET M D

November 6, 1961

RECORD DRAWING SHEET NO. 95



CONE HEIGHTS *	
ECCENTRIC	CONCENTRIC
2'-6"	2'-6"
3'-0"	3'-0"
3'-2"	3'-2"
3'-6"	4'-0"



GENERAL NOTE

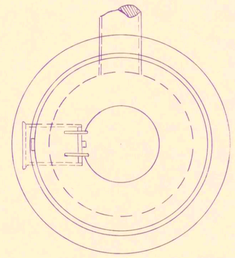
BOTTOM SHALL BE CONSTRUCTED OF PRECAST BOTTOM SECTION OR CLASS "A" CONCRETE FORMED IN PLACE AND INCLUDED IN THE CONTRACT UNIT PRICE FOR MANHOLE OR CATCH BASIN AS THE CASE MAY BE.

ALL PRECAST MANHOLE AND CATCH BASIN MATERIAL SHALL CONFORM TO A.S.T.M C-478 AND THE STANDARD SPECIFICATIONS (MIN. SQ.IN. OF REINFORCING STEEL PER LINEAL FOOT SHALL BE 0.12)

A 6" CUSHION OF B BORROW SHALL BE REQUIRED WHEN THE PRECAST BOTTOM SECTION IS USED AND SHALL BE PAID FOR IN THE CONTRACT UNIT PRICE FOR MANHOLE OR CATCHBASIN AS THE CASE MAY BE.

WATERPROOFING MATERIAL SHALL CONFORM TO AASHO, M115 AND THE STANDARD SPECIFICATIONS.

BASIS OF PAYMENT FOR MANHOLES AND CATCH BASIN SHALL BE AS SET OUT IN THE STANDARD SPECIFICATIONS.



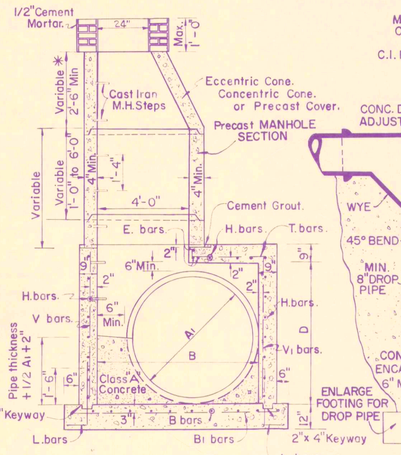
GENERAL NOTES

CONCENTRIC CONCRETE SECTION WILL NOT BE PERMITTED ON ANY MANHOLE THAT WILL BE UNDER THE JURISDICTION OF THE INDIANAPOLIS SANITARY DISTRICT.

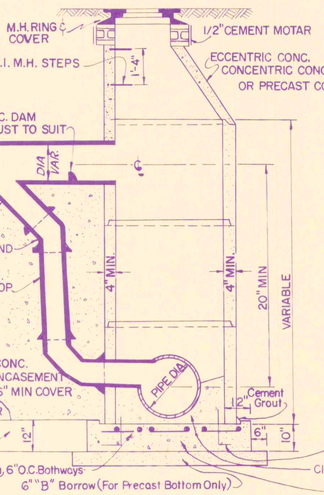
THE CONTRACTOR WILL BE PERMITTED TO SUBSTITUTE PRECAST MANHOLE TYPE "C" FOR MANHOLE TYPE "A" OR "B" AND PRECAST CATCH BASINS TYPE "W" FOR CATCH BASIN TYPE "A".

JOINTS BETWEEN SECTIONS OF PRECAST MANHOLES AND PRECAST CATCH BASINS SHALL BE IN ACCORDANCE WITH ASTM C-443.

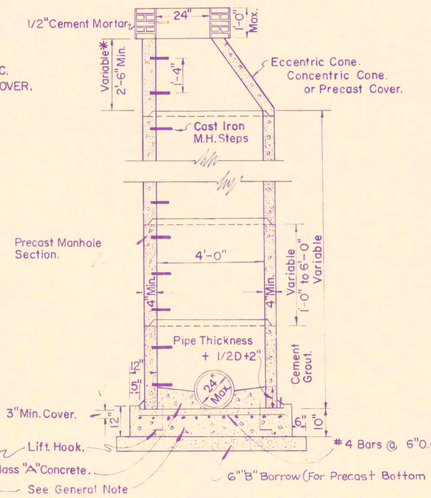
AIR-ENTRAINED CONCRETE WILL NOT BE REQUIRED IN THE PRECAST PORTION OF THE CONCRETE MANHOLE AND CATCH BASIN.



