



SURVEYOR'S OFFICE

# Hamilton County

August 1, 2008

*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

RE: Stultz & Almond Drain, Westmont Section 1

Attached is a petition filed by Platinum Properties, LLC along with a non-enforcement request, plans, calculations, quantity summary and assessment roll for the Westmont Section 1 Arm, Stultz and Almond Drain to be located in Clay Township. I have reviewed the submittals and petition and have found each to be in proper form.

I have made a personal inspection of the land described in the petition. Upon doing so, I believe that the drain is practicable, will improve the public health, benefit a public highway, and be of public utility and that the costs, damages and expenses of the proposed drain will probably be less than the benefits accruing to the owners of land likely to be benefited. The drain will consist of the following:

6" SSD	10,523 ft.	21" RCP	290 ft.
12" CMP	65 ft.	24" RCP	678 ft.
12" RCP	912 ft.	30" RCP	107 ft.
15" RCP	654 ft.	36" RCP	446 ft.
18" RCP	1,253 ft.	Open Ditch	180 ft.

The total length of the drain will be 15,108 feet.

The open ditch listed above is the channel between Str. 108 and Str. 108A. The CMP listed above is the existing CMP that runs across 136<sup>th</sup> Street and is being connected to Str. 101.

The retention ponds (Pond #1, existing pond and Pond #2)) located in Common Area #2 and #4 are to be considered part of the regulated drain. Pond maintenance shall include inlet, outlet, sediment removal and erosion control along the banks as part of the regulated drain. The maintenance of the pond (Pond #1, existing Pond and Pond #2) such as mowing and aquatic vegetation control will be the responsibility of the Homeowners Association. The Board will also retain jurisdiction for ensuring the storage volume for which the pond was designed will be retained, thereby, allowing no fill or easement encroachments.

The subsurface drains (SSD) to be part of the regulated drain are those located under the curbs and those main lines between lots or in rear yards. Only the main SSD lines, which are located within the easement and right of way, are to be maintained as regulated drain. Laterals for individual lots will not be considered part of the regulated drain. The portion of the SSD which will be regulated other than those under curbs are as follows:

Rear yard lots 6-7 from Str. 118  
Rear yard lots 8-9 from Str. 118  
Rear yard lot 5 from Str. 114  
Rear yard lot 4 from Str. 114  
Rear yard lot 4 from Str. 113  
Rear yard lot 3 from Str. 113  
Rear yard lots 1-2 from Str. 112  
Rear yard lot 39 from Str. 140  
Rear yard lot 40-41 from Str. 140  
Rear yard lot 28 from Str. 151A  
Rear yard lots 26-27 from Str. 146A  
Rear yard lots 25-26 from Str. 146  
Rear yard lot 25 from Str. 146  
Rear yard lot 24 from Str. 145  
Rear yard lot 23 from Str. 145  
Rear yard lot 23 from Str. 144

I have reviewed the plans and believe the drain will benefit each lot equally. Therefore, I recommend each lot be assessed equally. I also believe that no damages will result to landowners by the construction of this drain. I recommend a maintenance assessment of \$ 30.00 per platted lots, \$10.00 per acre for common areas and roadways, with a \$30.00 minimum. With this assessment the total annual assessment for this drain/this section will be \$1,584.60.

The petitioner has submitted surety for the proposed drain at this time. The sureties which are in the form of a Performance Bond are as follows:

Agent: Bond Safeguard Insurance Company  
Date: April 8, 2008  
Number: 5033225  
For: Storm Sewers and Sub-surface drains  
Amount: \$348,194.00

Parcels assessed for this drain may be assessed for the Osborn & Collins or Williams Creek Drain at sometime in the future.

I believe this proposed drain meets the requirements for Urban Drain Classification as set out in IC 36-9-27-67 to 69. Therefore, this drain shall be designated as an Urban Drain.

I recommend that upon approval of the above proposed drain that the Board also approve the attached non-enforcement requests. The request are for the reduction of the regulated drain easement to those easement widths as shown on the secondary plats for Westmont Section 1 as recorded in the office of the Hamilton County Recorder.

I recommend the Board set a hearing for this proposed drain for September 22, 2008.



Kenton C. Ward, CFM  
Hamilton County Surveyor

KCW/pll

STATE OF INDIANA     )  
                                  )  
COUNTY OF HAMILTON )

TO: HAMILTON COUNTY DRAINAGE BOARD  
% Hamilton County Surveyor  
One Hamilton County Square, Suite 188  
Noblesville, IN. 46060-2230

In the matter of Westmont Subdivision, Section  
One Drain Petition.

Petitioner is the owner of all lots in the land affected by the proposed new regulated drain. The drainage will affect various lots in Westmont, Section One, a subdivision in Hamilton County, Indiana. The general route of such drainage shall be in existing easements and along public roads as shown in the plans on file in the Surveyor's Office.

Petitioner believes that the cost, damages and expenses of the proposed improvement will be less than the benefits which will result to the owners of the land likely to be benefited thereby. Petitioner believes the proposed improvements will:

- (a) improve public health
- (b) benefit a public street
- (c) be of public utility


Petitioner agrees to pay the cost of construction of the drainage system and requests periodic maintenance assessments by the Board thereafter.

The Petitioner also agrees to the following:

1. To provide the Drainage Board a Performance Bond or Non-Revocable Letter of Credit for the portion of the drainage system which will be made a regulated drain. The bond will be in the amount of 120% of the Engineer's estimate. The bond will be in effect until construction of 100% of the system is completed and so certified by the Engineer.
2. The Petitioner shall retain an Engineer throughout the construction phase. At completion of the project the Petitioner's Engineer shall certify that the drainage system which is to be maintained as a regulated drain has been constructed as per construction plans.
3. The Petitioner agrees to request in writing to the County Surveyor any changes from the approved plan and must receive written authorization from the County Surveyor prior to implementation of the change. All changes shall be documented and given to the Surveyor to be placed in the Drain file.
4. The Petitioner shall instruct his Engineer to provide a reproducible print on a 24" x 36" Mylar of the final design of the Drainage System. This shall be submitted to the County Surveyor prior to the release of the Performance Bond.
5. The Petitioner shall comply with the Erosion Control Plan as specified on the construction plans. Failure to comply with the Erosion Control Plan shall be determined by the Board as being an obstruction to the drainage system. The County Surveyor shall immediately install or repair the needed measures at Petitioners cost as per IC 36-9-27-46.

The Petitioner further requests that the Drain be classified as an Urban Drain as per IC 36-9-27-69(d).

**RECORDED OWNER(S) OF LAND INVOLVED**

  
Signed \_\_\_\_\_

**Steve Broermann**  
Printed Name \_\_\_\_\_

**May 1, 2007**  
Date \_\_\_\_\_

\_\_\_\_\_  
Signed

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signed

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signed

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Date

BEFORE THE HAMILTON COUNTY DRAINAGE BOARD  
IN THE MATTER OF

***Stultz & Almond Drain, Westmont Section 1 Arm***

NOTICE

To Whom It May Concern and: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Notice is hereby given of the hearing of the Hamilton County Drainage Board on the **Stultz & Almond Drain, Westmont Section 1 Arm** on **September 22, 2008** at **9:05 A.M.** in Commissioners Court, Hamilton County Judicial Center, One Hamilton County Square, Noblesville, Indiana, and which construction and maintenance reports of the Surveyor and the Schedule of Assessments made 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

BEFORE THE HAMILTON COUNTY DRAINAGE BOARD  
IN THE MATTER OF THE

***Stultz & Almond Drain, Westmont Section 1***

NOTICE

Notice is hereby given pursuant to Section 405 of the 1965 Indiana Drainage Code that this Board, prior to final adjournment on **September 22, 2008** has issued an order adopting the Schedule of Assessments, filed the same and made public announcement thereof at the hearing and ordered publication. If judicial review of the findings and order of the Board is not requested pursuant to Article Eight of this code within twenty (20) days from the date of this publication, the order shall be conclusive.

Hamilton County Drainage Board

Attest: Lynette Mosbaugh

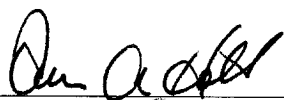
ONE TIME ONLY


**FINDINGS AND ORDER**  
**CONCERNING THE MAINTENANCE OF THE**  
**Stultz & Almond Drain, Westmont Section 1**

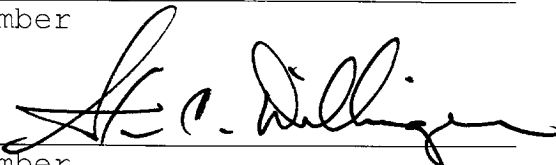
On this **22nd day of September 2008**, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the **Stultz & Almond Drain, Westmont Section 1**.

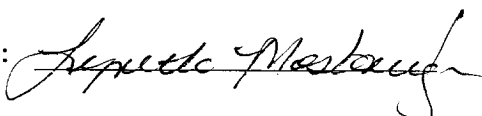
Evidence has been heard. Objections were presented and considered. The Board then adopted the original/amended Schedule of Assessments. The Board now finds that the annual maintenance assessment will be less than the benefits to the landowners and issues this order declaring that this Maintenance Fund be established.

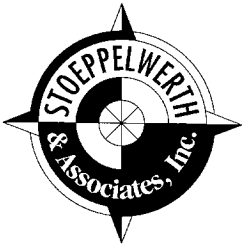
HAMILTON COUNTY DRAINAGE BOARD

  
\_\_\_\_\_  
President

  
\_\_\_\_\_  
Member

  
\_\_\_\_\_  
Member

Attest: 



# STOEPPELWERTH & ASSOCIATES, INC.

CONSULTING ENGINEERS • LAND SURVEYORS

David J. Stoepfelwerth  
President, CEO  
Professional Engineer  
Professional Land Surveyor

Curtis C. Huff  
Vice President, COO  
Professional Land Surveyor

R.M. Stoepfelwerth  
Founder  
Professional Engineer  
Professional Land Surveyor

March 28, 2008

Hamilton County Surveyor's Office  
One Hamilton County Square  
Suite 188  
Noblesville, Indiana 46060

Attention: Kent Ward

Re: Westmont, Section 1

Dear Mr. Ward:

On behalf of the developer Platinum Properties, L.L.C., I wish to submit the following Engineer's Estimate for Westmont, Section 1. The estimate is as follows:

Storm Sewer	\$215,945.00
Sub Surface Drains	\$74,216.00
Monumentation	\$8,980.00

If you have any questions regarding these estimates, please contact Brian Robinson at (317) 849-5935.

Respectively submitted,

STOEPPELWERTH & ASSOCIATES, INC.

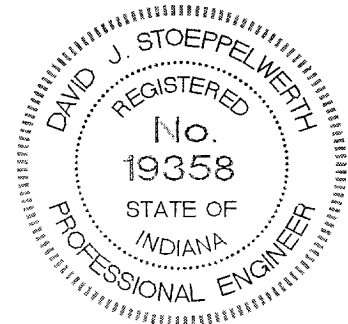
David J. Stoepfelwerth, P.E.  
No. 19385

Cc: Steve Broermann

7965 East 106th Street  
Fishers, Indiana  
46038-2505

317.849.5935  
Fax: 317.849.5942  
www.Stoepfelwerth.com

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**CERTIFICATE OF COMPLETION AND COMPLIANCE**

To: Hamilton County Surveyor

Re: Westmont, Section 1

I hereby certify that:

1. I am a Registered Land Surveyor or Engineer in the State of Indiana.
2. I am familiar with the plans and specifications for the above referenced subdivision.
3. I have personally observed and supervised the completion of the drainage facilities for the above referenced subdivision.
4. The drainage facilities within the above referenced subdivision to the best of my knowledge, information and belief have been installed and completed in conformity with all plans and specifications.

Signature:  \_\_\_\_\_ Date: January 29, 2009

Type or Print Name: Dennis D. Olmstead

Business Address: Stoeppelwerth & Associates, Inc.

7965 East 106<sup>th</sup> Street, Fishers, Indiana 46038

Telephone Number: (317) 849-5935

SEAL

INDIANA REGISTRATION NUMBER

900012



Kow



# 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 7, 2010

Re: Stultz & Almond: Westmont Section 1

Attached are as-builts, certificate of completion & compliance, and other information for Westmont Section 1. 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 August 1, 2008. The report was approved by the Board at the hearing held September 22, 2008. (See Drainage Board Minutes Book 11, Pages 324-325) The changes are as follows:

Structure:	Length:	Size	Material:	Up Invert:	Dn_Invert	Grade:	Changes:
118-117	153	24	RCP	896.19	895.63	0.37	3
117-116	32	24	RCP	895.63	895.42	0.66	
116-115	36	24	RCP	895.42	895.34	0.22	
115-114	112	24	RCP	895.34	894.76	0.52	1
114-113	107	30	RCP	894.76	894.55	0.2	
113-112	327	36	RCP	894.55	892.78	0.54	-2
112-111	129	36	RCP	892.79	892.51	0.21	12
122-121	154	18	RCP	897.58	896.82	0.49	1
121-120	78	21	RCP	896.82	896.46	0.46	-2
120-119	30	21	RCP	895.68	895.54	0.47	
119-114	173	24	RCP	895.54	895.07	0.27	3
105-104	30	12	RCP	894.93	894.36	1.9	
104-103	41	12	RCP	894.26	893.88	0.93	
103-102	40	15	RCP	893.76	893.25	1.28	
102-101	71	18	RCP	893.15	892.95	0.28	
101-100	62	18	RCP	892.85	892.5	0.56	1
106-103	74	12	RCP	894.52	893.88	0.86	-11
107-108	94	24	RCP	892.55	892.1	0.48	
128-127	30	15	RCP	895.41	895.31	0.33	
127-126	75	15	RCP	895.16	894.75	0.55	
126-125A	41	15	RCP	894.62	893.69	2.27	-1
125A-125	105	15	RCP	893.59	892.53	1.01	24

108A-108B	85	24	RCP	892.01	891.72	0.34	
110-109	94	18	RCP	893.12	892.36	0.81	
124-123	30	12	RCP	897.41	896.98	1.43	
123-113	168	12	RCP	896.89	894.65	1.33	-2
134-133A	193	18	RCP	894.1	893.79	0.16	-1
133A-133	32	18	RCP	893.69	893.56	0.41	-1
133-132	30	18	RCP	893.34	892.98	0.2	
132-131	180	21	RCP	893.34	892.98	0.2	
146A-146	192	12	RCP	895.59	894.81	0.41	2
146-145	179	12	RCP	894.81	894.13	0.38	-1
145-144	110	18	RCP	894.13	893.76	0.34	-1
144-143	81	18	RCP	893.76	893.03	0.9	1
148-147	30	12	RCP	897.87	897.66	0.7	
147-145	138	12	RCP	895.66	894.28	1	-2
142-141	40	15	RCP	894.6	894.03	1.43	
140-139	170	15	RCP	895.77	895.33	0.26	
139-138	31	18	RCP	895.23	894.97	0.84	-1
138-137	33	18	RCP	894.9	894.71	0.58	3
137-136	153	18	RCP	894.61	894.16	0.29	
136-135	31	18	RCP	894.06	893.98	0.26	-1
151A-151	157	12	RCP	897.77	895.44	1.48	1
151-150	36	15	RCP	895.37	895.29	0.22	
150-149	175	18	RCP	895.19	894	0.68	
129-130	126	12' x 6'	CONSPAN	892.3	891.32		

**RCP Pipe Totals:**

12	901
15	675
18	1250
21	288
24	685
30	107
36	456

**Total:** 4362

**SSD Totals:**

Streets	7939
Rear Yards	2353

**Total:** 10292

**Other Totals:**

Open Ditch	190
12x6 Conspan	126

**Total:** 316

The length of the drain due to the changes described above is now **14,970 feet**.

