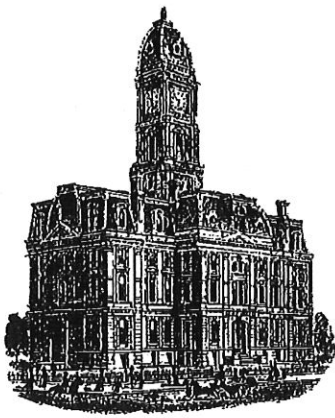


KCW



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

January 10, 2020

Re: Reserve at Springmill Drain (#315): Springmill Road Improvement Project-Mill Ridge Dr to 106TH St.

Attached are plans and other information for the Springmill Road Improvement project. An inspection of the drainage facilities for this project has been made and the facilities were found to be complete and acceptable.

This report will serve as an initial and final report for this construction. This road project began just south of 106th St and ended at Mill Ridge Dr. The work done is reflected on the final construction plans by the City of Carmel- Project Number 16-SW-07. During this construction regulated drain was affected. Those drains are as follows:

Plan Sheet 4A

Reserve at Springmill Drain- Section 2 Arm: the project removed 107 feet of 6" SSD. The project also installed 41 feet of 12" RCP and two new curb inlets (structures 14 & 15). Existing structure 112 was replaced with new structure 11. This occurred at the Mill Ridge Dr.

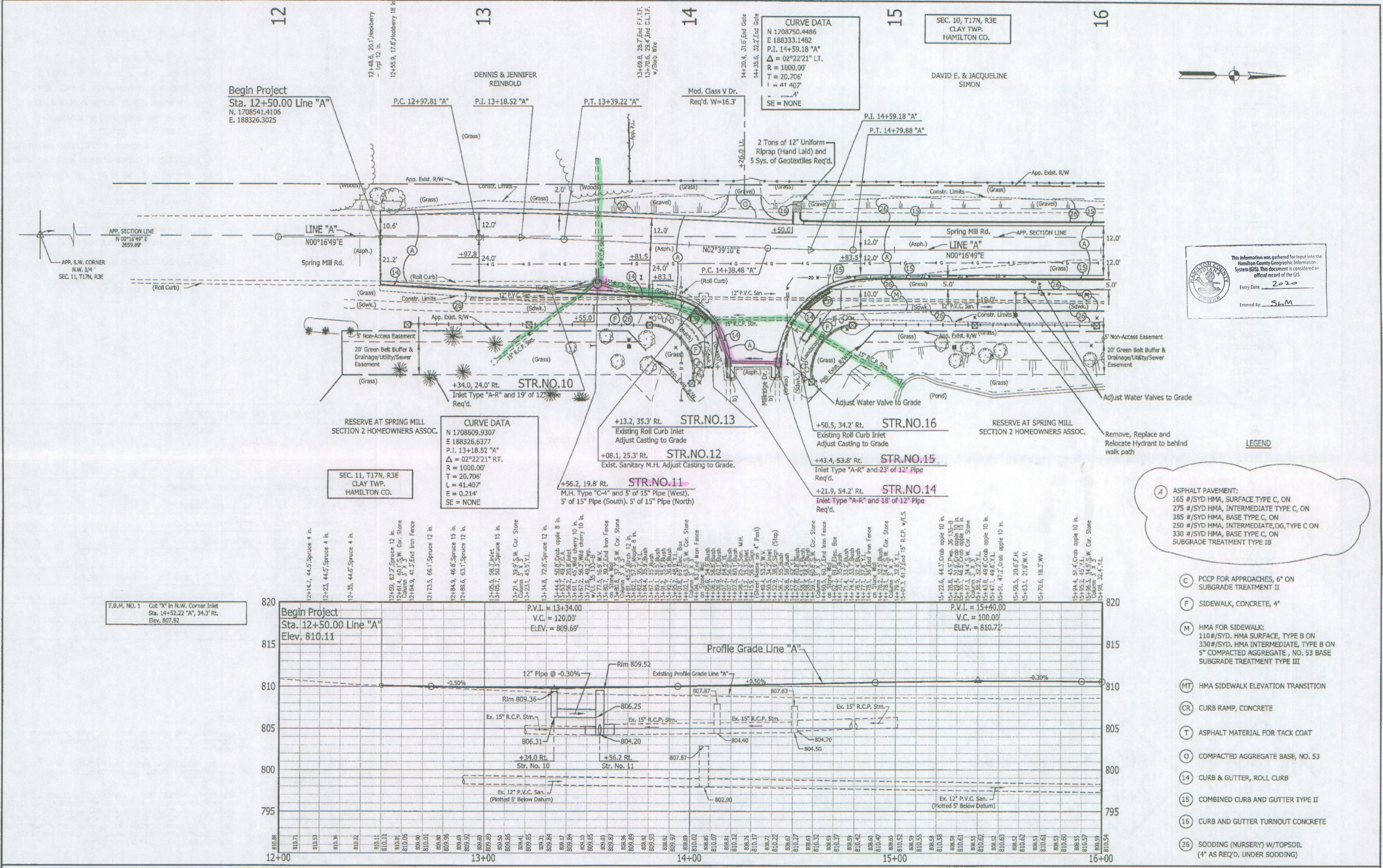
This project was paid for by the City of Carmel and work was conducted within existing drain easements and road right of way. I recommend the Board approve the drain's construction as complete and acceptable.

