

Kenton C. Ward, CFM
Surveyor of Hamilton County
Phone (317) 776-8495
Fax (317) 776-9628

Suite 188
One Hamilton County Square
Noblesville, Indiana 46060-2230

January 7, 2010

TO: Hamilton County Drainage Board

RE: W.R. Fertig Drain, Wood Park & Guilford Park Arms, 116th Street Reconstruction

Attached is a petition, plans and other information for the Reconstruction of the W.R. Fertig Drain, Wood Park and Guilford Park Arms between Rangeline Road and College Avenue in the City of Carmel.

The reconstruction was petitioned by the City of Carmel

The new line will consist of the following:

W.R. Fertig Drain

The W.R. Fertig Drain will be extended from the current terminus, Sta. 105+00 of the original 1899 legal description, to the new south right of way line of 116th Street. This extension will add an additional 152 feet of open drain.

Wood Park Arm

The 1,502 feet of original drain between Wood Park and Telemon Corporation parcel was removed with the widening project and shall be vacated. The portion of drain removed and vacated is between Structures 626-625, 625-615, 615-624, 624-617, 617-616, 616A-616, 616-616B, open drain between 616B and 700, 700-701, open drain between 701-702, and 702-703, per the Wood Park Section 1 plans by Paul I. Cripe, having job number 87367-40000 and dated September 25, 1987. Also removed was the Wood Park Arm between new Structure 138A of the road plans and Structure 615 of the original Wood Park Section 1 plans.

The relocation and extension of the Wood Park Arm of the W.R. Fertig Drain shall consist of the following length:

12" RCP – 18 LF	24" RCP – 466 LF
15" RCP – 56 LF	27" RCP – 403 LF
18" RCP – 771 LF	36" RCP – 239 LF

The total length of new drain shall be 1,953 feet. The new regulated drain shall be those lengths shown between Structures 137-138A, 138A-138, 136-138, 138-45, 45-48, 48-52, 52-60A, 60A-60, 56-60, 60-61, 61-64, 64-68, 68-75 on the plans prepared by Farr Garvey & Associates, Contract R-27495, Project STP-B886(007).

Guilford Park Arm

Structure 142 of the Guilford Park Arm, as shown in the plans prepared by Roger Ward Engineering, having job number K.A.S.003 and dated November 22, 2000, was removed with the project and replaced with Structure 69 of the road plans. This removed approximately 36 feet of the original Guilford Park Arm.

The relocation and extension of the Guilford Park Arm of the W.R. Fertig Drain shall consist of the following lengths:

18" RCP - 3 LF	24" RCP – 183 LF
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The total length of new drain shall be 186 feet. The new regulated drain shall be those lengths shown between Structures 74-73, 73-71, 71-69 and 69-68 on the plans prepared by Farr, Garvey & Associates, Contract R-27495, Project STP-B886(007).

This proposal will add an additional 753 feet to the total length of the W.R. Fertig and its Arms.

The cost of the relocation is to be paid by the City of Carmel.

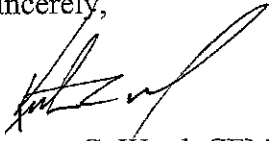
The petitioner, The City of Carmel, was not required to post a Bond/Letter of Credit for the project.

I recommend the easement for this drain reconstruction to be either 15 feet from the center line of the new drain measured at 90 degree angles in both directions, or the Right of Way line, whichever is greater. The easement on the new drain outside of the Right of Way shall be 15 feet from the centerline of the drain in both directions and will include easement on parcel 17-09-36-00-00-054.000, owned by PSI Energy Inc.

The new easement for the extension of the W.R. Fertig shall be within the right of way for 116th Street on the east bank of the regulated drain and 75' on the west bank. Per FEMA Flood Insurance Rate Map (FIRM) for this area, Map Number 18057C0209F, dated February 19, 2003, this area is within the 100 year floodplain. This will include easement on tract 17-13-01-00-00-007.00 which is owned b y Hanna, Inc.

I recommend the Board set a hearing for this item on February 22, 2010.

Sincerely,

A handwritten signature in black ink, appearing to read 'Kenton C. Ward', written over a thin horizontal line.

Kenton C. Ward, CFM
Hamilton County Surveyor

KCW/pll

Hamilton County Drainage Board
Court House
Noblesville, Indiana

IN RE: 116TH STREET WIDENING PROJECT

Hamilton County, Indiana

PETITION FOR RELOCATION AND RECONSTRUCTION

THE CITY OF CARMEL (hereinafter "Petitioner"),

hereby petitions the Hamilton County Drainage Board for authority to relocate and improve a section of the FERTIG Drain, and in support of said petition advises the Board that:

1. Petitioner owns real estate through which a portion of the FERTIG Drain runs.
2. Petitioner plans to develop its real estate with roads, buildings, utilities, storm drains, sanitary sewers and other structures.
3. Petitioner's proposed development of its real estate will require relocation and reconstruction of a portion of the FERTIG Drain, as specifically shown on engineering plans and specifications filed with the Hamilton County Surveyor.
4. The work necessary for the proposed relocation and reconstruction will be undertaken at the sole expense of the Petitioner and such work will result in substantial improvement to the FERTIG Drain, without cost to other property owners on the watershed of the FERTIG Drain.

WHEREFORE, Petitioner requests that an Order issue from the Hamilton County Drainage Board authorizing relocation and reconstruction of the FERTIG Drain, in conformance with applicable law and plans and specifications on file with the Hamilton County Surveyor.

Signed

M. T. McBride

Printed Name

MICHAEL T. MCBRIDE, P.E.
CITY ENGINEER
CITY OF CARMEL

FINDINGS AND ORDER

CONCERNING THE PARTIAL VACATION OF THE

W. R. Fertig Drain, Wood Park Arm

**Between Structures 626-625, 625-615, 615-624,
624-617, 617-616, 616A-616, 616-616B**

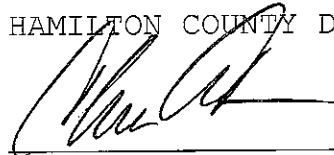
Open Drain Between 616B-700, 700-701 and 701-702, 702-703

Between New Structure 138A & Structure 615


On this *22nd* day of *February* 2010, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the **W. R. Fertig Drain, Wood Park Arm, between Structures 626-625, 625-615, 615-624, 624-617, 617-616, 616A-616, 616-616B and open drain between 616B-700, 700-701, 701-702, 702-703 and between new Structure 138A and Structure 616.**

Evidence has been heard. Objections were presented and considered. The Board then adopted an order of action. The Board now finds that the costs of continued maintenance to the portion of the above drain exceed the benefits to the real estate benefited by the portion of the drain to be abandoned and issues this order vacating the above section of the **W. R. Fertig Drain, Wood Park Arm, between Structures 626-625, 625-615, 615-624, 624-617, 617-616, 616A-616, 616-616B and open drain between 616B-700, 700-701, 701-702, 702-703 and between new Structure 138A and Structure 616.**

HAMILTON COUNTY DRAINAGE BOARD



President

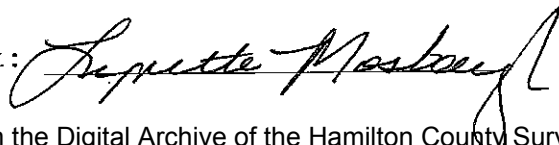


Member



Alternate Member

Attest:



FINDINGS AND ORDER

CONCERNING THE PARTIAL VACATION OF THE

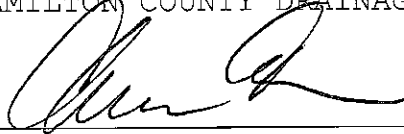
W. R. Fertig Drain, Guilford Park Arm

Structure 142

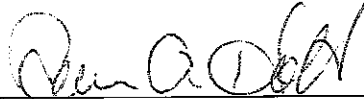
On this **22nd day of February 2010**, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the **W. R. Fertig Drain, Guilford Park Arm, Structure 142**.

Evidence has been heard. Objections were presented and considered. The Board then adopted an order of action. The Board now finds that the costs of continued maintenance to the portion of the above drain exceed the benefits to the real estate benefited by the portion of the drain to be abandoned and issues this order vacating the above section of the **W. R. Fertig Drain, Guilford Park Arm, Structure 142**.