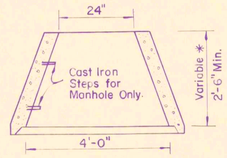
MANHOLE TYPE D,E,F, or G
(See Table)
SCALE :- 3/8" = 1'-0"



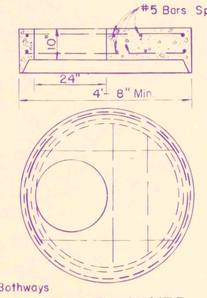
SECTION
‡ DROP MANHOLE TYPE "C"
SCALE 3/8"=1'-0"



SECTION
MANHOLE TYPE -"C"
SCALE :- 3/8"=1'-0"



CONCENTRIC CONE.
SCALE :- 1/2"=1'-0"

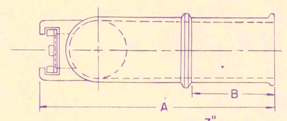


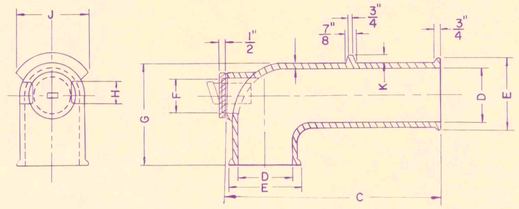
PRECAST COVER
SCALE :- 1/2"=1'-0"

NOTE :-
PRECAST COVER SHALL BE USED WHERE HEADROOM IS LIMITED.



CATCH BASIN TYPE -"W"
SCALE :- 1/2"= 1'-0"





CATCH BASIN HOOD SHALL BE MADE FROM GRAY CAST IRON AND CONFORM TO AASHO, M105 AND THE STANDARD SPECIFICATIONS.

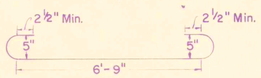
SIZE	A	B	C	D	E	F	G	H	J	K
12"	31 1/4"	6"	28 5/8"	12"	13 5/8"	8"	17"	4"	—	—
15"	34"	6"	31 1/2"	15"	16 5/8"	8"	21 1/4"	4"	16"	2"
18"	36 5/8"	6 1/2"	34"	18"	19 5/8"	8"	24 1/2"	4"	20"	2"

DETAIL OF PRECAST CATCHBASIN HOODS
NOT TO SCALE

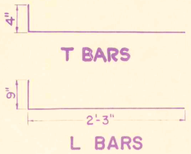
‡ Drop pipe may be used with Manhole Type D,E,F or G. and referred to as Drop Manhole Type D,E,F or G.

REINFORCING STEEL FOR MANHOLES

	Manhole Type "D"				Manhole Type "E"				Manhole Type "F"				Manhole Type "G"			
Bars	Length	No.	Spa.	Size	Length	No.	Spa.	Size	Length	No.	Spa.	Size	Length	No.	Spa.	Size
B	8'-0"	10	9"	#5	8'-0"	12	9"	#5	8'-0"	16	9"	#5	8'-0"	19	9"	#5
B1	6'-9"	12	9"	#5	8'-6"	12	9"	#5	11'-0"	12	9"	#5	13'-3"	12	9"	#5
E	7'-3"	3	2"	#5	7'-3"	3	7"	#5	7'-3"	3	2"	#5	7'-3"	3	2"	#5
H	8'-6"	22	6"	#5	8'-6"	33	6"	#5	8'-6"	41	6"	#5	8'-6"	58	6"	#5
L	3'-0"	16	12"	#5	3'-0"	16	12"	#5	3'-0"	16	12"	#5	3'-0"	16	12"	#5
T	1'-3"	16	6"	#5	3'-0"	16	6"	#5	5'-3"	16	6"	#5	7'-6"	16	6"	#5
V	5'-0"	16	6"	#5	6'-9"	16	6"	#5	9'-0"	16	6"	#5	11'-6"	16	6"	#5
V1	4'-9"	16	6"	#5	6'-6"	16	6"	#5	8'-9"	16	6"	#5	11'-3"	16	6"	#5

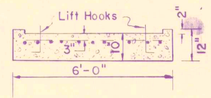


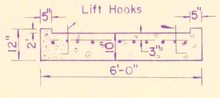
H BARS

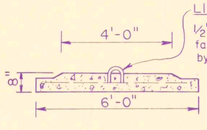


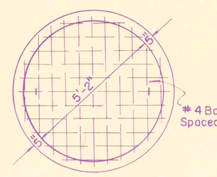
T BARS
L BARS

MANHOLE DIMENSIONS		
TYPE	A-1 PIPE SIZE DIA(INCHE)	B & D
D	27"To 42"	4'-9"
E	48"To 60"	6'-6"
F	66"To 84"	8'-10"
G	90"To 108"	11'-2"

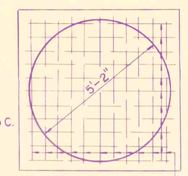




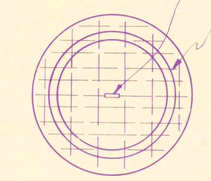




ROUND



SQUARE



ROUND ALTERNATE

PRECAST BOTTOM SECTION
SCALE :- 3/8" = 1'-0"
#4 Bars 5'-6" Long Spaced 6" C. to C.

MISCELLANEOUS STANDARDS

REVISIONS	
4-4-66	General Notes
7-1-66	Drop Manhole
6-26-68	Gen. Notes
7-26-68	Gen. Notes
4-1-69	1969 Spec.
1-4-71	1971 Specs
3-1-71	Precast Bott.
1-2-74	1974 Specs

SHEET MD3

RECORD DRAWING

SHEET NO. 96