Sincerely,

Kenton C. Ward,
Hamilton County Surveyor

KCW/slm

Street Appr. Req'd. Rt.
Sta. 14+33.2, W = 22.1'

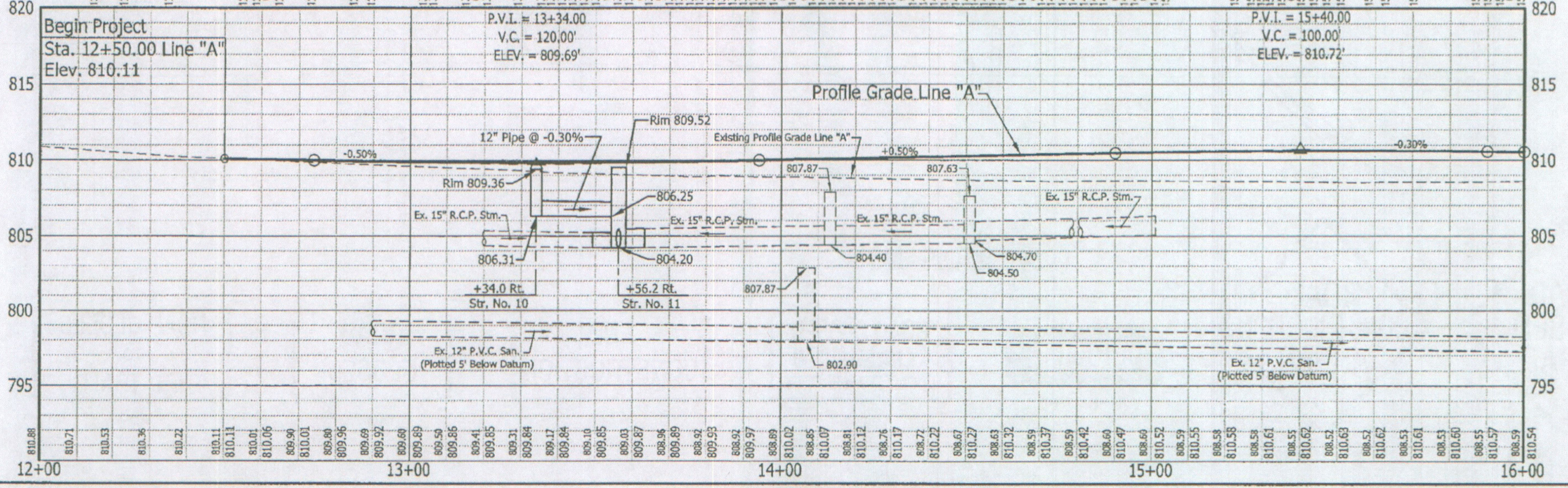


This information was gathered for input into the Hamilton County Geographic Information System (GIS). This document is considered an official record of the GIS.
Entry Date: 2020
Entered By: SLM