HAMILTON COUNTY DRAINAGE BOARD



President



Member



Alternate Member

Attest:



STATE OF INDIANA)
) ss:
COUNTY OF HAMILTON)

BEFORE THE HAMILTON COUNTY
DRAINAGE BOARD
NOBLESVILLE, INDIANA

IN THE MATTER OF THE
RECONSTRUCTION OF THE
**W. R. Fertig Drain, Wood Park & Guilford Park Arms,
116th Street Reconstruction**

FINDINGS AND ORDER FOR RECONSTRUCTION

The matter of the proposed Reconstruction of the ^{W.R. Fertig *Ham*} ~~Sly Run Drain,~~ **Wood Park & Guilford Park Arms, 116th Street Reconstruction** came before the Hamilton County Drainage Board for hearing **on February 22, 2010**, on the Reconstruction Report consisting of the report and the Schedule of Damages and Assessments. The Board also received and considered the written objection of an owner of certain lands affected by the proposed Reconstruction, said owner being:

Evidence was heard on the Reconstruction Report and on the aforementioned objections.

The Board, having considered the evidence and objections, and, upon motion duly made, seconded and unanimously carried, did find and determine that the costs, damages and expenses of the proposed Reconstruction will be less than the benefits accruing to the owners of all land benefited by the Reconstruction.

The Board having considered the evidence and objections, upon motion duly made, seconded and unanimously carried, did adopt the Schedule of Assessments as proposed, subject to amendment after inspection of the subject drain as it relates to the lands of any owners which may have been erroneously included or omitted from the Schedule of Assessments.

The Board further finds that it has jurisdiction of these proceedings and that all required notices have been duly given or published as required by law.

^{W.R. Fertig *Ham*} Wherefore, it is ORDERED, that the proposed Reconstruction of the ~~Sly Run Drain, Wood Park & Guilford Park Arms, 116th Street~~ **Reconstruction** be and is hereby declared established.

Thereafter, the Board made inspection for the purpose of determining whether or not the lands of any owners had been erroneously included or excluded from the Schedule of Assessments. The Board finds on the basis of the reports and findings at this hearing as follows:


HAMILTON COUNTY DRAINAGE BOARD




PRESIDENT



Member



Alternate Member

ATTEST: 
Executive Secretary

BEFORE THE HAMILTON COUNTY DRAINAGE BOARD
IN THE MATTER OF

*W. R. Fertig Drain, Wood Park & Guilford Park Arms
116th Street Reconstruction*

NOTICE

To Whom It May Concern and: _____

Notice is hereby given of the hearing of the Hamilton County Drainage Board concerning the reconstruction of the **W. R. Fertig Drain, Wood Park & Guilford Park Arms, 116th Street Reconstruction** on **February 22, 2010, at 9:05 A.M.** in Commissioners Court, Hamilton County Judicial Center, One Hamilton County Square, Noblesville, Indiana. Construction and maintenance reports of the Surveyor and the Schedule of Assessments proposed by the Drainage Board have been filed and are available for public inspection in the office of the Hamilton County Surveyor.

Hamilton County Drainage Board

Attest: Lynette Mosbaugh

ONE TIME ONLY

STATE OF INDIANA)
) SS BEFORE THE HAMILTON
)
COUNTY OF HAMILTON) DRAINAGE BOARD

**IN THE MATTER OF W. R. Fertig Drain - Wood Park & Guilford
Park Arms, 116th Street Reconstruction**

NOTICE

Notice is hereby given that the Hamilton County Drainage Board at its regular meeting **February 22, 2010** adopted the reconstruction report of the Surveyor and the Amended Schedule of damages and assessments including annual assessment for periodic maintenance, finding that the costs, damages and expense of the proposed improvement would be less than the benefits which will result to the owner of lands benefited thereby.

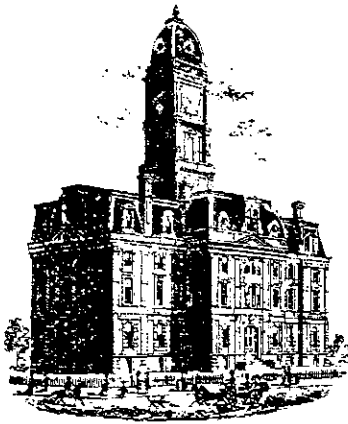
The Board issued an order declaring the proposed improvement established. Such findings and order were marked filed and are available for inspection in the Office of the Hamilton County Surveyor.

If judicial review of the findings and order of the Board is not requested pursuant to Article VIII of the 1965 Indiana Drainage Code as amended within twenty (20) days from the date of publication of this notice, the findings and order shall become conclusive.

HAMILTON COUNTY DRAINAGE BOARD

BY: Christine Altman
PRESIDENT

ATTEST: Lynette Mosbaugh
SECRETARY



SURVEYOR'S OFFICE
Hamilton County

Kenton C. Ward, CFM
Surveyor of Hamilton County
Phone (317) 776-8495
Fax (317) 776-9628

Suite 188
One Hamilton County Square
Noblesville, Indiana 46060-2230

To: Hamilton County Drainage Board

March 16, 2010

Re: WR Fertig: 116th St. Reconstruction of Guilford Park & Wood Park Arms

Attached are as-builts, certificate of completion & compliance, and other information for 116th Street Reconstruction of the Guilford Park & Wood Park Arms. An inspection of the drainage facilities for this section has been made and the facilities were found to be complete and acceptable.

During construction, changes were made to the drain, which will alter the plans submitted with my report for this drain-dated January 7, 2010. The report was approved by the Board at the hearing held February 22, 2010. (See Drainage Board Minutes Book 12, Pages 403-406)

The changes are as follows:

The 18" RCP total was incorrectly reported on the original report for the Wood Park Arm. It should have been reported at 488 feet of 18" RCP.

The length of the drain due to the changes described above is now **1912 feet**. It should be noted that the following drain was removed: Woodpark Sec. 1 Offsite – 1706 feet; Woodpark Sec. 1 – 366.1; Guilford Park Sec. 1 – 676 feet. Therefore, there was a loss of 836.1 feet in the overall watershed length.

A non-enforcement was not required for this particular project. Also, sureties were not obtained as the project was paid for by the City of Carmel.

I recommend the Board approve the drain's construction as complete and acceptable.

Sincerely,

Kenton C. Ward, CFM
Hamilton County Surveyor

KCW/slm

Donald M. & Waneta Dunkerly

For Improvements Along Guilford Rd. See Line "S-2-A", Plan & Profile

For Additional Information See Detention Pond Detail Sht. No. 60

SEC. 36, T18N, R3E CLAY TOWNSHIP HAMILTON COUNTY

P.S.I. Energy, Inc.

STR No. 43
C.B. C-15 & 2.3 m of 300 mm Pipe Req'd.

STR No. 42
MH C-4, 48.2 m of 450 mm Pipe, 1 Pipe End Sec. & 5.1 Mg. Revetment Riprap Req'd.

STR No. 46
Inlet B-15, 10.5 m of 300 mm Pipe, 1 Pipe End Sec. & 5.1 Mg. Revetment Riprap Req'd.

5.1 Mg. Revetment Riprap Req'd.

STR No. 209
Ad Just Casting to Grade

STR No. 44
Inlet B-15 & 20.4 m of 300 mm Pipe Req'd.

STR No. 45
MH C-4 & 39.1 m of 450 mm Pipe Req'd.

STR No. 48
MH C-4 & 70.4 m of 450 mm Pipe Req'd.