The non-enforcement was approved by the Board at its meeting on September 22, 2008 meeting and recorded under instrument # 2009034277.

The following sureties were guaranteed by Bond Safeguard Insurance Company and released by the Board on its February 9, 2009 meeting.

**Bond-LC No:** 5033225

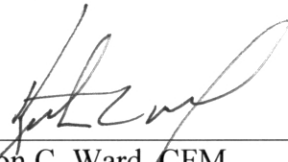
**Insured For:** Storm Sewers

**Amount:** \$348,194

**Issue Date:** April 8, 2008

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

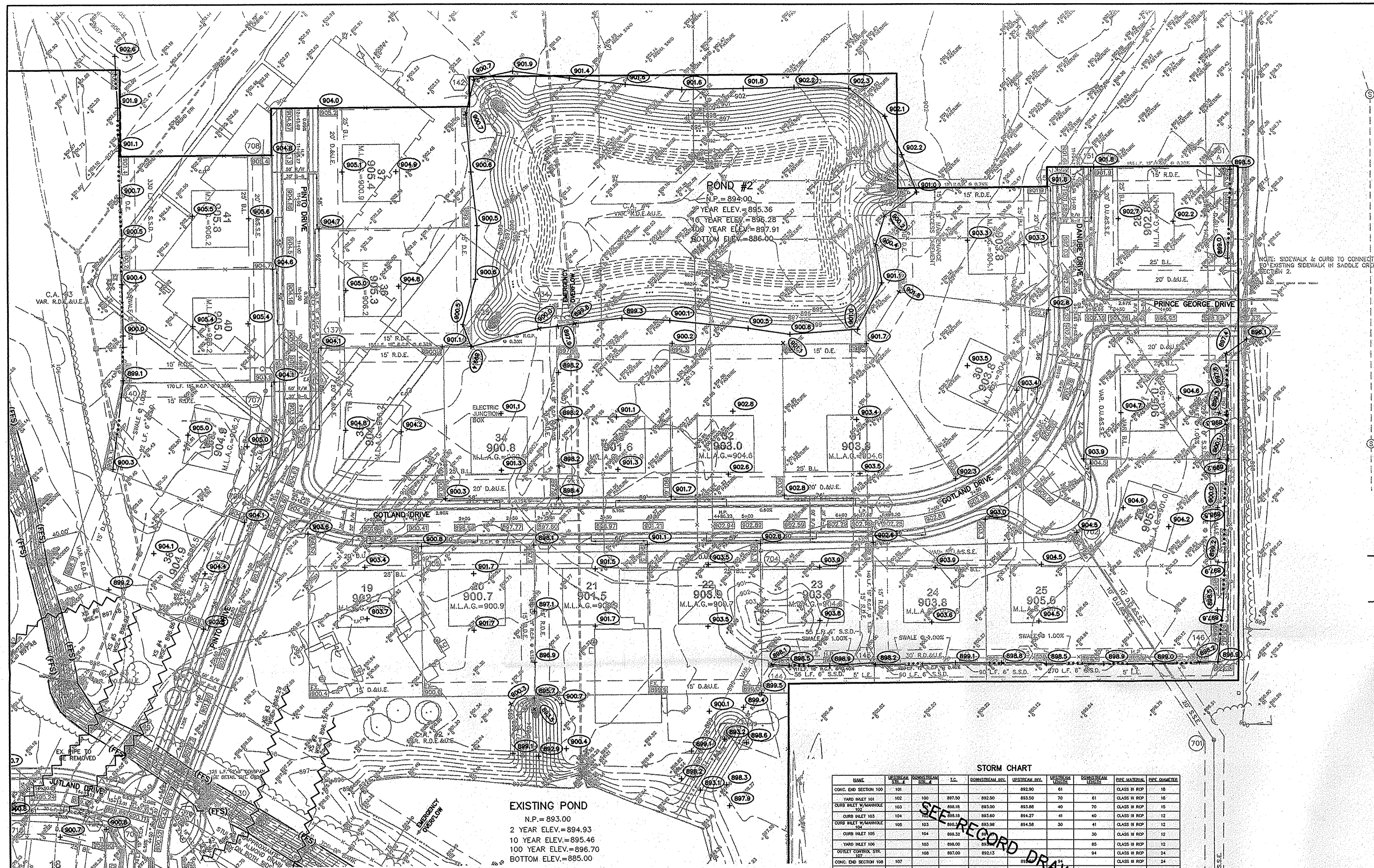
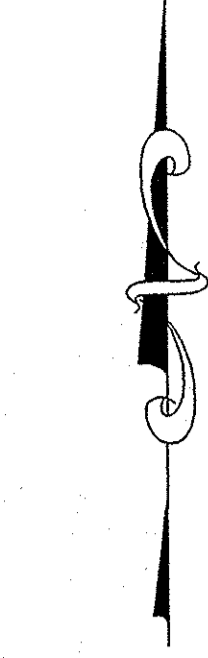
Sincerely,

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

Kenton C. Ward, CFM  
Hamilton County Surveyor

KCW/slm

CONTACT: CARMEL UTILITIES  
(317) 571-2648  
FOR WATER LOCATES



LEGEND SCALE: 1" = 60'

- EXISTING CONTOUR
EXISTING SANITARY SEWER
EXISTING STORM SEWER
PROPOSED GRADE
PROPOSED CONTOUR
PROPOSED SANITARY SEWER
PROPOSED STORM SEWER
PROPOSED SWALE
LOT NUMBER
PAD ELEVATION
EXISTING GRADE
DENOTES 4" SUBSURFACE DRAIN TO LOT
DENOTES 6" SUBSURFACE DRAIN
ROLL CURB
HANDICAPPED RAMP

PROPOSED FLOODWAY & FLOODWAY FRINGE PER STOEPPELWERTH & ASSOCIATES INC., STULTZ & ALMOND DRAIN HEC-RAS MODELING DATED FEBRUARY 18, 2008.
PROPOSED 100-YEAR BASE FLOOD ELEVATION PER STOEPPELWERTH & ASSOCIATES INC., STULTZ & ALMOND DRAIN HEC-RAS MODELING DATED FEBRUARY 18, 2008 (NAVD 88).

BM & TBM HISTORY:

TWO BENCH LOOPS WERE RUN: JRL RAN THE FIRST LOOP FROM THE HARRISON AT 141ST AND TOWNE TO THE SITE AND THROUGH CONTROL POINTS ON SITE AND BACK. CAC RAN THE SECOND FROM THE HARRISON AT 136TH AND TOWNE TO THE SITE AND THROUGH THE TEMPORARY BENCH MARKS AND BACK. THE ELEVATIONS ON THE HARRISONS CAME FROM A PREVIOUS BENCH LOOP FOR S & A JOB NUMBER 41760 - LAKESIDE PARK FROM BENCHMARK "LEE 2 AZI".

REFERENCE BENCHMARK:

LEE 2 AZI - THE STATION IS LOCATED APPROXIMATELY 2.5 MILES NORTHEAST OF ZIONSVILLE, AT THE INTERSECTION OF SHELBORNE ROAD AND WEST 131ST STREET, IN THE SOUTHWEST QUADRANT OF THE INTERSECTION; SET IN THE TOP OF A CONCRETE POST, LEVEL WITH THE ROADWAY; A DEPARTMENT OF NATURAL RESOURCES BRASS CONTROL STATION TABLET, STAMPED "LEE 2 AZI 1989".

A HARRISON MONUMENT AT THE INTERSECTION OF 141ST STREET AND TOWNE ROAD, SAID HARRISON IS THE WEST QUARTER CORNER OF SECTION 21, TOWNSHIP 18 NORTH, RANGE 3 EAST.

A HARRISON MONUMENT AT THE INTERSECTION OF 136TH STREET AND TOWNE ROAD, SAID HARRISON IS THE SOUTHWEST CORNER OF SECTION 21, TOWNSHIP 18 NORTH, RANGE 3 EAST.

TBM No. 1
A CUT "X" AT THE EAST END AND ON THE TOP OF A CENTER CURB ISLAND, SAID CUT "X" IS LOCATED 70 FEET ± EAST OF THE INTERSECTION OF QUARTER HORSE COURT AND BARREL RACER LANE IN THE WESTWOOD ESTATES SUBDIVISION.

TBM No. 2
A RAILROAD SPIKE, 1 FEET ± ABOVE THE GROUND, IN THE SOUTH SIDE OF POWER POLE NO. 774, SAID POLE IS LOCATED 70 FEET ± EAST OF THE CENTERLINE OF AUTUMN WOODS DRIVE (ENTRANCE OF SADDLE CREEK SUBDIVISION), 40 FEET ± NORTH OF THE CENTERLINE OF 141ST AND 10 FEET ± NORTHEAST OF A FIRE HYDRANT.

BENCH NOTES TYPED BY: JWM 6/22/2005
CHECKED BY: RJC 6/23/05

STORM CHART table with columns: NAME, ELEVATION, POSITION, DATE, T.C., DOWNSTREAM INV., UPSTREAM INV., DISTANCE FROM STATION, DISTANCE FROM END, DISTANCE FROM BENCH, DISTANCE FROM CONTROL, DISTANCE FROM MONUMENT, DISTANCE FROM TBM, DISTANCE FROM BENCHMARK, DISTANCE FROM MONUMENT, DISTANCE FROM TBM, DISTANCE FROM BENCHMARK.

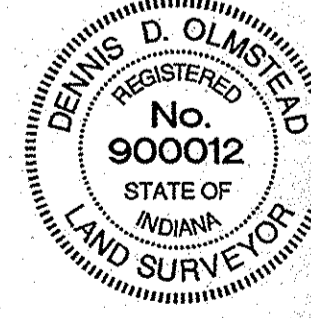
EXISTING POND
N.P. = 893.00
2 YEAR ELEV. = 894.93
10 YEAR ELEV. = 895.46
100 YEAR ELEV. = 896.70
BOTTOM ELEV. = 885.00

Minimum Flood Protection Grades
From Sections 104.02, 302.06 and 303.07 of the City of Carmel Storm Water Technical Standards Manual

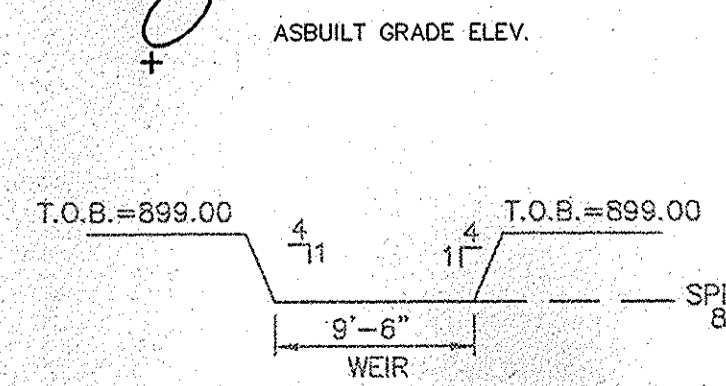
- 1. Definitions
a. Minimum Flood Protection Grade of all structures...
b. Lowest Adjacent Grade is the elevation of the lowest grade adjacent to a structure...
c. For areas outside of a Special Flood Hazard Area...
d. The Lowest Adjacent Grade for residential, commercial, or industrial buildings...
e. For areas within a Special Flood Hazard Area...
f. The Lowest Adjacent Grade for all residential, commercial, or industrial buildings...
g. The Lowest Adjacent Grade for all residential, commercial, or industrial buildings...
h. In addition to the Lowest Adjacent Grade...
i. The Lowest Floor Elevation