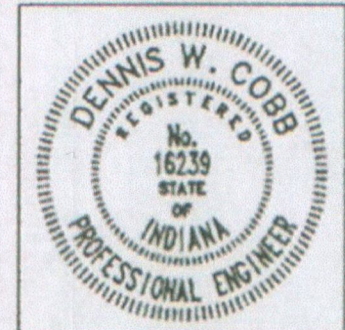
LEGEND

- (A) ASPHALT PAVEMENT:
165 #/SYD HMA, SURFACE TYPE C, ON
275 #/SYD HMA, INTERMEDIATE TYPE C, ON
385 #/SYD HMA, BASE TYPE C, ON
250 #/SYD HMA, INTERMEDIATE, OG, TYPE C ON
330 #/SYD HMA, BASE TYPE C, ON
SUBGRADE TREATMENT TYPE IB
- (C) PCCP FOR APPROACHES, 6" ON
SUBGRADE TREATMENT II
- (F) SIDEWALK, CONCRETE, 4"
- (M) HMA FOR SIDEWALK:
110#/SYD. HMA SURFACE, TYPE B ON
330#/SYD. HMA INTERMEDIATE, TYPE B ON
5" COMPACTED AGGREGATE, NO. 53 BASE
SUBGRADE TREATMENT TYPE III
- (MT) HMA SIDEWALK ELEVATION TRANSITION
- (CR) CURB RAMP, CONCRETE
- (T) ASPHALT MATERIAL FOR TACK COAT
- (O) COMPACTED AGGREGATE BASE, NO. 53
- (14) CURB & GUTTER, ROLL CURB
- (15) COMBINED CURB AND GUTTER TYPE II
- (16) CURB AND GUTTER TURNOUT CONCRETE
- (25) SODDING (NURSERY) W/TOPSOIL
(4" AS REQ'D. UNDER SODDING)

T.B.M. NO. 1 Out "K" in N.W. Corner Inlet
Sta. 14+52.22 "A", 34.3' Rt.
Elev. 807.92



NO.	DATE	REVISIONS	BY	APPR.
1	8/30/16	Revise mainline pavement section	ces	dwc



RECOMMENDED FOR APPROVAL
Dennis W. Cobb 8/2/16
DESIGN ENGINEER DATE

DESIGNED: B.M.S./C.E.S. DRAWN: B.M.S.
CHECKED: D.W.C. CHECKED: C.E.S./B.M.S.

CITY OF CARMEL
INDIANA

SPRING MILL ROAD
LINE "A"

HORIZONTAL SCALE	BRIDGE FILE
1" = 20'	N/A
VERTICAL SCALE	LOCATION
1" = 5'	CARMEL
SURVEY BOOK	SHEETS
	4A of 34
CONTRACT	PROJECT
16-SW-07	16-SW-07

Springmill Rd Improvements
Millridge Dr. to 106th St.

PIPE MATERIALS

STRUCTURE NUMBER	10	11(West)	11(South)	11(North)	14	15	17	18	19
PIPE TYPE/ SHAPE	2 / CIR	2 / CIR	2 / CIR	2 / CIR	2 / CIR	2 / CIR	2 / CIR	2 / CIR	2 / CIR
SMOOTH PIPE SIZE	12	15	15	15	12	12	12	12	12
DUCTILE IRON (DI) PIPE SIZE									
RCP/ RCHEP (S)	IV	II	II	II	II	II	IV	IV	II
CLASS	1500	1000	1000	1000	1000	1000	1500	1500	1000
DO.01 RATING									
NON-REINFORCED CONCRETE PIPE, CLASS 3 (S)					OK	OK			
CORRUGATED PE PIPE, TYPE S (S) *									
RIBBED PE PIPE (S) *									
SMOOTH WALL PE PIPE (S)*/ MAXIMUM DR 26.00									
PROFILE WALL PVC PIPE (S)									
SMOOTH WALL PVC PIPE (S) *									
VITRIFIED CLAY PIPE, EXTRA STRENGTH (S)									