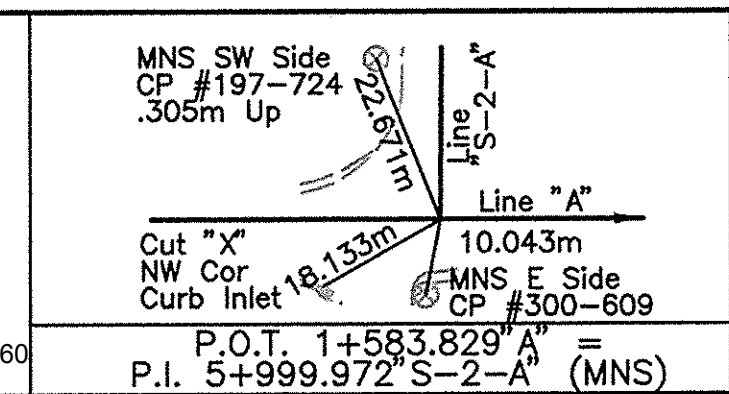
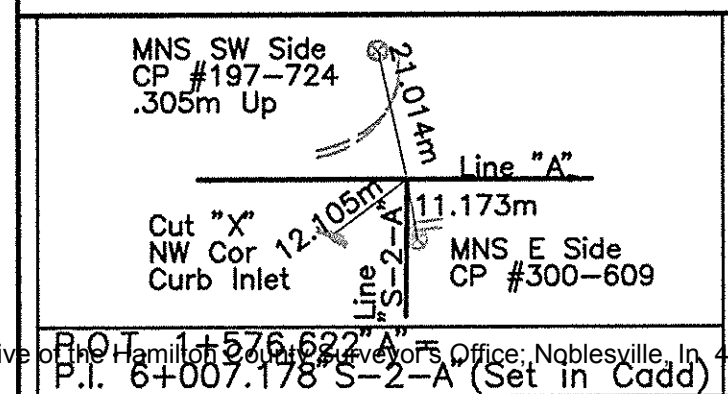
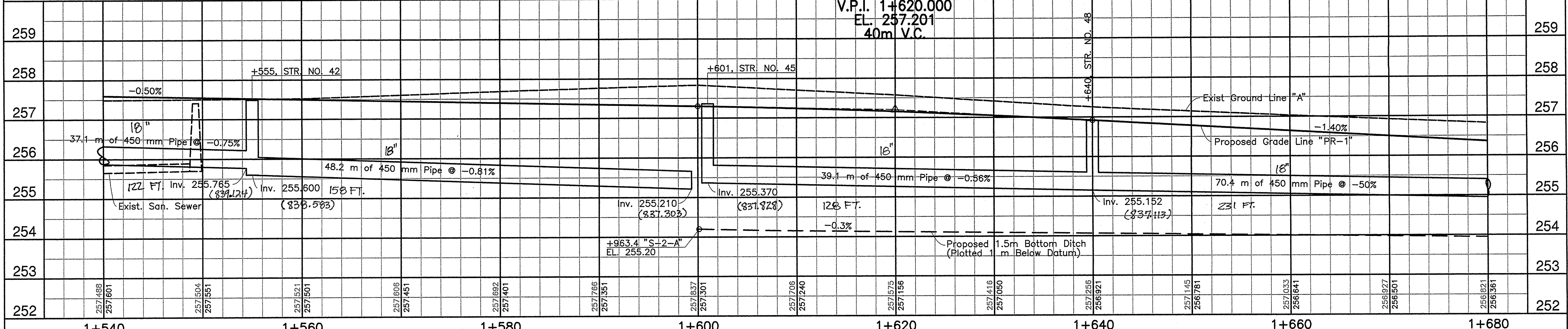
STR No. 47
C.B. B-15 & 4 m of 300 mm Pipe Req'd.

SEC. 1, T17N, R3E CLAY TOWNSHIP HAMILTON COUNTY

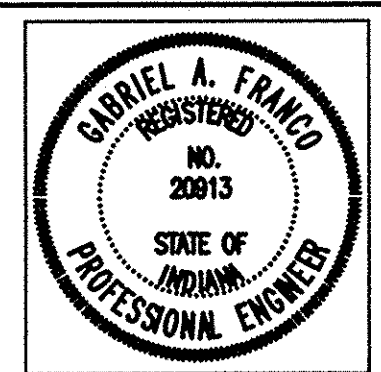
Dura Development Co., Inc. (GUILFORD PARK SUBDIVISION)

THE CONTRACTOR SHALL NOTIFY THE HAMILTON COUNTY SURVEYOR'S OFFICE PRIOR TO CONSTRUCTION OR DEMOLITION OF W.R. FERTIG REGULATED DRAIN @ 776-8495

LINE "PR-1" TO BE CONSTRUCTED ALL R/W ON THIS SHEET TO BE AS SHOWN, EXCEPT AS SHOWN.



TBM #7: Boat spike N side Comb. Pwp. #300-086 S side 116th St. & W side Guilford Rd. Sta. 1+548.315" A", 14.299 Rt., El. = 258.167



RECOMMENDED FOR APPROVAL: *Gabriello* 11-11-04
DESIGN ENGINEER DATE

DESIGNED: GF DRAWN: MP
CHECKED: MR CHECKED: MR

INDIANA DEPARTMENT OF TRANSPORTATION

116TH STREET LINE "PR-1"

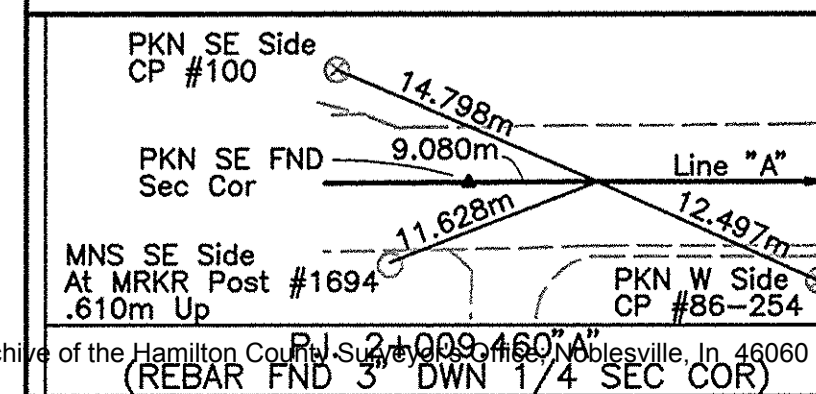
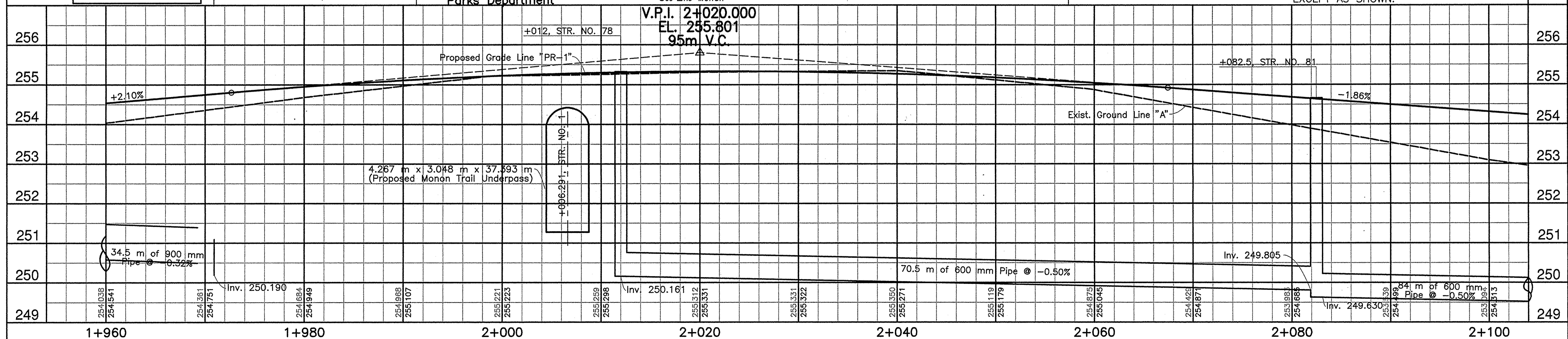
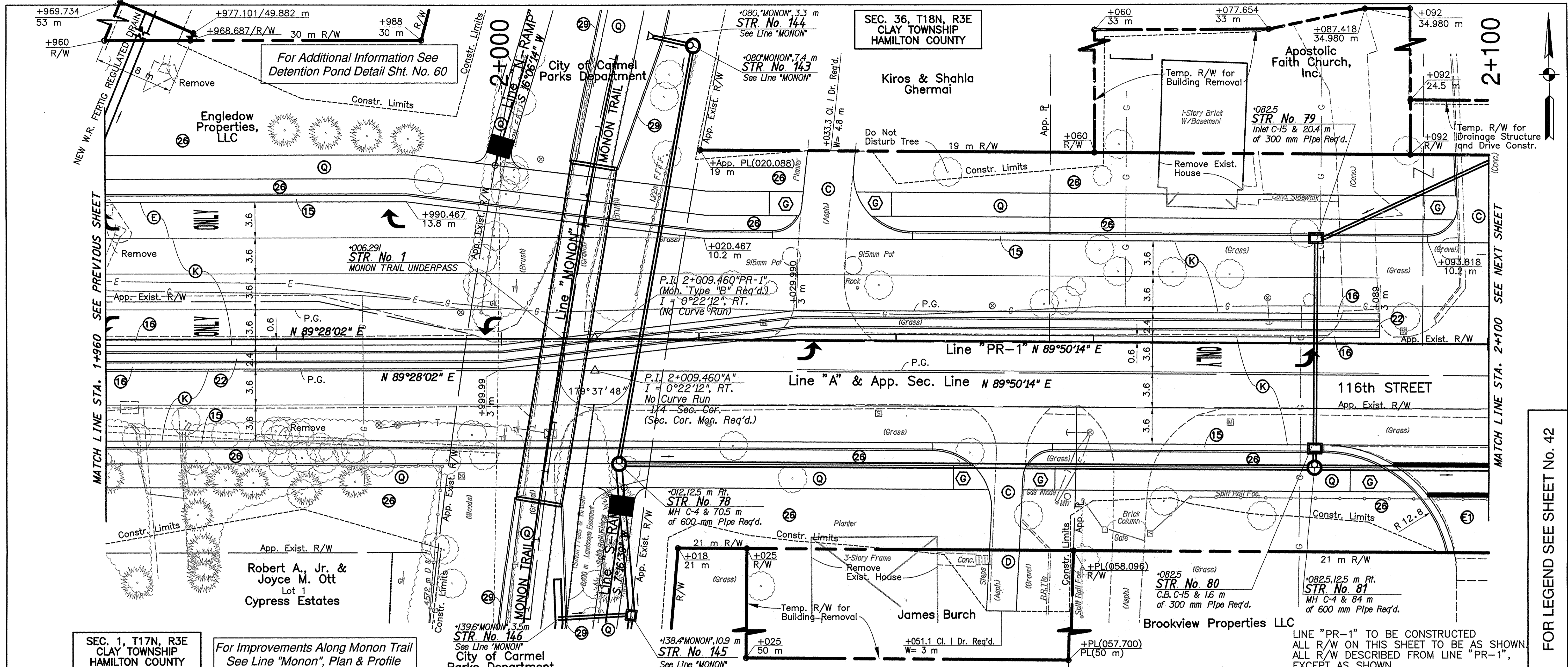
HORIZONTAL SCALE 1:200	BRIDGE FILE
VERTICAL SCALE 1:50	DESIGNATION 9785910
SURVEY BOOK LPA JOB CONTRACT R-27495	SHEETS 47 of 178 PROJECT STP-B886(007)