RECORD DRAWING

DENNIS D. OLMSTEAD
Registered Land Surveyor
No. 900012



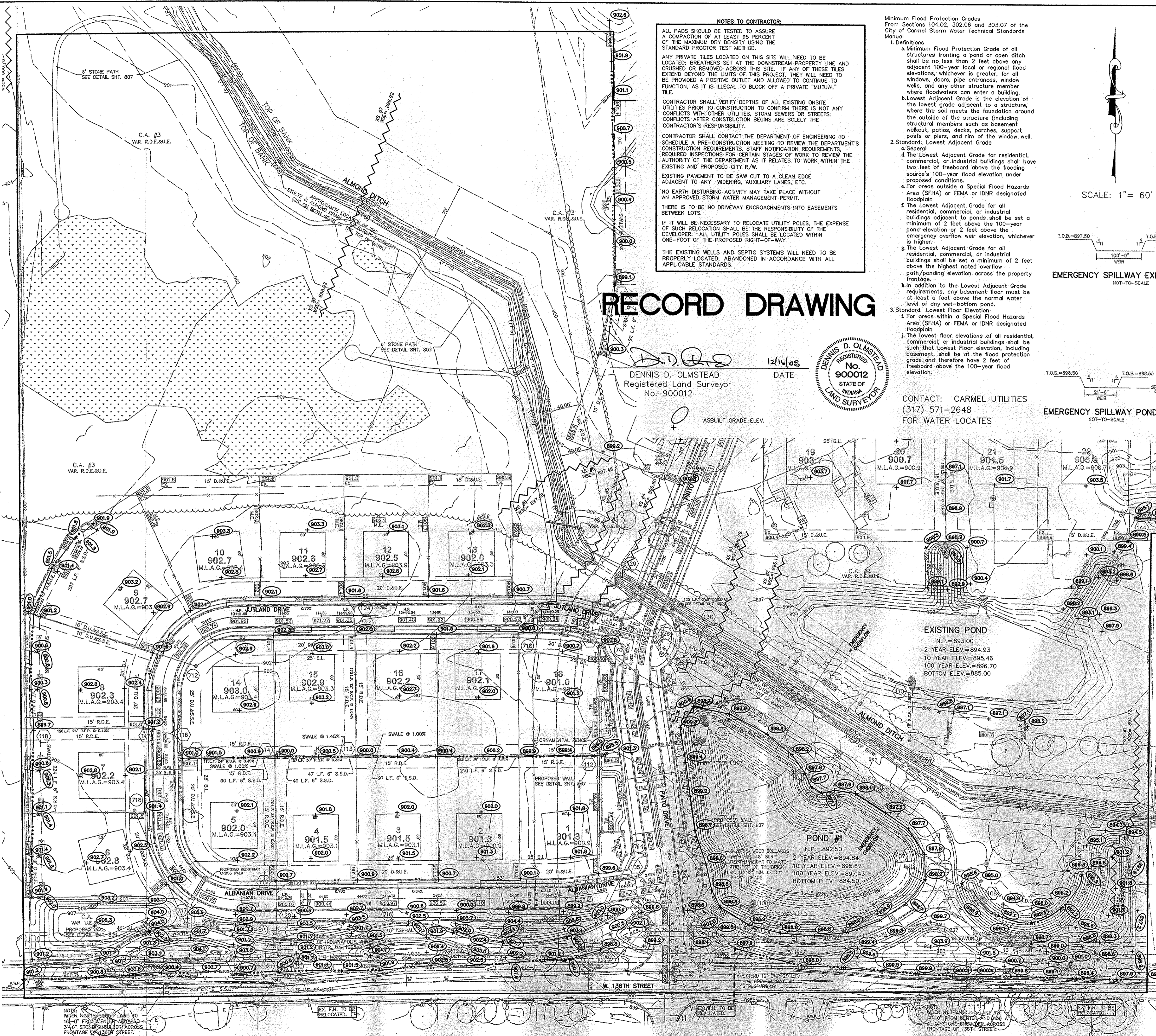
DATE 11/16/08



EMERGENCY SPILLWAY POND 2
NOT-TO-SCALE

NOTES TO CONTRACTOR:
ALL PADS SHOULD BE TESTED TO ASSURE A COMPACTION OF AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY USING THE STANDARD PROCTOR TEST METHOD.
ANY PRIVATE TILES LOCATED ON THIS SITE WILL NEED TO BE LOCATED, BREATHERS SET AT THE DOWNSTREAM PROPERTY LINE AND CRUSHED OR REMOVED ACROSS THIS SITE. IF ANY OF THESE TILES EXTEND BEYOND THE LIMITS OF THIS PROJECT, THEY WILL NEED TO BE PROVIDED A POSITIVE OUTLET AND ALLOWED TO CONTINUE TO FUNCTION, AS IT IS ILLEGAL TO BLOCK OFF A PRIVATE "MUTUAL" TILE.
CONTRACTOR SHALL VERIFY DEPTHS OF ALL EXISTING ONSITE UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM THERE IS NOT ANY CONFLICTS WITH OTHER UTILITIES, OTHER UTILITIES, STORM SEWERS, OR STREETS. CONFLICTS AFTER CONSTRUCTION BEGINS ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.
CONTRACTOR SHALL CONTACT THE DEPARTMENT OF ENGINEERING TO SCHEDULE A PRE-CONSTRUCTION MEETING TO REVIEW THE DEPARTMENT'S CONSTRUCTION REQUIREMENTS, STAFF NOTIFICATION REQUIREMENTS, REQUIRED INSPECTIONS FOR CERTAIN STAGES OF WORK TO REVIEW THE AUTHORITY OF THE DEPARTMENT AS IT RELATES TO WORK WITHIN THE EXISTING AND PROPOSED CITY R/W.
EXISTING PAVEMENT TO BE SAW CUT TO A CLEAN EDGE ADJACENT TO ANY MEDIAN, AUXILIARY LANES, ETC.
NO EARTH DISTURBING ACTIVITY MAY TAKE PLACE WITHOUT AN APPROVED STORM WATER MANAGEMENT PERMIT.
THERE IS TO BE NO DRIVEWAY ENCROACHMENTS INTO EASEMENTS BETWEEN LOTS.
IF IT WILL BE NECESSARY TO RELOCATE UTILITY POLES, THE EXPENSE OF SUCH RELOCATION SHALL BE THE RESPONSIBILITY OF THE DEVELOPER AND SHALL BE LOCATED WITHIN ONE-FOOT OF THE PROPOSED RIGHT-OF-WAY.
THE EXISTING WELLS AND SEPTIC SYSTEMS WILL NEED TO BE PROPERLY LOCATED, ABANDONED IN ACCORDANCE WITH ALL APPLICABLE STANDARDS.

Vertical sidebar containing: STOEPPELWERTH & ASSOCIATES, INC. CONSULTING ENGINEERS & LAND SURVEYORS; SITE DEVELOPMENT PLAN WESTMONT SECTION 1; DRAWN BY BAH CHECKED BY EEF; SHEET NO. C201; 5 & A JOB NO. 52415PLA



**NOTES TO CONTRACTOR:**

ALL PADS SHOULD BE TESTED TO ASSURE A COMPARISON OF AT LEAST 95 PERCENT OF THE MAXIMUM DRY DENSITY USING THE STANDARD PROCTOR TEST METHOD.

ANY PRIVATE TILES LOCATED ON THIS SITE WILL NEED TO BE LOCATED; BREACHERS SET AT THE DOWNSTREAM PROPERTY LINE AND CRUSHED OR REMOVED ACROSS THIS SITE. IF ANY OF THESE TILES EXTEND BEYOND THE LIMITS OF THIS PROJECT, THEY WILL NEED TO BE PROVIDED A POSITIVE OUTLET AND ALLOWED TO CONTINUE TO FUNCTION, AS IT IS ILLEGAL TO BLOCK OFF A PRIVATE "MUTUAL" TILE.

CONTRACTOR SHALL VERIFY DEPTHS OF ALL EXISTING ON-SITE UTILITIES PRIOR TO CONSTRUCTION TO CONFIRM THERE IS NOT ANY CONFLICTS WITH OTHER UTILITIES, STORM SEWERS OR STREETS. CONFLICTS AFTER CONSTRUCTION BEGINS ARE SOLELY THE CONTRACTOR'S RESPONSIBILITY.

CONTRACTOR SHALL CONTACT THE DEPARTMENT OF ENGINEERING TO SCHEDULE A PRE-CONSTRUCTION MEETING TO REVIEW THE DEPARTMENT'S CONSTRUCTION REQUIREMENTS, STAFF NOTIFICATION REQUIREMENTS, REQUIRED INSPECTIONS FOR CERTAIN STAGES OF WORK TO REVIEW THE AUTHORITY OF THE DEPARTMENT AS IT RELATES TO WORK WITHIN THE EXISTING AND PROPOSED CITY R/W.

EXISTING PAVEMENT TO BE SAW CUT TO A CLEAN EDGE ADJACENT TO ANY WIDENING, AUXILIARY LANES, ETC.

NO EARTH DISTURBING ACTIVITY MAY TAKE PLACE WITHOUT AN APPROVED STORM WATER MANAGEMENT PERMIT.

THERE IS TO BE NO DRIVEWAY ENCROACHMENTS INTO EASEMENTS BETWEEN LOTS.

IF IT WILL BE NECESSARY TO RELOCATE UTILITY POLES, THE EXPENSE OF SUCH RELOCATION SHALL BE THE RESPONSIBILITY OF THE OWNER. ALL UTILITY POLES SHALL BE LOCATED WITHIN ONE-FOOT OF THE PROPOSED RIGHT-OF-WAY.

THE EXISTING WELLS AND SEPTIC SYSTEMS WILL NEED TO BE PROPERLY LOCATED; ABANDONED IN ACCORDANCE WITH ALL APPLICABLE STANDARDS.

Minimum Flood Protection Grades  
From Sections 104.02, 302.06 and 303.07 of the  
City of Carmel Storm Water Technical Standards  
Manual

**1. Definitions**

a. Minimum Flood Protection Grade of all structures fronting a pond or open ditch shall be no less than 2 feet above any adjacent 100-year local or regional flood elevations, whichever is greater, for all windows, doors, pipe entrances, window wells, and any other structure member where floodwaters can enter a building.

b. Lowest Adjacent Grade is the elevation of the lowest grade adjacent to a structure, where the soil meets the foundation around the outside of the structure (including structural members such as basement walkout, patios, decks, porches, support posts or piers, and rim of the window well).

**2. Standard: Lowest Adjacent Grade**

a. General

4. The Lowest Adjacent Grade for residential, commercial, or industrial buildings shall have two feet of freeboard above the flooding source's 100-year flood elevation under proposed conditions.

e. For areas outside a Special Flood Hazards Area (SFHA) or FEMA or IDNR designated floodplain

f. The Lowest Adjacent Grade for all residential, commercial, or industrial buildings adjacent to ponds shall be set a minimum of 2 feet above the 100-year pond elevation or 2 feet above the emergency overflow weir elevation, whichever is higher.

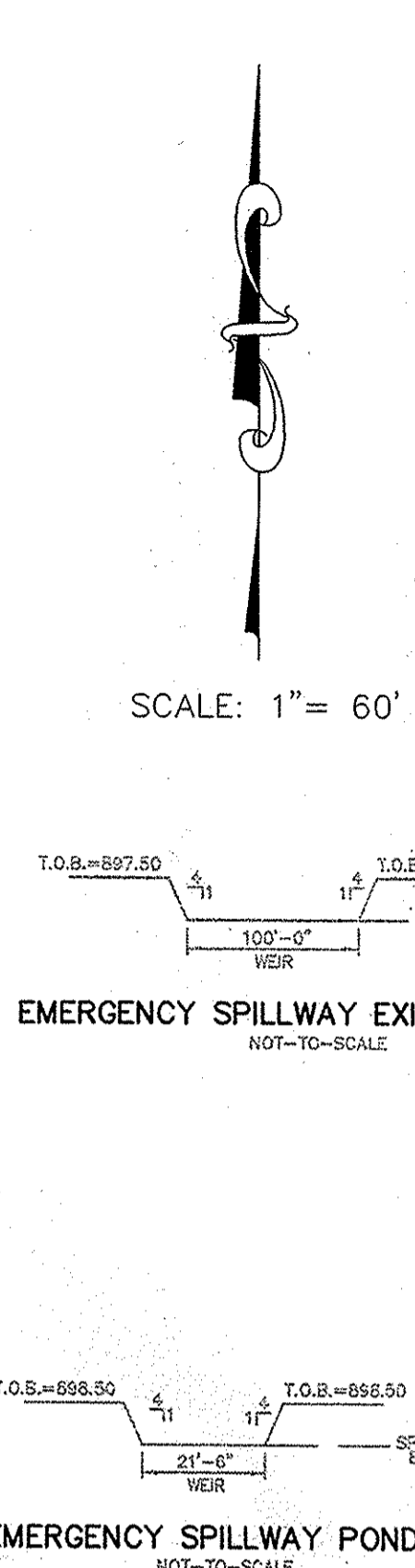
g. The Lowest Adjacent Grade for all residential, commercial, or industrial buildings shall be set a minimum of 2 feet above the highest noted overflow path/ponding elevation across the property frontage.

h. In addition to the Lowest Adjacent Grade requirements, any basement floor must be at least a foot above the normal water level of any wet-bottom pond.

**3. Standard: Lowest Floor Elevation**

i. For areas within a Special Flood Hazards Area (SFHA) or FEMA or IDNR designated floodplain

j. The lowest floor elevations of all residential, commercial, or industrial buildings shall be such that Lowest Floor elevation, including basement, shall be at the flood protection grade and therefore have 2 feet of freeboard above the 100-year flood elevation.



**LEGEND**

- EXISTING CONTOUR
- EXISTING SANITARY SEWER
- EXISTING STORM SEWER
- PROPOSED GRADE
- PROPOSED TOP OF WALL GRADE
- PROPOSED CONTOUR
- PROPOSED SANITARY SEWER
- PROPOSED STORM SEWER
- PROPOSED SWALE

**100 874.1**  
M.L.A.G. =

EX. EXISTING GRADE

--- DENOTES SHEET FLOW

--- DENOTES 4" SUBSURFACE DRAIN TO LOT

--- DENOTES 6" SUBSURFACE DRAIN

--- ROLL CURB

\* HANDICAPPED RAMP

PROPOSED FLOODWAY & FLOODWAY FRINGE PER STOEPPELWERTH & ASSOCIATES INC., STULTZ & ALMOND DRAIN HEC-RAS MODELING DATED FEBRUARY 18, 2008.

PROPOSED 100-YEAR BASE FLOOD ELEVATION PER STOEPPELWERTH & ASSOCIATES INC., STULTZ & ALMOND DRAIN HEC-RAS MODELING DATED FEBRUARY 18, 2008 (NAVD 88).