STRUCTURE NUMBER	20	22	23	24	26	27	28	29	31	32
PIPE TYPE/ SHAPE	2 / CIR	2 / CIR	2 / CIR	2 / CIR	2 / CIR	2 / CIR	2 / CIR	2 / CIR	2 / CIR	2 / CIR
SMOOTH PIPE SIZE	12	12	12	12	12				12	12
DUCTILE IRON (DI) PIPE SIZE						12	12	12		
RCP/ RCHEP (S)	IV	II	II	II	IV				IV	II
CLASS	1500	1000	1000	1000	1500				1500	1000
DO.01 RATING										
NON-REINFORCED CONCRETE PIPE, CLASS 3 (S)		OK								OK
CORRUGATED PE PIPE, TYPE S (S) *										
RIBBED PE PIPE (S) *										
SMOOTH WALL PE PIPE (S)*/ MAXIMUM DR 26.00										
PROFILE WALL PVC PIPE (S)										
SMOOTH WALL PVC PIPE (S) *										
VITRIFIED CLAY PIPE, EXTRA STRENGTH (S)										

LEGEND

RCP- REINFORCED CONCRETE PIPE	CORR- CORRUGATION	(S)- SMOOTH PIPE MATERIAL	**- REFER TO STANDARD DRAWING 715-PHCL-18 OR 19 FOR NOMINAL DIAMETER APPROPRIATE FOR PAY ITEM DIAMETER
RCHEP- REINFORCED CONCRETE HORIZONTAL ELLIPTICAL PIPE	BPI- BITUMINOUS PAVED INVERT	(C)- CORRUGATED PIPE MATERIAL	***- TABULATED THICKNESS REFERS TO TOP & SIDE PLATES. BOTTOM PLATES SHALL BE OF NEXT GREATER AVAILABLE THICKNESS.
PE- POLYETHYLENE	ALUM- ALUMINUM	OK- ACCEPTABLE FOR USE	RCBC- REINFORCED CONCRETE BOX CULVERT
DR- DIMENSION RATIO	STR- STRUCTURAL	(LS)- LOCK SEAM PIPE REQUIRED	
PVC- POLYVINYL CHLORIDE	CFP- CONCRETE FIELD PAVING	(R)- RIVETED	
BIT- BITUMINOUS	CIR- CIRCULAR PIPE	DI - DUCTILE IRON	
	DEF- DEFORMED PIPE		

STRUCTURE DATA SUMMARY

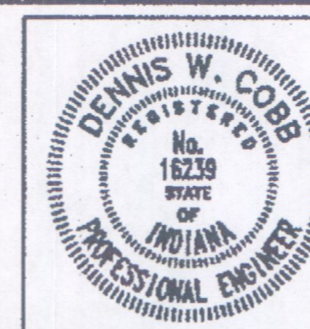
ITEM	QUANTITY (ROUNDED)
PIPE, TYPE 2, CIR. 12 IN.	642 LFT.
PIPE, TYPE 2, CIR. 15 IN.	15 LFT.
MANHOLE, C4	3 EA.
INLET, E7	1 EA.
INLET, M10	9 EA.
INLET, A-R	3 EA.
PIPE CATCH BASIN, 18 IN.	1 EA.
PIPE END SECTION, DIA. 12"	1 EA.
CASTING, ADJUST TO GRADE (SANITARY MANHOLES)	4 EA.
CASTING, ADJUST TO GRADE (STORM INLETS)	2 EA.
PRE-CAST CONCRETE ARCH (MIN. OPEN AREA ABOVE FLOWLINE = 105 SQ.FT.)	64 LFT.
CONCRETE CLASS A	17 CYS.
STRUCTURE BACKFILL, TYPE 1 (TO CULVERT DETAIL SHEET)	171 CYS.
VIDEO INSPECTION FOR PIPE	855 LFT.