MATCH LINE STA. 1+540 SEE PREVIOUS SHEET

MATCH LINE STA. 1+680 SEE NEXT SHEET

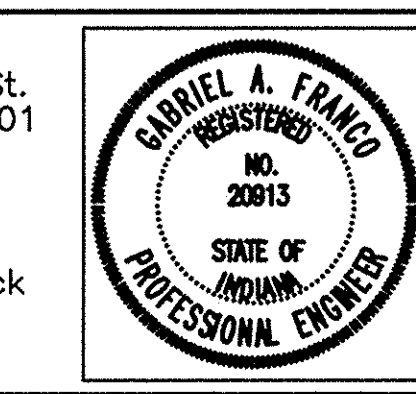
FOR LEGEND SEE SHEET No. 42

Farmer, Garvey & Associates, LLC
8923 N. Meridian • Indianapolis, IN 46260
(317) 844-8900 • FAX (317) 844-9158
Consulting Engineers



TBM #9: Railroad spike S side Comb. Pwp. #100 W side Old Monon R/R on N side 116th St. Sta. 1+995.909' A, 5.757' Lt., El. = 255.201

TBM #Y-42 1934: Standard USC&GS Tablet S1-T17N-R3E Hamilton Co. IN @ CL 111th St. & 15' +/- E of Old Track Elev. = 255.737



RECOMMENDED FOR APPROVAL: *Gabrielle Franco* 11-11-04
 DESIGN ENGINEER DATE

DESIGNED: GF DRAWN: MP
 CHECKED: MR CHECKED: MR

INDIANA DEPARTMENT OF TRANSPORTATION

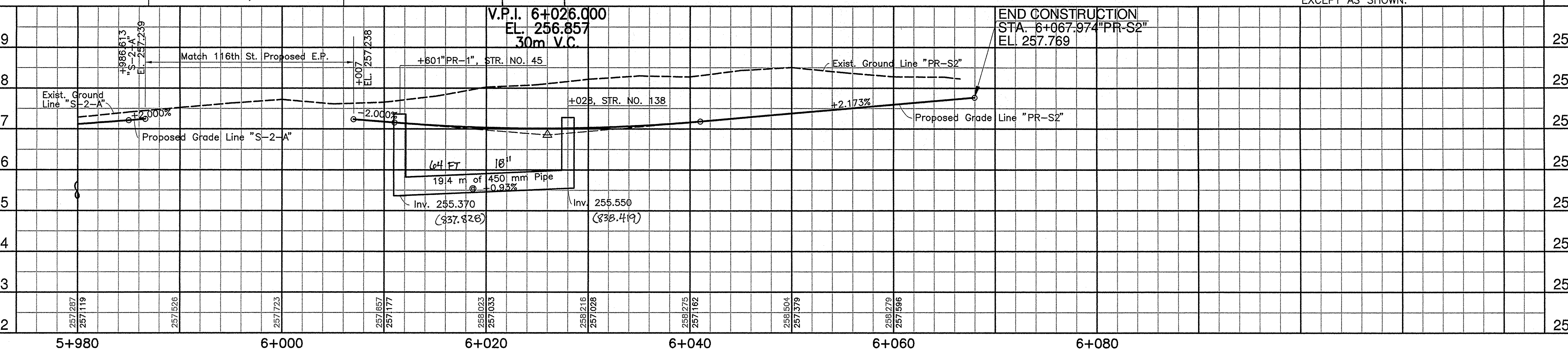
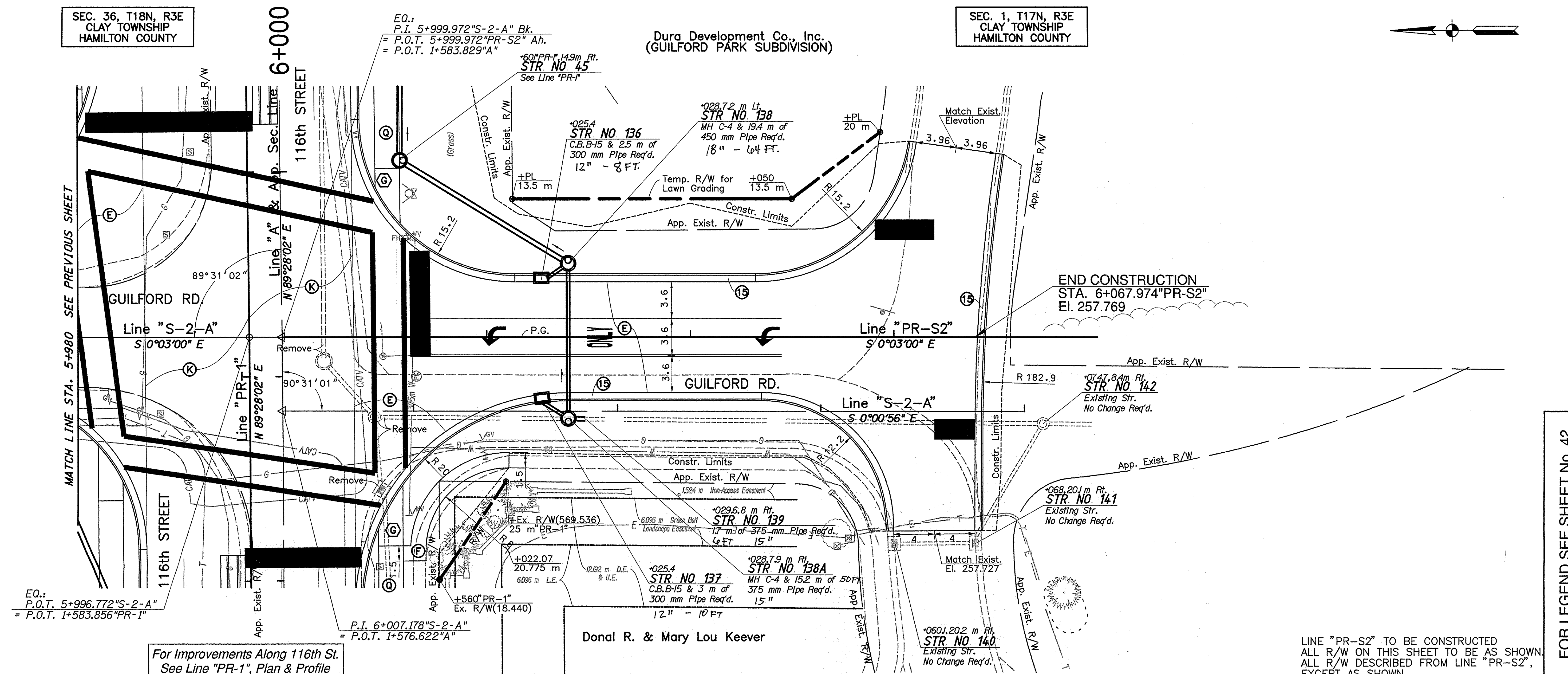
116TH STREET LINE "PR-1"