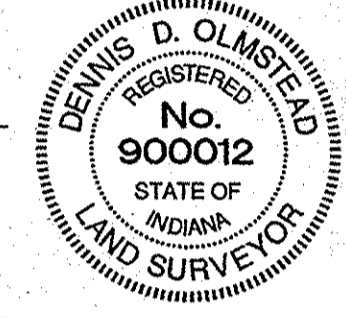
WSE = 894.66

THE SUBJECT PROPERTY IS NOT LOCATED IN A SPECIAL FLOOD HAZARD ZONE A AS SAID TRACT PLOTS BY SCALE ON COMMUNITY PANEL NO. 180081-0205-F OF THE FLOOD INSURANCE RATE MAPS DATED FEBRUARY 19, 2003.

# RECORD DRAWING

DENNIS D. OLMSTEAD  
Registered Land Surveyor  
No. 900012

DATE: 12/14/08



CONTACT: CARMEL UTILITIES  
(317) 571-2648  
FOR WATER LOCATES

- EARTHWORK:**
- EXCAVATION**
    - A. Excavated material that is suitable (topsoil and/or clay) may be used for fills. All unsuitable material and all surplus excavated material not required shall be removed from the sites.
    - B. Provide and place any additional fill material from offsite as may be necessary to produce the grades required on plans. Fill obtained from offsite shall be of quality as specified for fills herein and the source approved by Developer. It will be the responsibility of the Contractor for any cost for fill needed.
  - REMOVAL OF TREES**
    - A. All trees and stumps shall be removed from areas to be occupied by a road surfaces area. Trees and stumps shall not be buried on site.
  - REMOVAL OF TOPSOIL**
    - A. All topsoil shall be removed from all areas beneath future pavements or building. Topsoil removal shall be to a minimum depth of 6 inches or to the depth indicated in the geotechnical report provided by the Developer to be excavated or filled. Topsoil should be stored at a location where it will not interfere with construction operations. The topsoil shall be free of debris and stones.
  - UTILITIES**
    - A. Rules and regulation governing the respective utility shall be observed in executing all work under this section.
    - B. It shall be the responsibility of the Contractor to determine the location of existing underground utilities 2 working days prior to commencing work. For utility locations to be marked call Toll Free 1-800-382-5544 within Indiana or 1-800-428-5200 outside Indiana.
    - C. Contact Carmel Utilities at 571-2648 for location of all water mains.
  - SITE GRADING**
    - A. Do all cutting, filling, compacting of fills and rough grading required to bring entire project area to subgrade as shown on the drawing.
    - B. The tolerance for paved areas shall not exceed 0.05 feet above established subgrade. All other areas shall not exceed 0.05 feet plus or minus the established grade. Provide roundings at top and bottom of banks and other breaks in grade.
    - C. The Engineer shall be notified when the Contractor has reached the tolerance as stated above, so that field measurements and spot elevations can be verified by the Engineer. The Contractor shall not remove his equipment from the site until the Engineer has verified that the job meets the above tolerance.

**DRAINAGE SUMMARY:**

SITE ACREAGE DRAINING TO ALMOND DITCH = 98.95 AC.  
OFF-SITE/UPSTREAM ACREAGE = 11.42  
OFF-SITE/UPSTREAM FLOW FROM WESTMONT ESTATES:  
2 YEAR: 55.71 cfs  
10 YEAR: 109.04 cfs  
100 YEAR: 131.31 cfs  
PRE-DEVELOPED RELEASE RATES INTO ALMOND DITCH  
2 YEAR: 69.16 cfs  
10 YEAR: 144.06 cfs  
100 YEAR: 227.63 cfs  
POST-DEVELOPED RELEASE RATES INTO ALMOND DITCH  
2 YEAR: 60.87 cfs  
10 YEAR: 121.20 cfs  
100 YEAR: 174.02 cfs

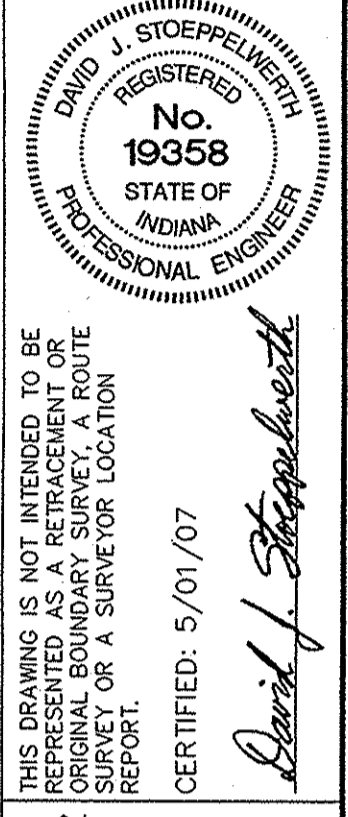
**HOLEY MOLEY SAYS "DIG SAFELY"**

**CAUTION**  
LOCATION OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (including, but not limited to, manholes, meter boxes, and marks made upon the ground by others) AND ARE SPECULATIVE IN NATURE. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH THERE IS NO ABOVE GROUND EVIDENCE OR FOR WHICH NO ABOVE GROUND EVIDENCE HAS BEEN OBTAINED. THE EXACT LOCATIONS OF SAID EXISTING UNDERGROUND UTILITIES SHALL BE DETERMINED BY THE CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

**CALL TOLL FREE 1-800-382-5544**  
PER INDIANA STATE LAW ICS-1-25, IT IS AGAINST THE LAW TO EXCAVATE WITHOUT NOTICING THE UNDERGROUND LOCATION SERVICE TWO (2) WORKING DAYS BEFORE COMMENCING WORK.

**IT'S THE LAW**  
CALL TOLL FREE 1-800-382-5544

ASBUITS	REVISIONS	DATE	MARK	BY
12/15/08	REVISED PER AGENCY COMMENTS	12/15/08		BAH
12/15/08	REVISED PER AGENCY COMMENTS	12/15/08		EEF
12/15/08	REVISED PER AGENCY COMMENTS	12/15/08		EEF
12/15/08	ADD GRADES TOP WALL PER COMMENTS	12/15/08		EEF
12/15/08	REVISED PER DEVELOPER CHANGES	12/15/08		EEF
12/15/08	REVISED PER AGENCY COMMENTS	12/15/08		EEF
12/15/08	REVISED PER AGENCY COMMENTS	12/15/08		EEF
12/15/08	REVISED PER AGENCY COMMENTS	12/15/08		EEF