LEGEND FOR ABBREVIATION

A.C.S.2 - ALUMINUM COATED STEEL TYPE 2	C.M.P. - CORRUGATED METAL PIPE
C.S. - CORRUGATED STEEL	D.I.F. - DETERMINE IN FIELD
C.A. - CORRUGATED ALUMINUM	C.P.P. - CORRUGATED PLASTIC PIPE
S.P.S. - STRUCTURAL PLATE STEEL	R.C.P. - REINFORCED CONCRETE PIPE
G.B.E.S. - GRATED BOX END SECTION	P.G.C.S. - PRECOATED GALVANIZED CORRUGATED STEEL
S.M.E.S. - SAFETY METAL CULVERT END SECTION	S.P.P.A. - STRUCTURAL PLATE PIPE ARCH
* - INDICATES RIM ELEVATION	M.T.F. - MINIMUM TREATMENT FLOW OF B.M.P.
A. - ABRASIVE	A-R - INLET TYPE A-R TO BE IN DOT TYPE A INLET WITH CASTING TO BE NEENAH TYPE R-3501-1R(RIGHT)OR(TL-LEFT) OR EQUAL.
N. - NON-ABRASIVE	
C.M.P.A. - CORRUGATED METAL PIPE ARCH	

STRUCTURE DATA

STRUCTURE NUMBER	LOCATION	LEFT	RIGHT	CROSS	SIZE	PIPE TYPE	MANHOLE INLET CATCH BASIN, OR SPECIALTY STRUCTURE	LENGTH	SKEW	CORNER	FLOW LINE		LIFE SERVICE YR.	SITE DESIGNATION	PH	STRUCTURE BACKFILL TYPE 1	STRUCTURE BACKFILL TYPE 2	REINFORCEMENT	RIPRAP	VIDEO INSPECTION FOR PIPE	CONCRETE ANCHOR PIPE END SECTION	CONCRETE CLASS A	REMARKS	
											UP STREAM ELEV.	DOWN STREAM ELEV.												
LINE "A"																								
10	13+34.0	X			12	2	INLET TYPE "A-R"	19	1.0		* 809.36	806.23	75	N.	6.5	4							TL (LEFT) CONNECT TO STR. NO. 11	
11	13+58.2	X			15	2	M.H. TYPE "C-4"	5	3.0	804.20	D.I.F.	804.20	75	N.	6.5	3							5	CONNECT TO EXIST. 15" R.C.P. (WEST)
					15	2	PIPE	5	3.0	D.I.F.	804.20	804.20	75	N.	6.5	3							5	CONNECT TO EXIST. 15" R.C.P. (SOUTH)
					15	2	PIPE	5	3.0	D.I.F.	804.20	804.20	75	N.	6.5	3							5	CONNECT TO EXIST. 15" R.C.P. (NORTH)
12	13+08.1	X					Exist. San. M.H.																	ADJUST CASTING TO GRADE
13	13+13.2	X					Exist. Str. Inlet																	ADJUST CASTING TO GRADE
14	14+21.9	X			12	2	INLET TYPE "A-R"	18	1.7	805.54	* 809.22	805.47	75	N.	6.5	7							18	TR (RIGHT) CONNECT TO STR. NO. 13
15	14+43.4	X			12	2	INLET TYPE "A-R"	23	2.0	804.57	* 809.22	804.51	75	N.	6.5	9							23	TL (LEFT) CONNECT TO STR. NO. 14
16	14+50.5	X					Exist. Str. Inlet																	ADJUST CASTING TO GRADE
17	16+40.0	X			12	2	INLET TYPE "M-10"	7	1.5	806.55	* 810.23	806.92	75	N.	6.5	2							7	CONNECT TO STR. NO. 19