HORIZONTAL SCALE	BRIDGE FILE
1:200	
VERTICAL SCALE	DESIGNATION
1:50	9785910
SURVEY BOOK	SHEETS
LPA JOB	50 of 178
CONTRACT	PROJECT
R-27495	STP-BB86(007)

SEC. 36, T18N, R3E
CLAY TOWNSHIP
HAMILTON COUNTY

SEC. 1, T17N, R3E
CLAY TOWNSHIP
HAMILTON COUNTY

Dura Development Co., Inc.
(GUILFORD PARK SUBDIVISION)



For Improvements Along 116th St.
See Line "PR-1", Plan & Profile

Donal R. & Mary Lou Kever

END CONSTRUCTION
STA. 6+067.974"PR-S2"
EL. 257.769

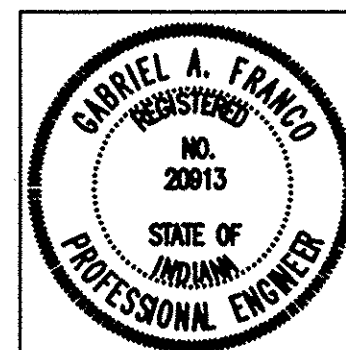
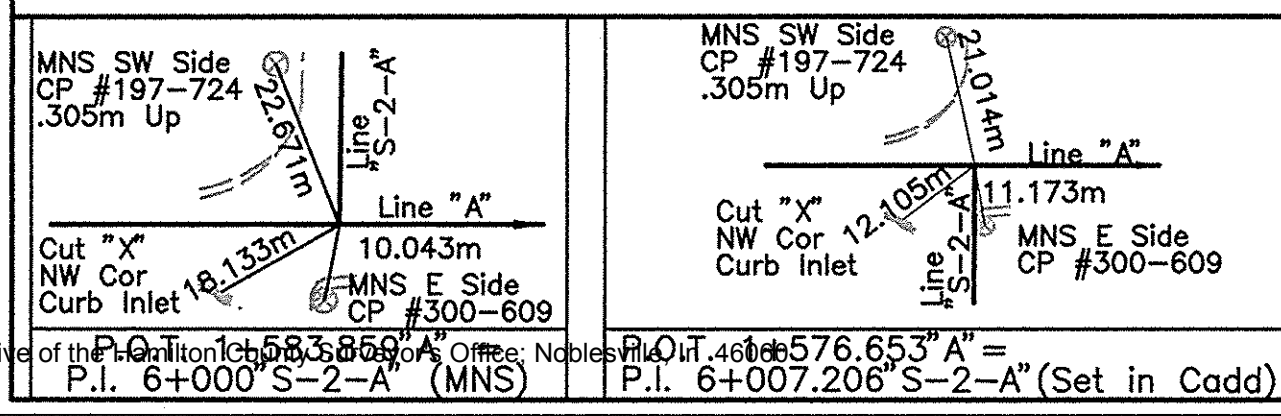
068.201 m Rt.
STR NO 141
Existing Str.
No Change Req'd.

0601.202 m Rt.
STR NO 140
Existing Str.
No Change Req'd.

LINE "PR-S2" TO BE CONSTRUCTED
ALL R/W ON THIS SHEET TO BE AS SHOWN.
ALL R/W DESCRIBED FROM LINE "PR-S2",
EXCEPT AS SHOWN.

FOR LEGEND SEE SHEET NO. 42

FG Farrah, Garvey & Associates, LLC
 8925 W. Madison Indianapolis, IN 46260
 (317) 844-8000 • FAX (317) 844-9128
 Consulting Engineers

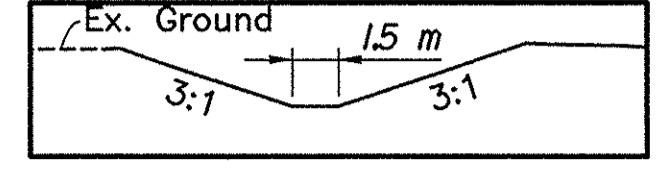
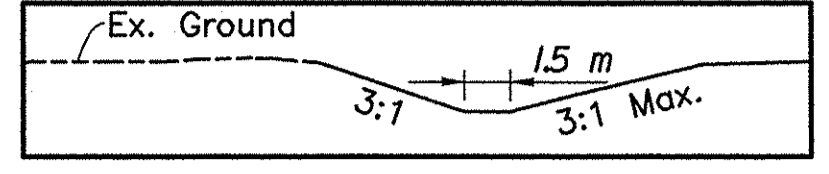
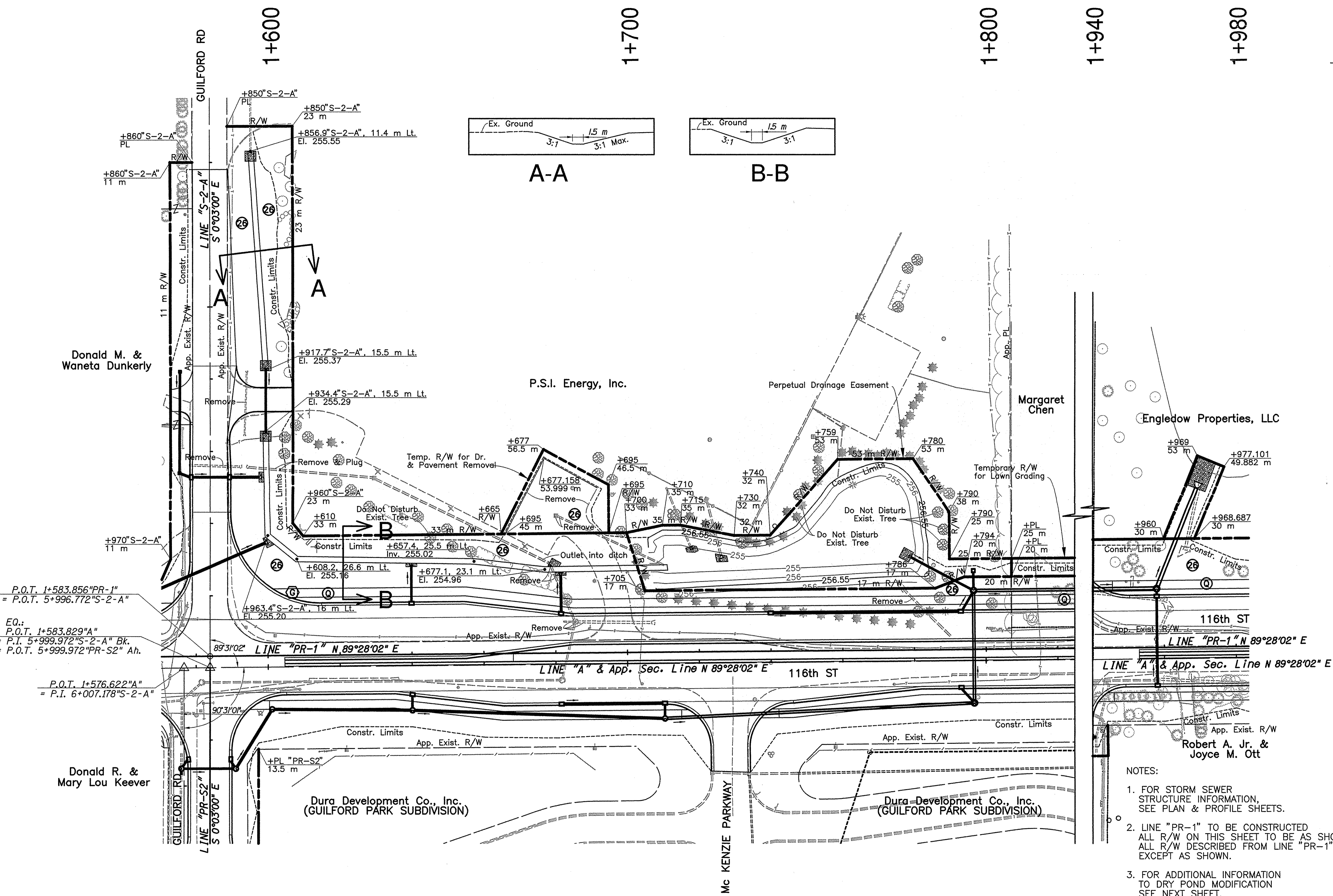
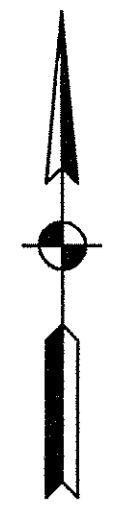