**STOEPPELWERTH & ASSOCIATES, INC.**  
CONSULTING ENGINEERS & LAND SURVEYORS

7985 East 108th Street, Fishers, IN 46038-2505  
Phone: (317) 849-9335 Fax: (317) 849-5942  
Toll Free: (800) 728-8917

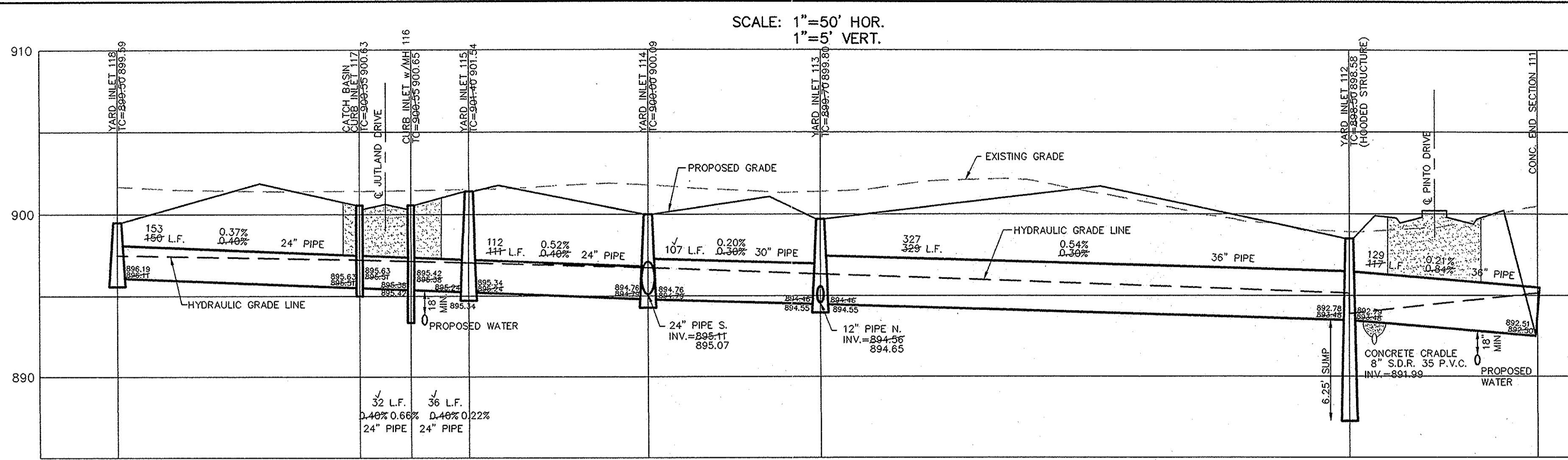


**SITE DEVELOPMENT PLAN**  
**WESTMONT**  
**SECTION 1**

DRAWN BY: BAH CHECKED BY: EEF

**C200**

3 & A JOB NO. 52415PLA

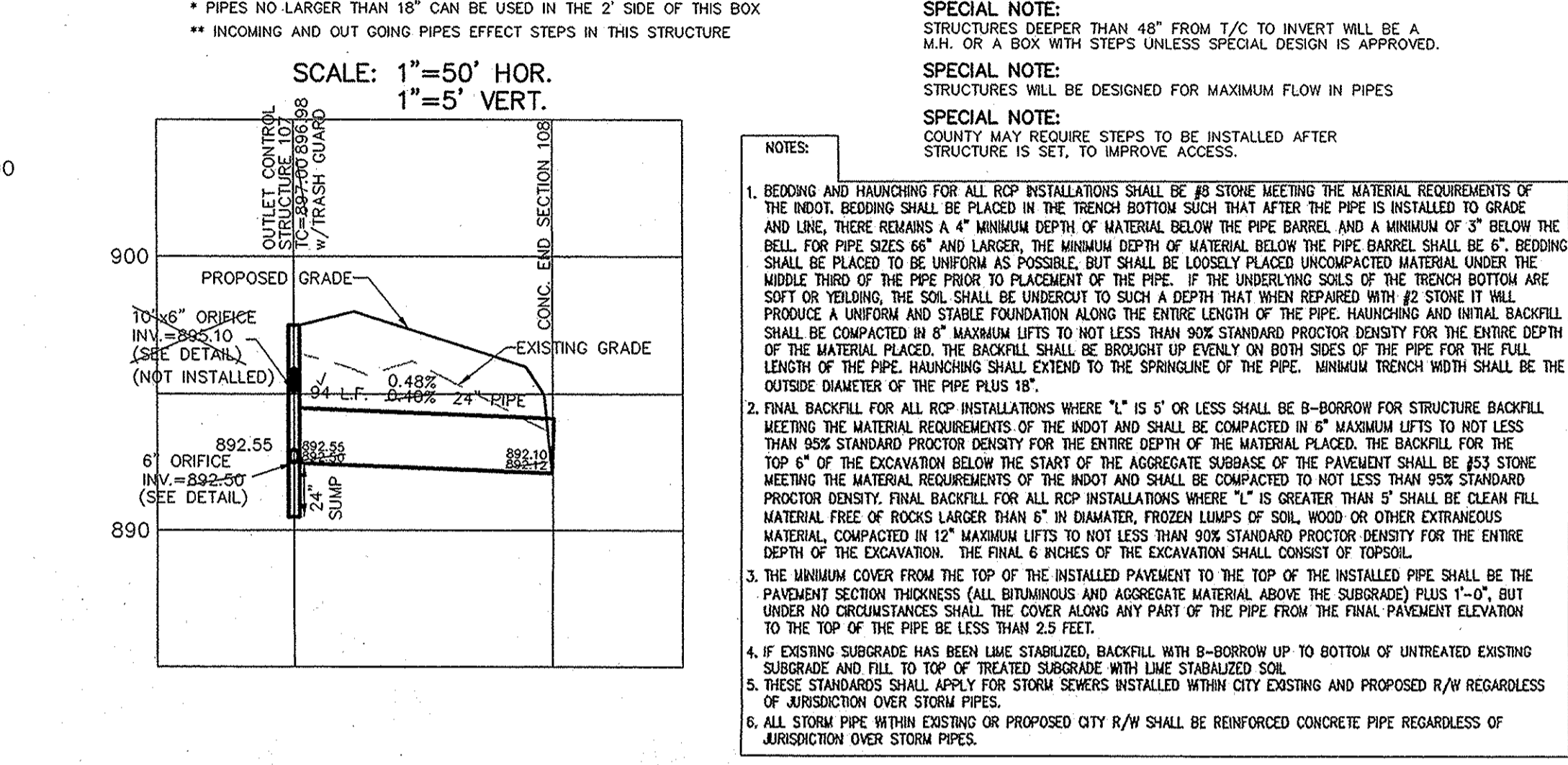


**CURB INLET TABLE**

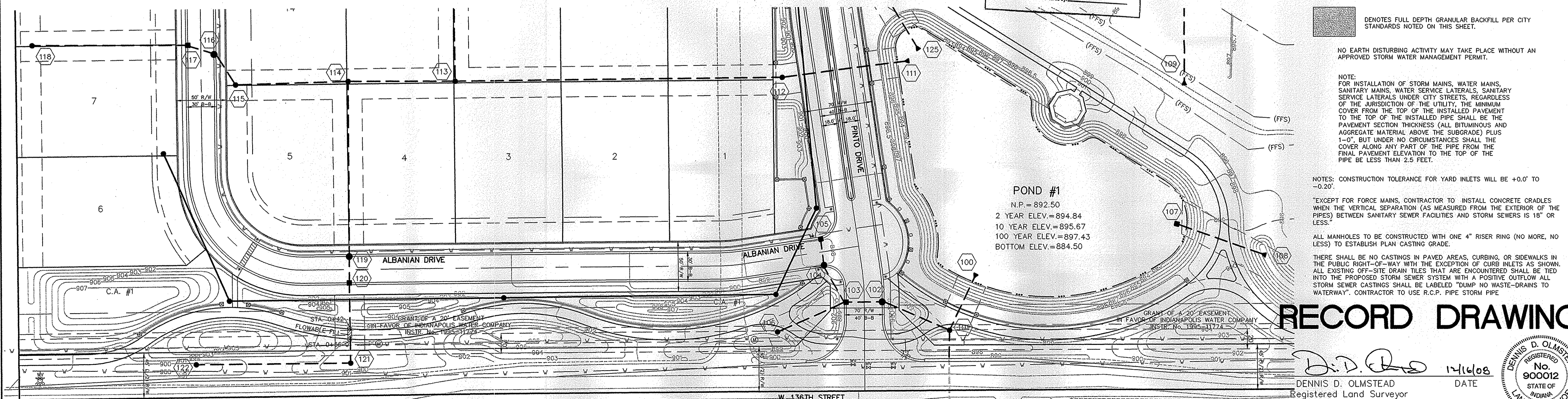
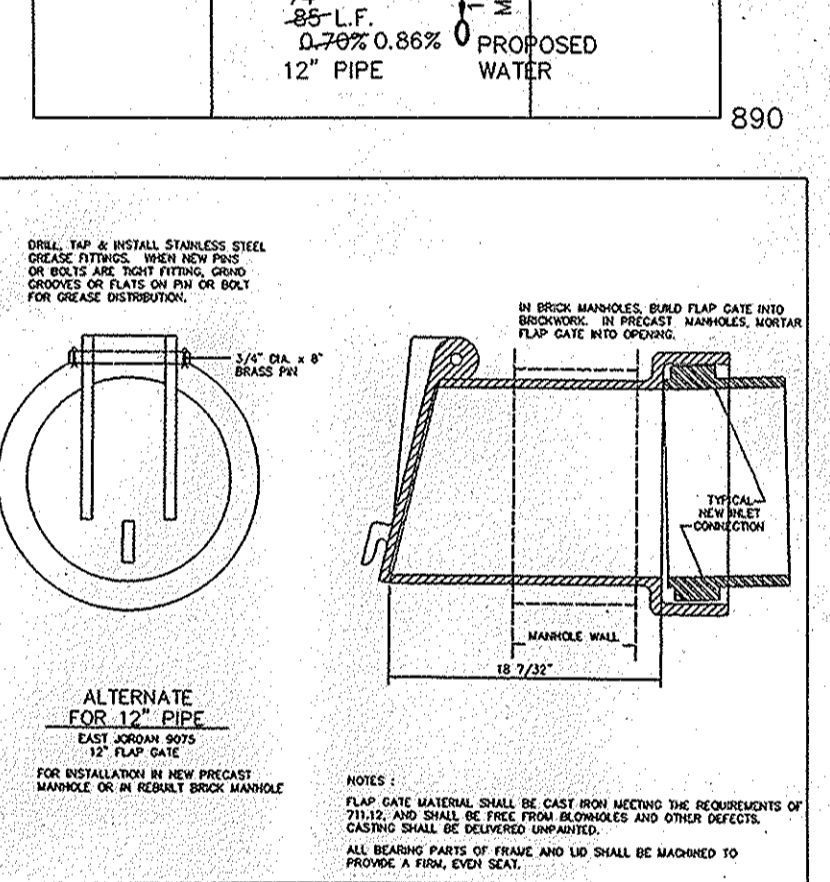
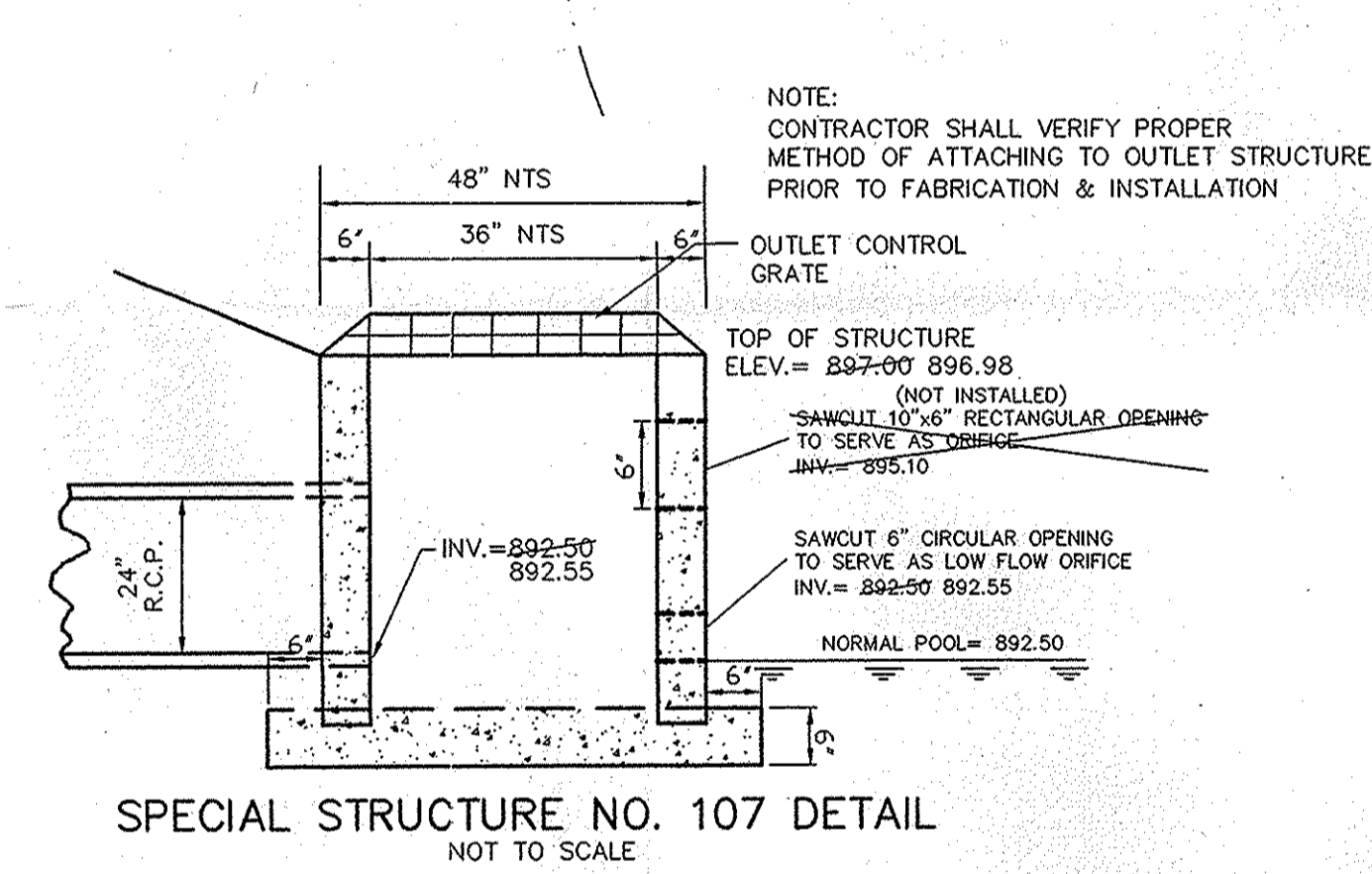
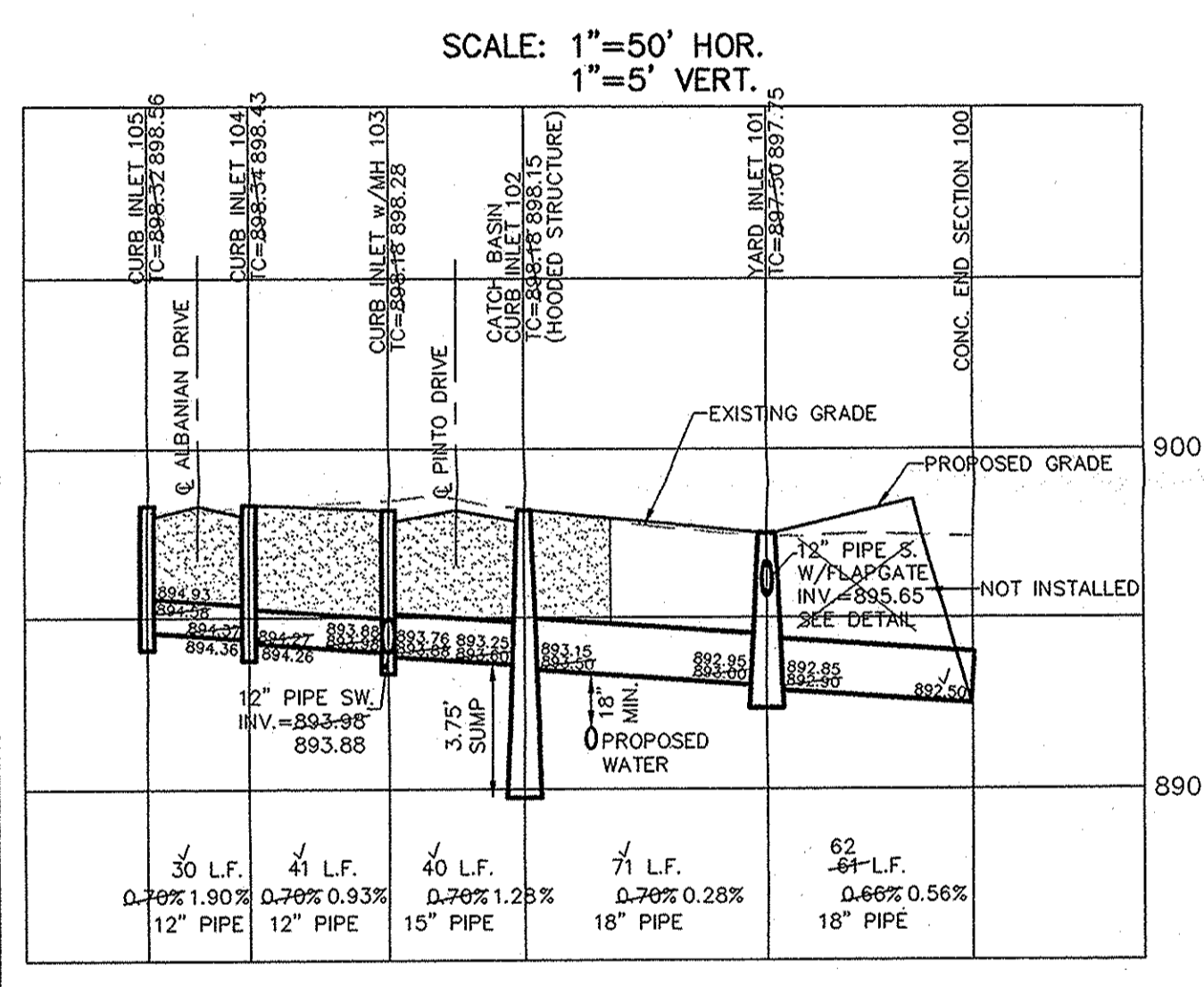
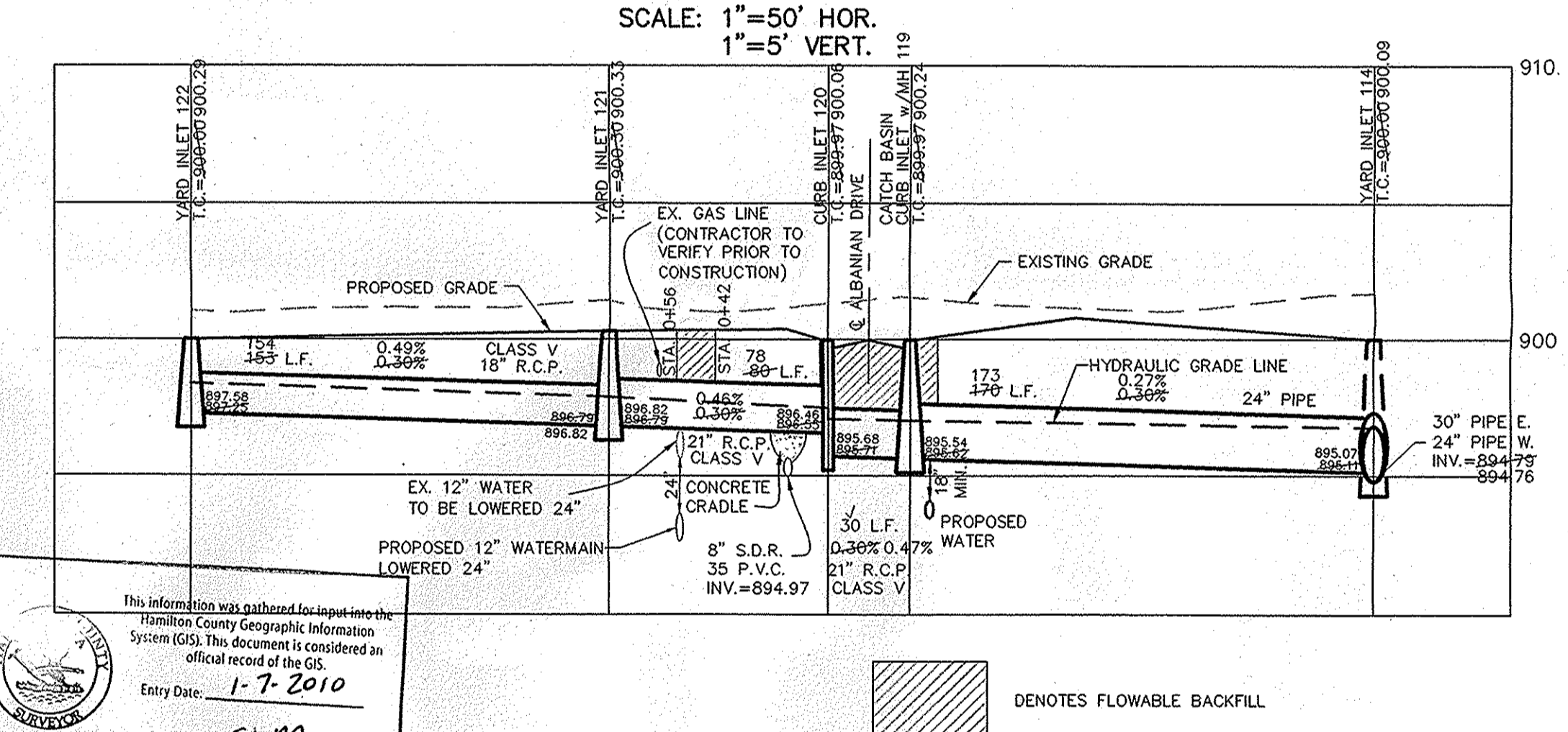
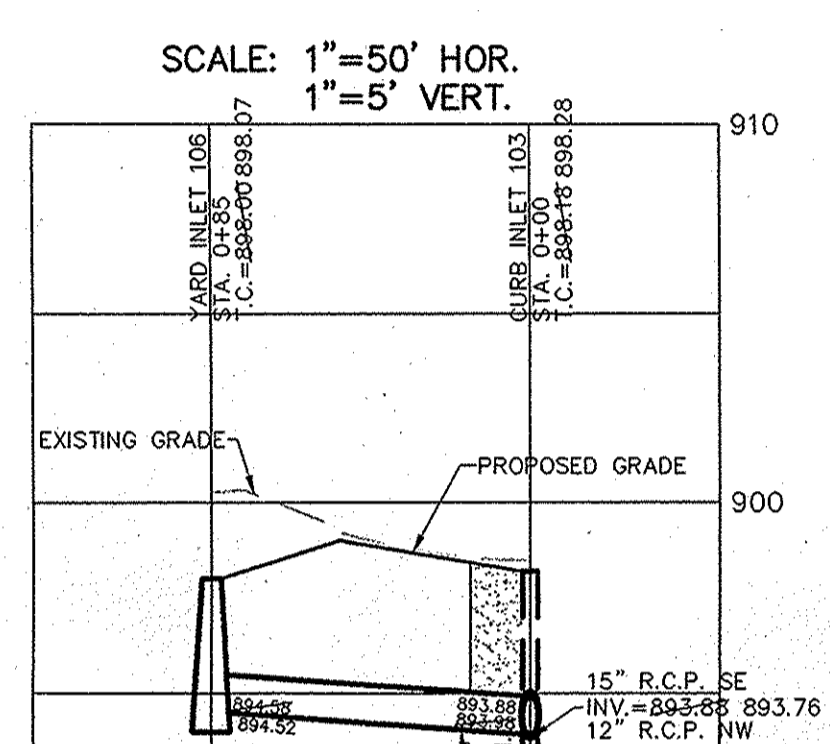
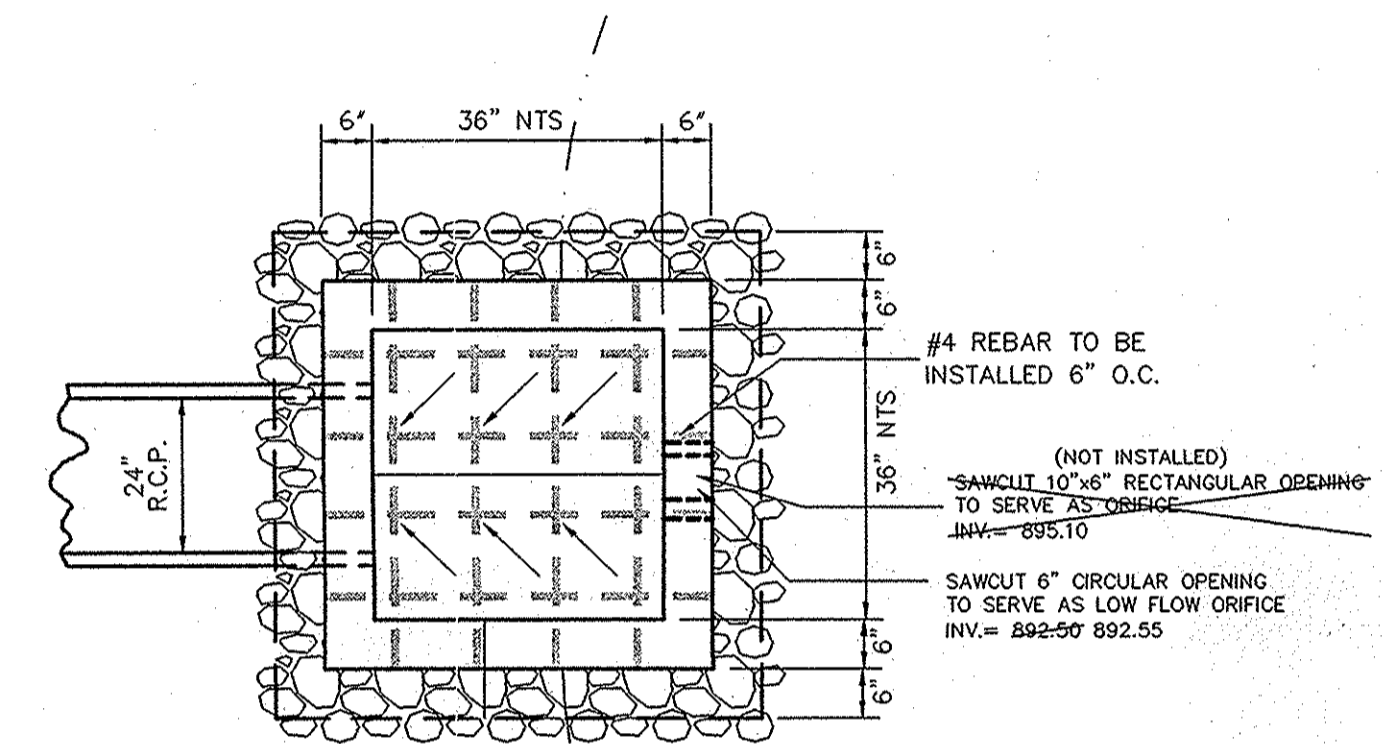
PIPE SIZE	STRUCTURES LESS THAN 48" FROM T/C TO INVERT	STRUCTURES GREATER THAN 48" FROM T/C TO INVERT	ANGLE AND QUALITY OF PIPES WILL REQUIRE SPECIAL DESIGN	STEPS REQUIRED	CURB CASTING *R-3501 N	CASTING *3501 TL & TR
12" to 18"	2'x2'		DESIGN APPROVAL	No	Yes	Yes
18" or 21"		MH/BOX	DESIGN APPROVAL	Yes	Yes	Yes
21" or 27"	2'x3'		DESIGN APPROVAL	No	No	Yes
24" or LARGER	DESIGN APPROVAL		DESIGN APPROVAL	No	No	Yes
24" or LARGER		MH/BOX	DESIGN APPROVAL	Yes**	Yes	Yes