18	16+40.0	X			12	2	INLET TYPE "M-10"	7	1.5	807.02	* 810.23	806.99	75	N.	6.5	2							7	CONNECT TO STR. NO. 20
19	16+50.0	X			12	2	INLET TYPE "M-10"	115	1.6	806.92	* 810.23	806.57	75	N.	6.5	34							115	CONNECT TO STR. NO. 24
20	16+50.0	X			12	2	INLET TYPE "M-10"	24	1.0	806.99	* 810.23	806.92	75	N.	6.5	5							24	CONNECT TO STR. NO. 19
21	17+05.3	X					Exist. San. M.H.																	ADJUST CASTING TO GRADE
22	17+41.0	X			12	2	18" PIPE CATCH BASIN	2	1.5	805.54	* 807.99	D.I.F.	75	N.	6.5	1								CONNECT TO EXIST. 12" R.C.P.
23	17+49.0	X			12	2	M.H. TYPE "C-4"	13	1.7	805.63	* 809.29	805.59	75	N.	6.5	5							13	CONNECT TO STR. NO. 22
24	17+67.8	X			12	2	M.H. TYPE "C-4"	15	1.0	807.32	* 810.58	806.51	75	N.	6.5	6							15	CONNECT TO STR. NO. 23
					12	2	PIPE	28	2.0	806.57	805.63	805.63	75	N.	6.5	9							28	CONNECT TO STR. NO. 23
25	18+03.2	X					Exist. San. M.H.																	ADJUST CASTING TO GRADE
26	20+97.5	X			12	2	INLET TYPE "M-10"	227	1.0	807.23	* 809.61	806.57	75	N.	6.5	46							227	CONNECT TO STR. NO. 24
27	20+97.5	X			12	2	INLET TYPE "M-10"	24	1.0	807.30	* 809.61	807.23	75	N.	6.5	5							24	CONNECT TO STR. NO. 26
28	20+04.5	X			12	2	INLET TYPE "M-10"	4	1.0	807.25	* 809.61	807.23	75	N.	6.5	1							4	CONNECT TO STR. NO. 26
29	20+04.5	X			12	2	INLET TYPE "M-10"	4	1.0	807.32	* 809.61	807.30	75	N.	6.5	1							4	CONNECT TO STR. NO. 27
30	20+44.6	X					Exist. San. M.H.																	ADJUST CASTING TO GRADE 17 ENCASEMENT OF SANITARY REQ'D. ROTATE CONE OUT OF CURB & GUTTER
31	20+93.0	X			12	2	INLET TYPE "M-10"	86	1.0	807.60	* 811.71	807.32	75	N.	6.5	18							86	CONNECT TO STR. NO. 29
32	21+02.0	X			12	2	INLET TYPE "E-7"	26	1.5	807.67	* 809.30	807.60	75	N.	6.5	7							26	CONNECT TO STR. NO. 31
33	21+80.0	X					20' X 8' PRE-CAST CONC. ARCH	64		806.20	806.20													SEE CULVERT DETAIL SHEET



RECOMMENDED FOR APPROVAL	<i>Dennis W. Cobb</i>	DATE
DESIGNED:	C.E.S.	DRAWN:
CHECKED:	D.W.C.	CHECKED:
	B.M.S.	C.E.S.

CITY OF CARMEL INDIANA
STRUCTURE DATA & PIPE MATERIAL SHEET

HORIZONTAL SCALE	N/A	BRIDGE FILE	N/A
VERTICAL SCALE	N/A	DESIGNATION	CARMEL
SURVEY BOOK	15	SHEETS	34
JOB NO.	16-SW-07	PROJECT	16-SW-07