RECOMMENDED FOR APPROVAL
Gabriel A. Franco 11-11-04
 DESIGN ENGINEER DATE
 DESIGNED: GF DRAWN: MP
 CHECKED: MR CHECKED: MR

INDIANA
DEPARTMENT OF TRANSPORTATION
 GUILFORD RD.
LINE "S-2-A" & "PR-S2"

HORIZONTAL SCALE	BRIDGE FILE
1:200	
VERTICAL SCALE	DESIGNATION
1:50	9785910
SURVEY BOOK	SHEETS
LPA JOB	59 of 178
CONTRACT	PROJECT
R-27495	STP-B886(007)

This copy is from the Digital Archive of the Hamilton County Public Works Department. Office: Noblesville, IN 46060. P.I. 6+000 "S-2-A" (MNS) P.I. 6+007.206 "S-2-A" (Set in Cadd)



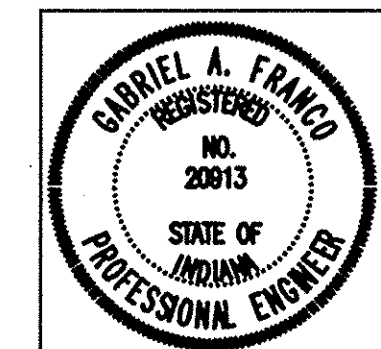
P.O.T. 1+583.856"PR-1"
 = P.O.T. 5+996.772"S-2-A"

EQ.:
 P.O.T. 1+583.829"A"
 = P.I. 5+999.972"S-2-A" Bk.
 = P.O.T. 5+999.972"PR-S2" Ah.

P.O.T. 1+576.622"A"
 = P.I. 6+007.178"S-2-A"

- NOTES:
1. FOR STORM SEWER STRUCTURE INFORMATION, SEE PLAN & PROFILE SHEETS.
 2. LINE "PR-1" TO BE CONSTRUCTED ALL R/W ON THIS SHEET TO BE AS SHOWN. ALL R/W DESCRIBED FROM LINE "PR-1", EXCEPT AS SHOWN.
 3. FOR ADDITIONAL INFORMATION TO DRY POND MODIFICATION SEE NEXT SHEET.

FOR LEGEND SEE SHEET No. 42



RECOMMENDED FOR APPROVAL *Gabriell Franco* 11-11-04
 DESIGN ENGINEER DATE

DESIGNED: MAB DRAWN: MP
 CHECKED: GAF CHECKED: MAB

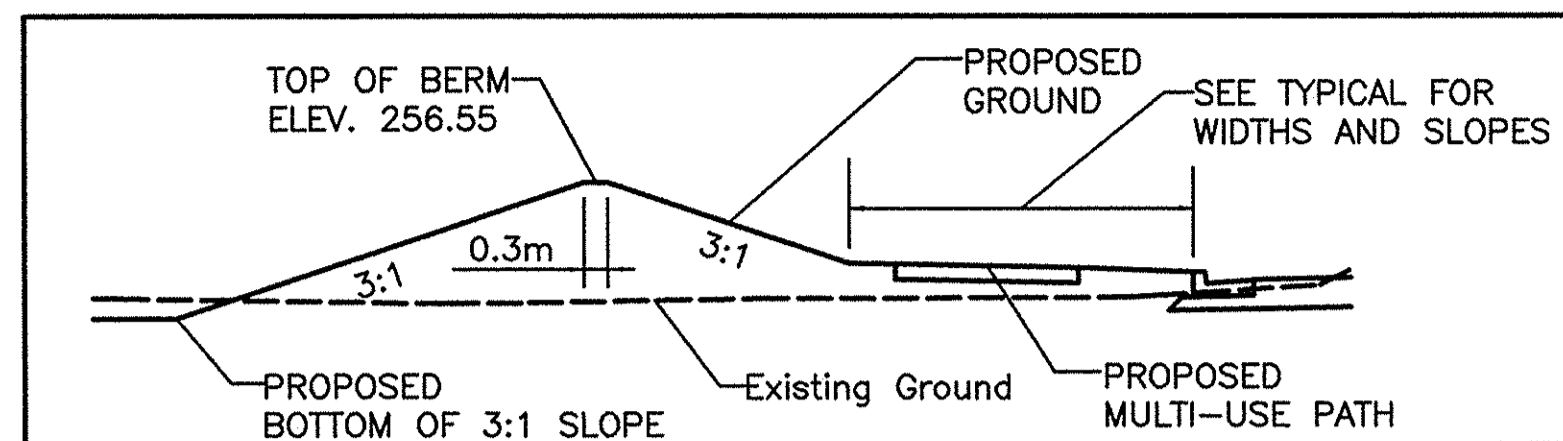
INDIANA
 DEPARTMENT OF TRANSPORTATION

MODIFICATION TO EXISTING
 DRY BOTTOM DETENTION POND

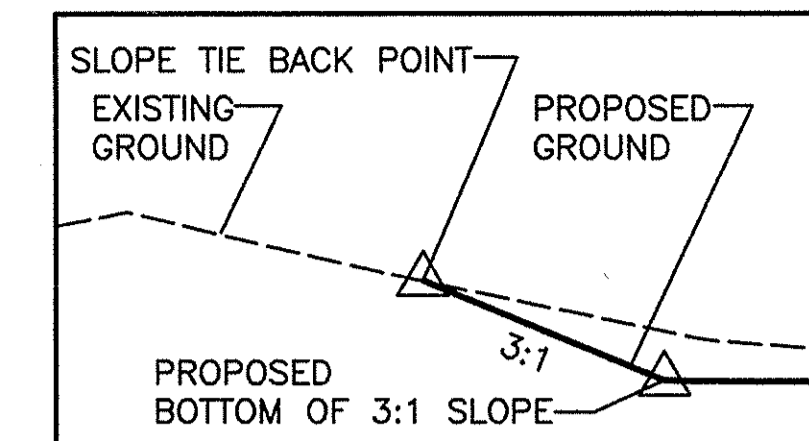
HORIZONTAL SCALE	BRIDGE FILE
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VERTICAL SCALE	DESIGNATION
NONE	9785910
SURVEY BOOK	SHEETS
LPA JOB	60 of 178
CONTRACT	PROJECT
R-27495	STP-B886(007)

1+700

1+800



SECTION A-A
 NOT TO SCALE



SLOPE TIE BACK DETAIL
 NOT TO SCALE

POINT #	STATION	OFFSET
1	1+710.11	33.66
2	1+715.34	33.59
3	1+719.29	32.66
4	1+732.02	30.24
5	1+736.43	30.23
6	1+740.74	31.27
7	1+746.74	34.15
8	1+752.23	40.39
9	1+756.28	45.72
10	1+763.27	49.90
11	1+768.57	51.72
12	1+774.95	51.22
13	1+779.84	47.06
14	1+782.12	41.97
15	1+783.03	35.82
16	1+783.45	32.29
17	1+783.98	29.29
18	1+783.91	25.60