\* PIPES NO LARGER THAN 18" CAN BE USED IN THE 2' SIDE OF THIS BOX  
\*\* INCOMING AND OUT GOING PIPES EFFECT STEPS IN THIS STRUCTURE

SPECIAL NOTE: STRUCTURES DEEPER THAN 48" FROM T/C TO INVERT WILL BE A M.H. OR A BOX WITH STEPS UNLESS SPECIAL DESIGN IS APPROVED.  
SPECIAL NOTE: STRUCTURES WILL BE DESIGNED FOR MAXIMUM FLOW IN PIPES  
SPECIAL NOTE: COUNTY MAY REQUIRE STEPS TO BE INSTALLED AFTER STRUCTURE IS SET, TO IMPROVE ACCESS.



NOTE: THE STORM SEWER SYSTEM SHALL BE CONSTRUCTED PER DESIGN SPECIFIED AND AS APPROVED BY THE CITY OF CARMEL ON THE FINAL APPROVED CONSTRUCTION PLANS. DEVIATIONS FROM THE APPROVED DESIGN SHALL ONLY BE PERMITTED DUE TO SPECIAL APPROVAL FROM A DESIGNATED REPRESENTATIVE OF THE CITY OF CARMEL IN ADDITION TO DEVIATION SHALL BE INCLUDED AS A REQUIREMENT ON AS-BUILT/RECORD DRAWINGS SUBMITTED FOR RELEASE OF PERFORMANCE GUARANTEES. APPROVED DESIGN SLOPES IDENTIFIED AS GENERATING VELOCITIES OF 2.5 FPS OR LESS OR 10 FPS OR GREATER (AT FULL FLOW CAPACITY) SHALL REQUIRE AS-BUILT BACKFILLING OF THE PIPE. THE CONTRACTOR IS INSTRUCTED TO AS-BUILT EACH SECTION OF STORM PIPE AS IT IS BEING INSTALLED TO ENSURE COMPLIANCE WITH THE DESIGN PLANS AND AS APPROVED BY THE CITY OF CARMEL.



ASBUILT: 12/2/08  
REVISED PER CARMEL ENGINEERING COMMENTS: 5/12/09  
ADDED NOTE TO LOWER 12" WATERMAIN 24": 2/28/08  
REVISED PER AGENCY COMMENTS: 7/19/08  
REVISED PER DEVELOPER CHANGES: 7/22/08  
REVISED PER AGENCY COMMENTS: 7/19/08  
REVISED PER AGENCY COMMENTS: 7/22/08  
REVISED PER DEVELOPER CHANGES: 12/7/07  
REVISED PER AGENCY COMMENTS: 11/7/07

MARK: REVISIONS

DATE:

REGISTERED PROFESSIONAL ENGINEER  
No. 19358  
STATE OF INDIANA  
David J. Stoepelwerth

CERTIFIED: 5/01/07

THIS DRAWING IS NOT INTENDED TO BE REPRESENTED AS A RETRACTION OF ORIGINAL BOUNDARY SURVEY, A ROUTE REPORT OR A SURVEYOR LOCATION REPORT.

STOEPPELWERTH & ASSOCIATES, INC.  
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7965 East 106th Street, Fishers, IN 46038-2505  
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Toll Free: (800) 728-6917

INDIANA  
CARMEL

STORM PLAN & PROFILES  
WESTMONT  
SECTION 1

REGISTERED LAND SURVEYOR  
Dennis D. OLMSTEAD  
No. 900012  
STATE OF INDIANA

DATE: 12/16/08

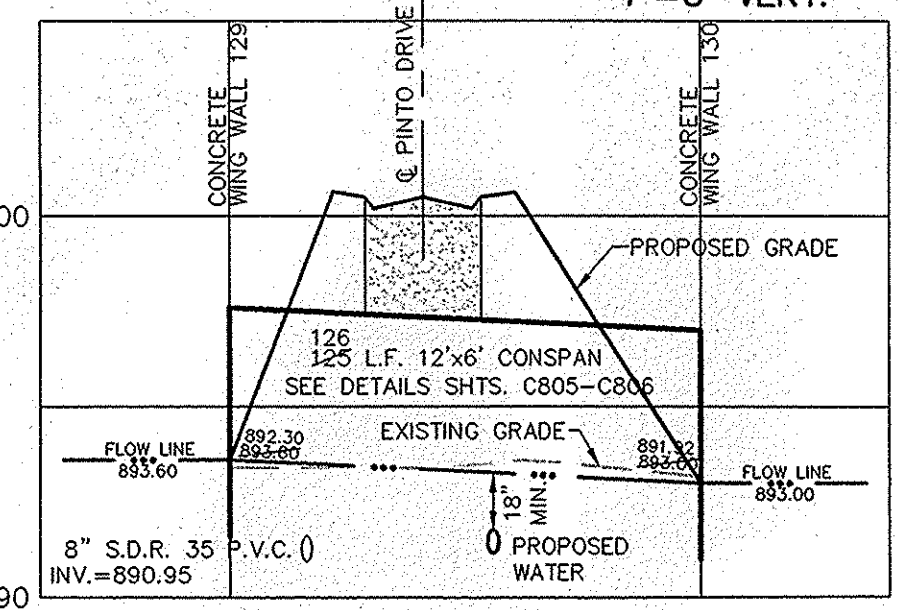
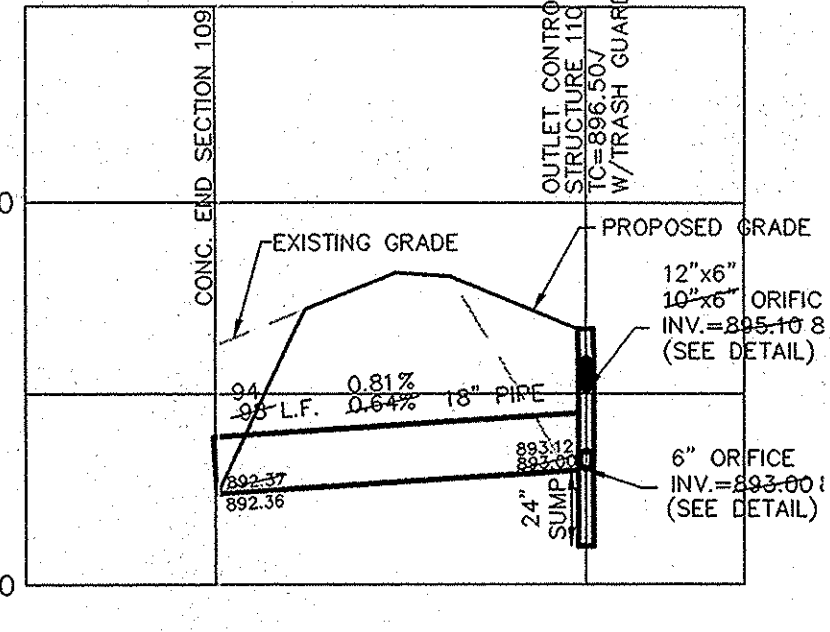
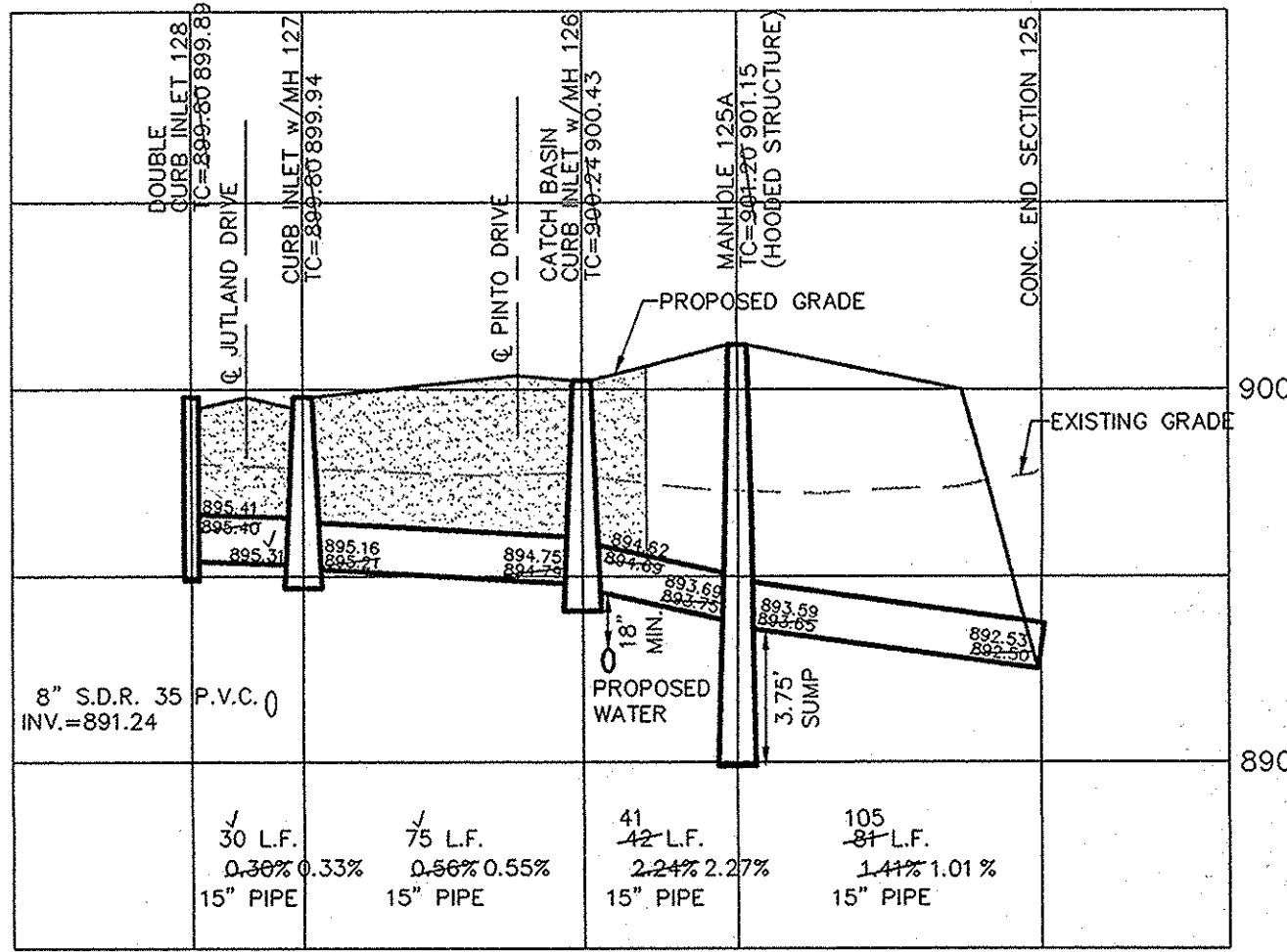
DRAWN BY: BAH  
CHECKED BY: EEF

SHEET NO. C600  
S & A JOB NO. 52415PLA

SCALE: 1" = 50' HOR.  
1" = 5' VERT.

SCALE: 1" = 50' HOR.  
1" = 5' VERT.

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1" = 5' VERT.



NOTE:  
THE STORM SEWER SYSTEM SHALL BE CONSTRUCTED PER DESIGN SPECIFIED AND AS APPROVED BY THE CITY OF CARMEL ON THE FINAL APPROVED CONSTRUCTION PLANS. DEVIATIONS FROM THE APPROVED DESIGN SHALL ONLY BE PERMITTED DUE TO SPECIAL APPROVAL FROM A DESIGNATED REPRESENTATIVE OF THE CITY OF CARMEL IN ADDITION TO DEVIATION SHALL BE INCLUDED AS A REQUIREMENT ON AS-BUILT/RECORD DRAWINGS SUBMITTED FOR RELEASE OF PERFORMANCE GUARANTEES. APPROVED DESIGN SLOPES IDENTIFIED AS GENERATING VELOCITIES OF 2.5 FPS OR LESS OR 10 FPS OR GREATER (AT FULL FLOW CAPACITY) SHALL REQUIRE AS-BUILT CERTIFICATION AT THE TIME OF CONSTRUCTION, PRIOR TO BACKFILLING THE PIPE. THE CONTRACTOR IS INSTRUCTED TO AS-BUILT EACH SECTION OF STORM PIPE AS IT IS BEING INSTALLED TO ENSURE COMPLIANCE WITH THE DESIGN PLANS AND AS APPROVED BY THE CITY OF CARMEL.

- NOTES:
1. BEDDING AND HAUNCHING FOR ALL ROP INSTALLATIONS SHALL BE #8 STONE MEETING THE MATERIAL REQUIREMENTS OF THE INDOT. BEDDING SHALL BE PLACED IN THE TRENCH BOTTOM SUCH THAT AFTER THE PIPE IS INSTALLED TO GRADE AND LIME, THERE REMAINS A 4" MINIMUM DEPTH OF MATERIAL BELOW THE PIPE DABBLE, AND A MINIMUM OF 3" BELOW THE BELL. FOR PIPE SIZES 6" AND LARGER, THE MINIMUM DEPTH OF MATERIAL BELOW THE PIPE BARRIL SHALL BE 6". BEDDING SHALL BE PLACED TO BE UNIFORM AS POSSIBLE, BUT SHALL BE LOOSELY PLACED UNCOMPACTED MATERIAL UNDER THE MIDDLE THIRD OF THE PIPE PRIOR TO PLACEMENT OF THE PIPE. IF THE UNDERLYING SOILS OF THE TRENCH BOTTOM ARE SOFT OR YELING, THE SOIL SHALL BE UNDERCUT TO SUCH A DEPTH THAT WHEN REPAIRED WITH #2 STONE IT WILL PRODUCE A UNIFORM AND STABLE FOUNDATION ALONG THE ENTIRE LENGTH OF THE PIPE. HAUNCHING AND INTRAL BACKFILL SHALL BE COMPACTED IN 6" MAXIMUM LIFTS TO NOT LESS THAN 90% STANDARD PROCTOR DENSITY FOR THE ENTIRE DEPTH OF THE MATERIAL PLACED. THE BACKFILL SHALL BE BROUGHT UP EVENLY ON BOTH SIDES OF THE PIPE FOR THE FULL LENGTH OF THE PIPE. HAUNCHING SHALL EXTEND TO THE SPRINGLINE OF THE PIPE. MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 18".
  2. FINAL BACKFILL FOR ALL ROP INSTALLATIONS WHERE "L" IS 5' OR LESS SHALL BE B-BORROW FOR STRUCTURE BACKFILL MEETING THE MATERIAL REQUIREMENTS OF THE INDOT AND SHALL BE COMPACTED IN 6" MAXIMUM LIFTS TO NOT LESS THAN 90% STANDARD PROCTOR DENSITY FOR THE ENTIRE DEPTH OF THE MATERIAL PLACED. THE BACKFILL FOR THE TOP 6" OF THE EXCAVATION BELOW THE START OF THE AGGREGATE SUBBASE OF THE PAVEMENT SHALL BE #53 STONE MEETING THE MATERIAL REQUIREMENTS OF THE INDOT AND SHALL BE COMPACTED TO NOT LESS THAN 90% STANDARD PROCTOR DENSITY. FINAL BACKFILL FOR ALL ROP INSTALLATIONS WHERE "L" IS GREATER THAN 5' SHALL BE CLEAN FILL MATERIAL FREE OF ROCKS LARGER THAN 6" IN DIAMETER, FROZEN LUMPS OF SOIL, WOOD OR OTHER EXTRANEOUS MATERIAL. COMPACTED IN 12" MAXIMUM LIFTS TO NOT LESS THAN 90% STANDARD PROCTOR DENSITY FOR THE ENTIRE DEPTH OF THE EXCAVATION. THE FINAL 6 INCHES OF THE EXCAVATION SHALL CONSIST OF TOPSOIL.
  3. THE MINIMUM COVER FROM THE TOP OF THE INSTALLED PAVEMENT TO THE TOP OF THE INSTALLED PIPE SHALL BE THE PAVEMENT SECTION THICKNESS (ALL BITUMINOUS AND AGGREGATE MATERIAL ABOVE THE SUBGRADE) PLUS 1'-0", BUT UNDER NO CIRCUMSTANCES SHALL THE COVER ALONG ANY PART OF THE PIPE FROM THE FINAL PAVEMENT ELEVATION TO THE TOP OF THE PIPE BE LESS THAN 2.5 FEET.
  4. IF EXISTING SUBGRADE HAS BEEN LIME STABILIZED, BACKFILL WITH B-BORROW UP TO BOTTOM OF UNTREATED EXISTING SUBGRADE AND FILL TO TOP OF TREATED SUBGRADE WITH LIME STABILIZED SOIL.
  5. THESE STANDARDS SHALL APPLY FOR STORM SEWERS INSTALLED WITHIN CITY EXISTING AND PROPOSED R/W REGARDLESS OF JURISDICTION OVER STORM PIPES.
  6. ALL STORM PIPE WITHIN EXISTING OR PROPOSED CITY R/W SHALL BE REINFORCED CONCRETE PIPE REGARDLESS OF JURISDICTION OVER STORM PIPES.

NOTES: CONSTRUCTION TOLERANCE FOR YARD INLETS WILL BE +0.0' TO -0.2'.

"EXCEPT FOR FORCE MAINS, CONTRACTOR TO INSTALL CONCRETE GRADLES WHEN THE VERTICAL SEPARATION (AS MEASURED FROM THE EXTERIOR OF THE PIPES) BETWEEN SANITARY SEWER FACILITIES AND STORM SEWERS IS 18" OR LESS."

ALL MANHOLES TO BE CONSTRUCTED WITH ONE 4" RISER RING (NO MORE, NO LESS) TO ESTABLISH PLAN CASTING GRADE.

THERE SHALL BE NO CASTINGS IN PAVED AREAS, CURBING, OR SIDEWALKS IN THE PUBLIC RIGHT-OF-WAY WITH THE EXCEPTION OF CURB INLETS AS SHOWN ALL EXISTING OFF-SITE DRAIN TILES THAT ARE ENCOUNTERED SHALL BE TIED INTO THE PROPOSED STORM SEWER SYSTEM WITH A POSITIVE OUTFLOW ALL STORM SEWER CASTINGS SHALL BE LABELED "DUMP" NO WASTE-DRAINS TO WATERWAY". CONTRACTOR TO USE R.C.P. PIPE STORM PIPE

DENOTES FULL DEPTH GRANULAR BACKFILL PER CITY STANDARDS NOTED ON THIS SHEET.

NOTE:  
FOR INSTALLATION OF STORM MAINS, WATER MAINS, SANITARY MAINS, WATER SERVICE LATERALS, SANITARY SERVICE LATERALS UNDER CITY STREETS, REGARDLESS OF THE JURISDICTION OF THE UTILITY, THE MINIMUM COVER FROM THE TOP OF THE INSTALLED PAVEMENT TO THE TOP OF THE INSTALLED PIPE SHALL BE THE PAVEMENT SECTION THICKNESS (ALL BITUMINOUS AND AGGREGATE MATERIAL ABOVE THE SUBGRADE) PLUS 1'-0", BUT UNDER NO CIRCUMSTANCES SHALL THE COVER ALONG ANY PART OF THE PIPE FROM THE FINAL PAVEMENT ELEVATION TO THE TOP OF THE PIPE BE LESS THAN 2.5 FEET.