SLOPE TIE BACK POINTS △

NOTE: ALL POINTS ON THE SLOPE TIE BACK LINE AT EL. 256.55

POINT #	STATION	OFFSET
1A	1+710.71	28.99
2A	1+715.07	28.95
3A	1+718.44	28.09
4A	1+731.42	25.63
5A	1+737.11	25.63
6A	1+742.46	26.95
7A	1+749.41	30.34
8A	1+755.93	37.56
9A	1+759.76	42.63
10A	1+765.01	45.59
11A	1+769.61	47.19
12A	1+773.18	46.95
13A	1+776.38	43.85
14A	1+777.61	40.83
15A	1+778.35	35.59
16A	1+778.78	32.27
17A	1+779.35	28.85
18A	1+779.26	25.54

BOTTOM OF 3:1 SLOPE POINTS △

NOTE: ELEVATIONS VARY FOR POINTS ON THE BOTTOM OF 3:1 SLOPE LINE

TOTAL CAPACITY 790 m³
 TOP OF BERM ELEV. 255.54

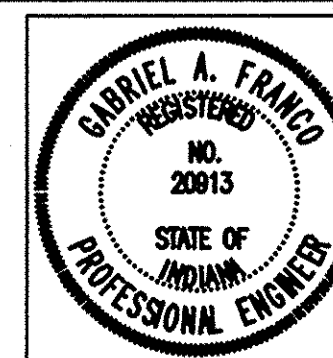
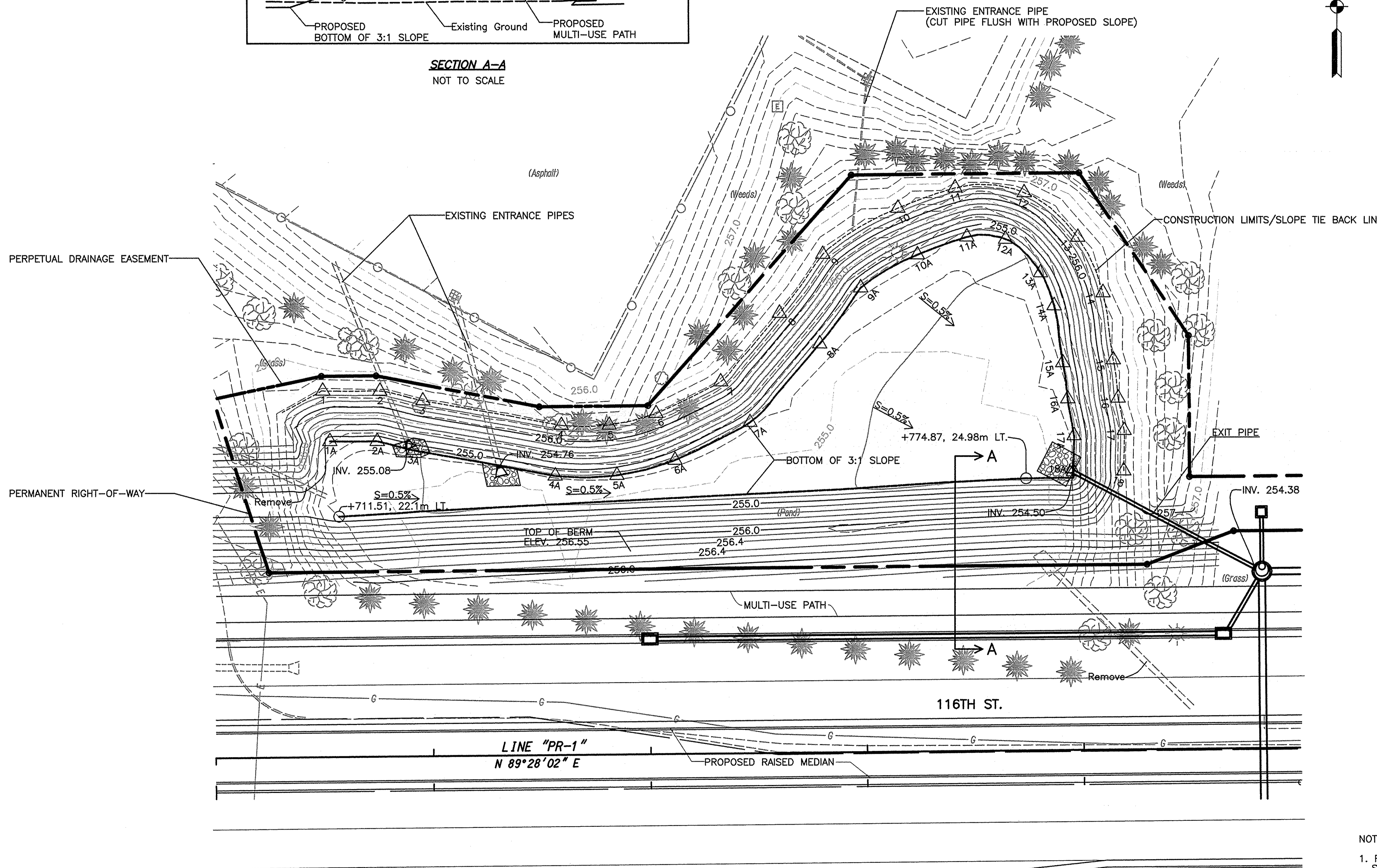
EXISTING POND DETAILS

TOTAL CAPACITY 3571 m³
 100 YEAR DESIGN CAPACITY 1408 m³
 100 YEAR ELEVATION 255.75
 MAX DESIGN FLOW IN 0.275 m³/s
 MAX DESIGN FLOW OUT 0.221 m³/s
 CONTRIBUTING DRAINAGE AREA 19.6 ACRES
 FREEBOARD FOR 100 YEAR STORM 0.8 m

PROPOSED POND DETAILS

NOTES:

- FOR STORM SEWER STRUCTURE INFORMATION, SEE PLAN & PROFILE SHEETS.
- FOR PERPETUAL DRAINAGE EASEMENT AND PERMANENT R/W DETAILS, SEE DETENTION POND DETAIL



RECOMMENDED FOR APPROVAL *Gabriello* 11-11-04
 DESIGN ENGINEER DATE
 DESIGNED: MAB DRAWN: MAB
 CHECKED: GAF CHECKED: GAF

INDIANA
 DEPARTMENT OF TRANSPORTATION

MODIFICATION TO EXISTING
 DRY BOTTOM DETENTION POND

HORIZONTAL SCALE	BRIDGE FILE
1:200	
VERTICAL SCALE	DESIGNATION
NONE	9785910
SURVEY BOOK	SHEETS
LPA JOB	61 of 178
CONTRACT	PROJECT
R-27495	STP-B886(007)

STRUCTURE DATA

NOTES:

1. CASTING ELEVATIONS FOR CURB CASTINGS ARE GIVEN AT THE EDGE OF PAVEMENT
2. OFFSETS FOR MANHOLES AND DITCH STRUCTURES ARE GIVEN TO THE CENTER OF THE STRUCTURE
3. FOR CATCH BASINS TYPE B & C, REFER TO INDOT STANDARD DRAWING FOR INLETS TYPE B & C AND LOWER BOTTOM OF STRUCTURE 750 mm.

STRUCTURE NUMBER	LOCATION				SIZE	PIPE TYPE	STRUCTURE DESCRIPTION	LENGTH	SKEW	COVER	FLOW LINE		CASTING ELEVATION	SERVICE LIFE	SITE DESIGNATION	pH	BACKFILL METHOD	GRATED BOX END SECTION				SAFETY METAL END SECTIONS		CONNECT TO STRUCTURE	REMARKS				
	STATION	ALIGNMENT	LEFT	RIGHT							CROSS	UP STREAM						DOWN STREAM	STRUCTURE BACKFILL	REVTMENT RIPRAP	CONCRETE CLASS A FOR STRUCTURES	PIPE END SECTION	TYPE			SLOPE	EA.	SLOPE	EA.
			m	m																									
78	2+012.0	PR_1		12.5	600	2	M.H. C-4	70.5		4.4	250.161	249.805	255.327	75	NA	7.0	1	586.3							81				
79	2+082.5	PR_1	X		300	2	INLET C15	20.4		1.8	252.500	252.292	254.494	75	NA	7.0	1	46.4								80			
80	2+082.5	PR_1			300	2	CB C15	1.6		2.0	252.292	252.271	254.494	75	NA	7.0	1	4.1								81			
81	2+082.5	PR_1		12.5	600	2	MH C4	84.0		3.9	249.630	249.210	254.664	75	NA	7.0	1	603.7								85			
82	2+107.5	PR_1	22.0		300	2	C.B. E-7	27.6		1.0	252.683	252.500	253.283	75	NA	7.0	1	36.2								79			
83	2+166.5	PR_1	X		300	2	INLET B15	20.4		1.1	251.560	251.458	252.948	75	NA	7.0	1	30.1								84			
84	2+166.5	PR_1		X	300	2	CB C15	1.6		1.3	251.458	251.443	252.948	75	NA	7.0	1	2.7								85			
85	2+166.5	PR_1		12.5	600	2	MH C4	28.5		3.2	249.210	249.066	253.115	75	NA	7.0	1	167.3								86			
86	2+195.0	PR_1		12.5	600	2	MH C4	10.8		3.1	249.066	249.013	252.767	75	NA	7.0	1	60.7									Outlet to Carmel Creek		
87	2+228.2	PR_1	X		375	2	INLET C15	20.5		1.3	250.650	250.550	252.312	75	NA	7.0	1	39.0								88			
88	2+229.7	PR_1		X	375	2	CB C15	1.7		1.5	250.550	250.530	252.299	75	NA	7.0	1	3.6								89			
89	2+229.7	PR_1		12.6	900	2	MH J4	13.0		1.4	248.886	248.860	252.466	75	NA	7.0	1	54.6									Outlet to Carmel Creek		
90	2+253.7	PR_1		12.6	750	2	MH J4	24.1		2.6	248.934	248.886	252.028	75	NA	7.0	1	139.5								89			
91	2+266.5	PR_1	X		300	2	INLET B15	37.2		1.1	250.841	250.655	252.049	75	NA	7.0	1	54.6								87			
92	2+275.0	PR_1		X	300	2	CB B15	1.7		1.2	250.677	250.654	252.066	75	NA	7.0	1	2.6								93			
93	2+275.0	PR_1		12.6	750	2	MH J4	21.3		2.4	249.000	248.934	252.233	75	NA	7.0	1	115.5								90			
94	2+325.2	PR_1	20.3		300	2	INLET B15	8.2		0.8	251.630	251.540	252.570	75	NA	7.0	1	9.3								95			
95	2+333.4	PR_1	20.3		300	2	INLET C15	14.8		1.3	251.540	251.390	252.880	75	NA	7.0	1	25.1								96A			
96A	2+345.5	PR_1	X		300	2	INLET C15	20.4		1.7	251.390	251.190	253.305	75	NA	7.0	1	44.3								96B			
96B	2+345.5	PR_1		X	300	2	CB C15	1.6		1.9	251.190	251.160	253.305	75	NA	7.0	1	3.9								96C			
96C	2+345.5	PR_1		12.5	750	2	MH J4	70.5		3.0	249.142	249.000	253.472	75	NA	7.0	1	475.9								93			
97	2+441.5	PR_1	X		300	2	INLET B15	24.1		1.2	251.541	251.333	252.932	75	NA	7.0	1	36.1								98			
98	2+441.5	PR_1		X	300	2	CB C15	1.6		1.3	251.333	251.312	252.860	75	NA	7.0	1	2.7								99			
99	2+441.5	PR_1		16.1	750	2	MH J4	95.9		3.3	249.334	249.142	253.027	75	NA	7.0	1	696.4								96C			
100	2+501.5	PR_1	X		300	2	INLET B15	25.5		1.2	251.013	250.769	252.402	75	NA	7.0	1	40.4								101			
101	2+496.8	PR_1		X	300	2	CB C15	1.6		1.5	250.769	250.748	252.445	75	NA	7.0	1	3.0								102			
102	2+496.8	PR_1		14.5	750	2	MH J4	60.1		2.6	249.479	249.334	252.581	75	NA	7.0	1	355.5								99			
103	2+548.0	PR_1	X		300	2	INLET B15	20.4		1.2	251.383	251.175	252.772	75	NA	7.0	1	31.4								104			
104	2+548.0	PR_1		X	300	2	CB C15	1.6		1.4	251.175	251.154	252.772	75	NA	7.0	1	2.9								105			
105	2+548.0	PR_1		12.5	600	2	MH C4	46.6		2.6	249.600	249.479	252.939	75	NA	7.0	1	222.6								102			
106	2+615.0	PR_1	X		375	2	INLET C15	20.4		2.2	249.893	249.791	252.454	75	NA	7.0	1	64.1								107			
107	2+615.0	PR_1		X	375	2	CB C15	1.6		2.4	249.780	249.770	252.454	75	NA	7.0	1	5.4								108			
108	2+615.0	PR_1		12.5	600	2	MH C4	67.0		2.5	249.763	249.600	252.621	75	NA	7.0	1	305.1								105			
109	2+638.2	PR_1	17.5		300	2	C.B. E-7	24.3		1.5	250.200	249.968	251.386	75	NA	7.0	1	47.4								106			
110	2+659.5	PR_1	16.5		300	2	C.B. E-7	8.8		1.2	250.220	250.133	251.740	75	NA	7.0	1	13.6								111			
111	2+666.5	PR_1	X		375	2	INLET C15	20.4		1.2	250.133	250.029	251.610	75	NA	7.0	1	34.1								112			
112	2+666.5	PR_1		X	375	2	CB C15	1.6		1.3	250.029	250.019	251.610	75	NA	7.0	1	3.0								113			
113	2+666.5	PR_1		12.5	450	2	MH C4	51.7		1.9	249.994	249.763	251.777	75	NA	7.0	1	148.9								108			
114	2+719.9	PR_1	X		300	2	CB C15	43.6		0.9	249.168	248.767	250.615	75	NA	7.0	1	53.0								117			
115	2+719.9	PR_1		X	300	2	INLET B15	18.8		1.1	249.262	249.168	250.667	75	NA	7.0	1	27.5								114			
116	2+740.4	PR_1	20.3				Existing Str.						250.376														No Change Req'd		
117	2+764.0	PR_1	7.8				Existing Str.						249.745														No Change Req'd		
118	2+764.2	PR_1	21.1				Existing Str.						249.730														No Change Req'd		
119	2+764.6	PR_1		X			Existing Str.						249.810														No Change Req'd		
120	2+764.6	PR_1	X				Existing Str.						249.758														No Change Req'd		
121	2+768.6	PR_1	19.8				Existing Str.						249.666														No Change Req'd		
122	4+952.2	S-1		18.9			Existing Str.						258.550														No Change Req'd		
123	4+961.0	S-1	3.3		300	2	INLET B15	1.5		1.1	257.430	257.420	258.890	75	NA	7.0	1	2.3								124			
124	4+961.0	S-1	0.3		300	2	CB C15	33.1		1.4	257.420	257.259	258.860	75	NA	7.0	1	60.2								22			
125	5+024.9	S-1	X		300	2	INLET B15	21.1		1.0	257.790	257.668	259.053	75	NA	7.0	1	28.1								126			
126	5+025.5	S-1		X	375	2	CB C15	43.8		1.3	257.593	257.371	259.037	75	NA	7.0	1	81.4								22			
127	5+132.7	S-1		14.2			Existing Str.						258.847														No Change Req'd		
128	5+132.9	S-1		21.3			Existing Str.						258.974														No Change Req'd		
129	5+174.0	S-1		19.9			Existing Str.						258.885														No Change Req'd		
130	5+174.1	S-1	X		375	2	INLET B15	25.8		0.7	258.050	257.920	259.131	75	NA	7.0	1	27.4								129	Connect to Existing Str.		
130A	5+182.4	S-1		19.5			Existing Str.						258.839														No Change Req'd		
131	5+926.1	S-2-A	15.5		300	3	300mm Pipe	16.8		1.0	255.370	255.290		75	NA	7.0	1	22.8	10.2		2					Outlet to Proposed Ditch			
132	5+918.0	S-2-A		8.4	300	2	450mm PCB	28.0		0.4	255.600	255.460	256.400	75	NA	7.0	1	19.3								133			
133	5+946.0	S-2-A		8.5	375	2	450mm PCB	3.9		0.6	255.430	255.410	256.109	75	NA	7.0	1	4.1								135			
134	5+947.1	S-2-A	X		450	2	INLET C15	8.6		0.5	255.280	255.254	256.731	75	NA	7.0	1	8.6	5.1		1					Outlet to Proposed Ditch			
135	5+947.1	S-2-A		X	375	2	INLET C15	9.9		1.0	255.380	255.280	256.734	75	NA	7.0	1	15.0								134			