CURB INLET TABLE

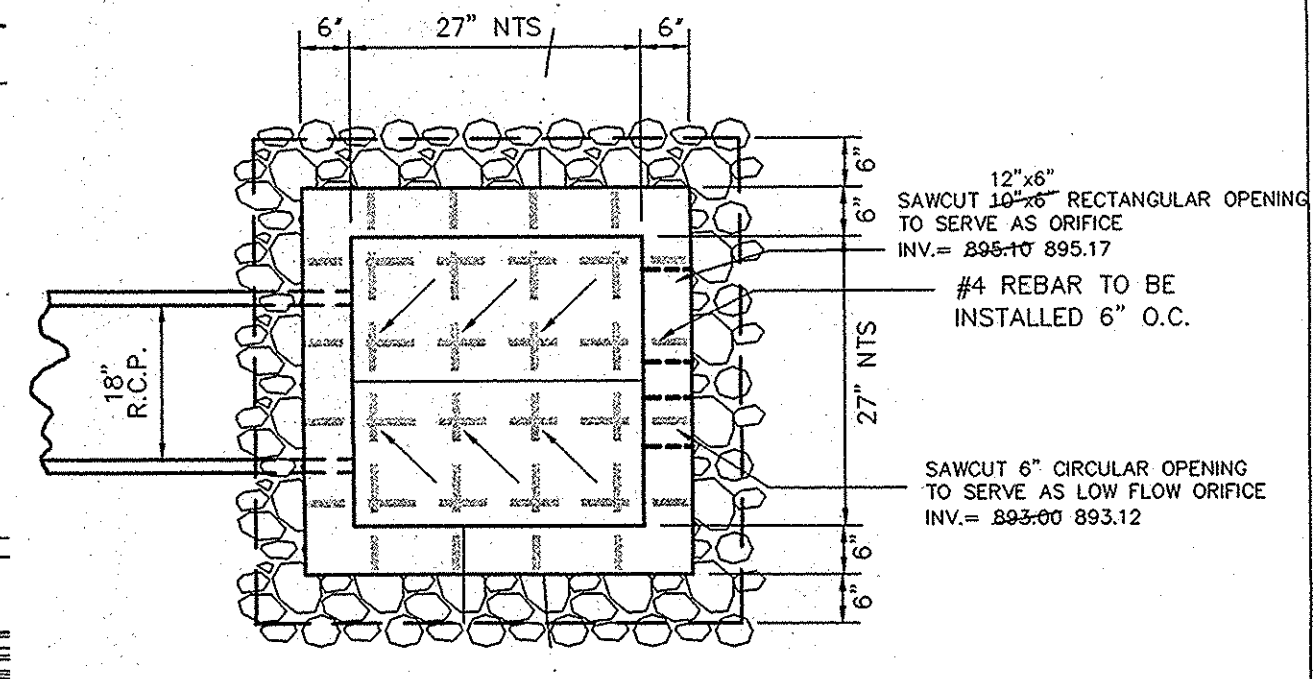
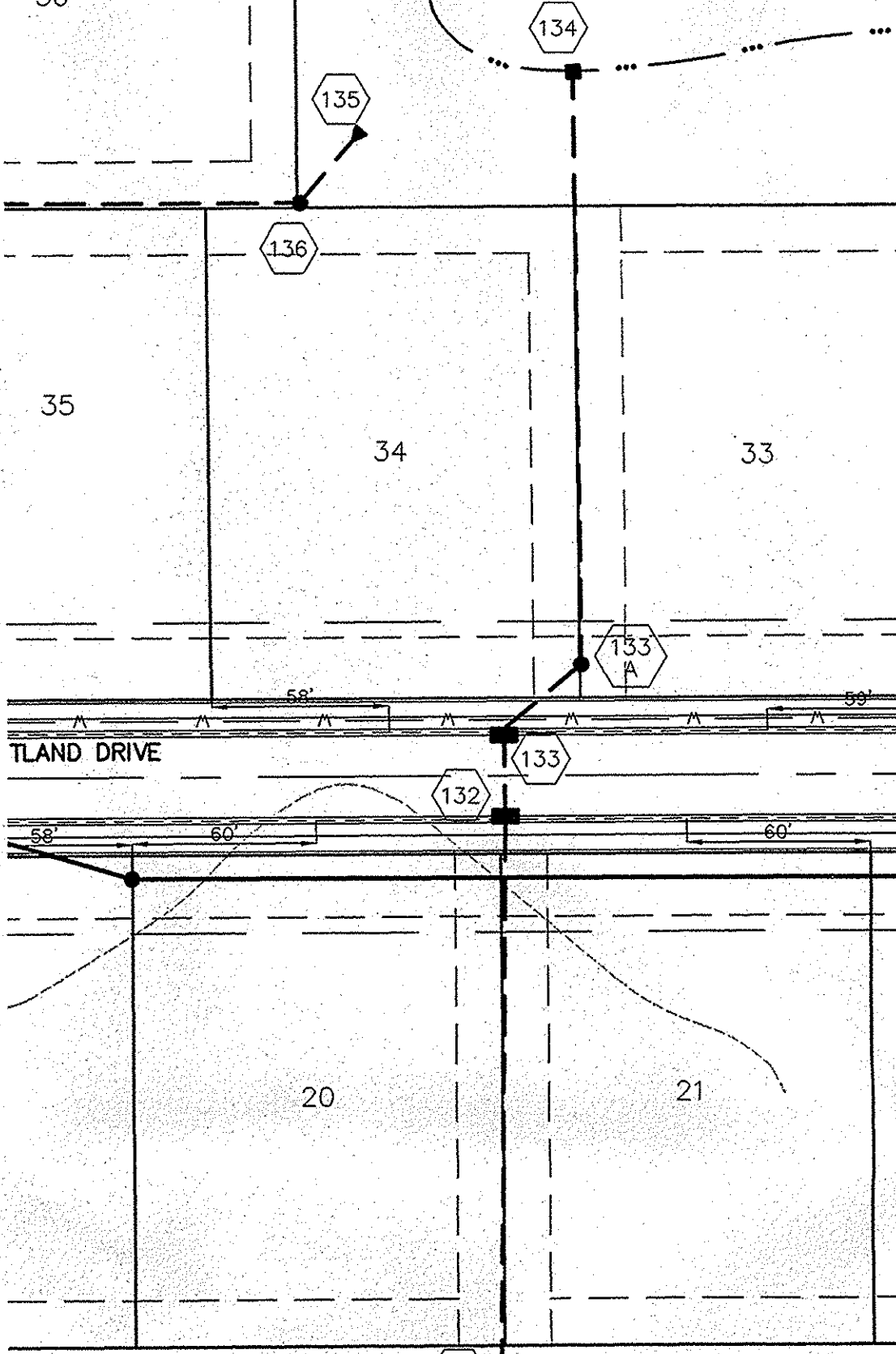
PIPE SIZE	STRUCTURES LESS THAN 48" FROM T/C TO INVERT	STRUCTURES GREATER THAN 48" FROM T/C TO INVERT	ANGLE AND QUALITY OF PIPES WILL REQUIRE SPECIAL DESIGN	STEPS REQUIRED	CURB CASTING *R-3501 N	CASTING *3501 TL & TR
12" to 18"	2'x2'		DESIGN APPROVAL	No	Yes	Yes
18" or 21"		MH/BOX	DESIGN APPROVAL	Yes	Yes	Yes
21" or 27"			DESIGN APPROVAL	No	No	Yes
24" or LARGER	DESIGN APPROVAL		DESIGN APPROVAL	No	No	Yes
24" or LARGER		MH/BOX	DESIGN APPROVAL	Yes**	Yes	Yes

\* PIPES NO LARGER THAN 18" CAN BE USED IN THE 2' SIDE OF THIS BOX  
\*\* INCOMING AND OUT GOING PIPES EFFECT STEPS IN THIS STRUCTURE

SPECIAL NOTE:  
STRUCTURES DEEPER THAN 48" FROM T/C TO INVERT WILL BE A M.H. OR A BOX WITH STEPS UNLESS SPECIAL DESIGN IS APPROVED.

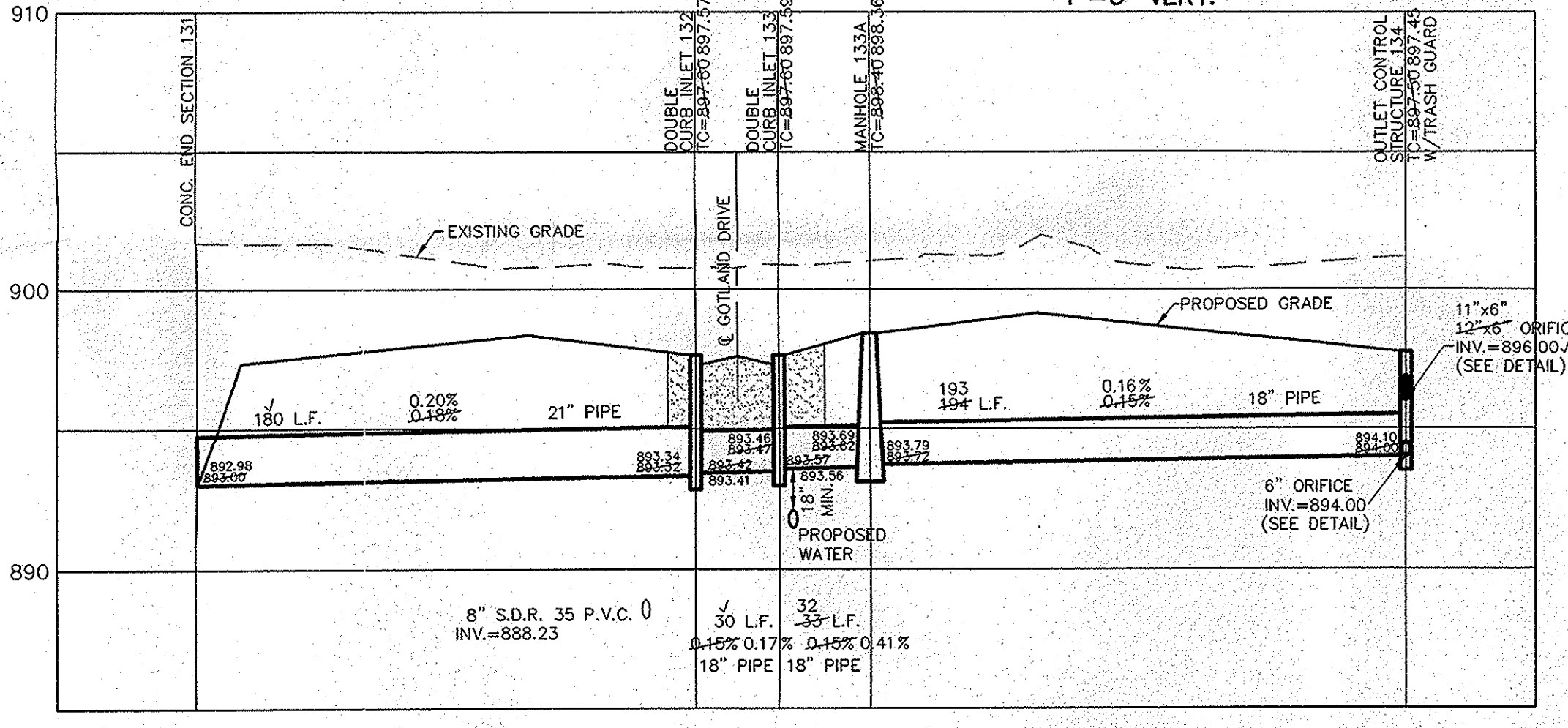
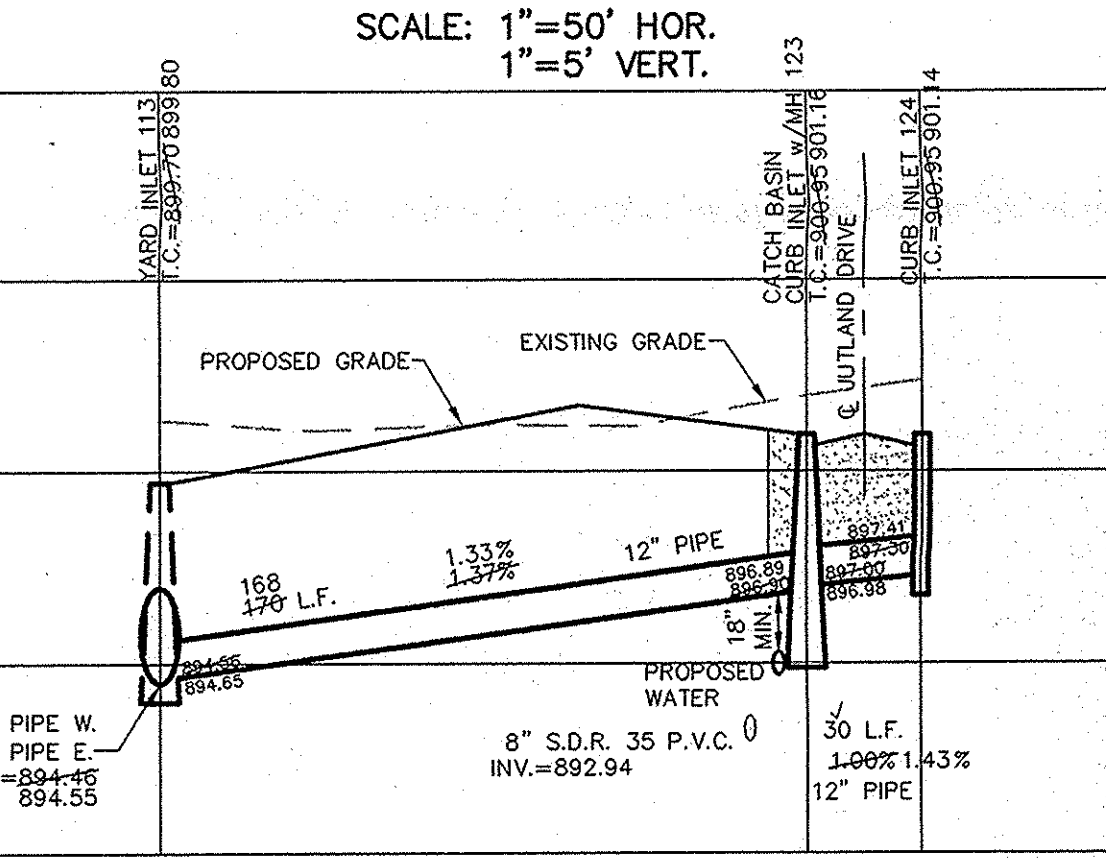
SPECIAL NOTE:  
STRUCTURES WILL BE DESIGNED FOR MAXIMUM FLOW IN PIPES

SPECIAL NOTE:  
COUNTY MAY REQUIRE STEPS TO BE INSTALLED AFTER STRUCTURE IS SET, TO IMPROVE ACCESS.



NOTE:  
CONTRACTOR SHALL VERIFY PROPER METHOD OF ATTACHING TO OUTLET STRUCTURE PRIOR TO FABRICATION & INSTALLATION

SPECIAL STRUCTURE NO. 110 DETAIL  
NOT TO SCALE



SCALE: 1" = 50' HOR.  
1" = 5' VERT.

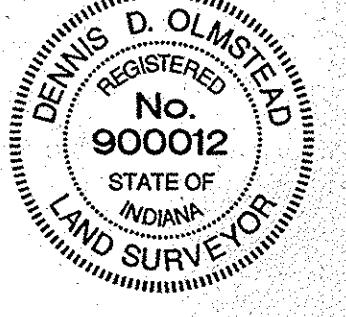
This information was gathered for input into the Hamilton County Geographic Information System (GIS). This document is considered an official record of the GIS.  
Entry Date: 1-7-2010  
Entered By: SLM

EXISTING POND  
N.P. = 893.00  
2 YEAR ELEV. = 894.93  
10 YEAR ELEV. = 895.46  
100 YEAR ELEV. = 896.70  
BOTTOM ELEV. = 885.00

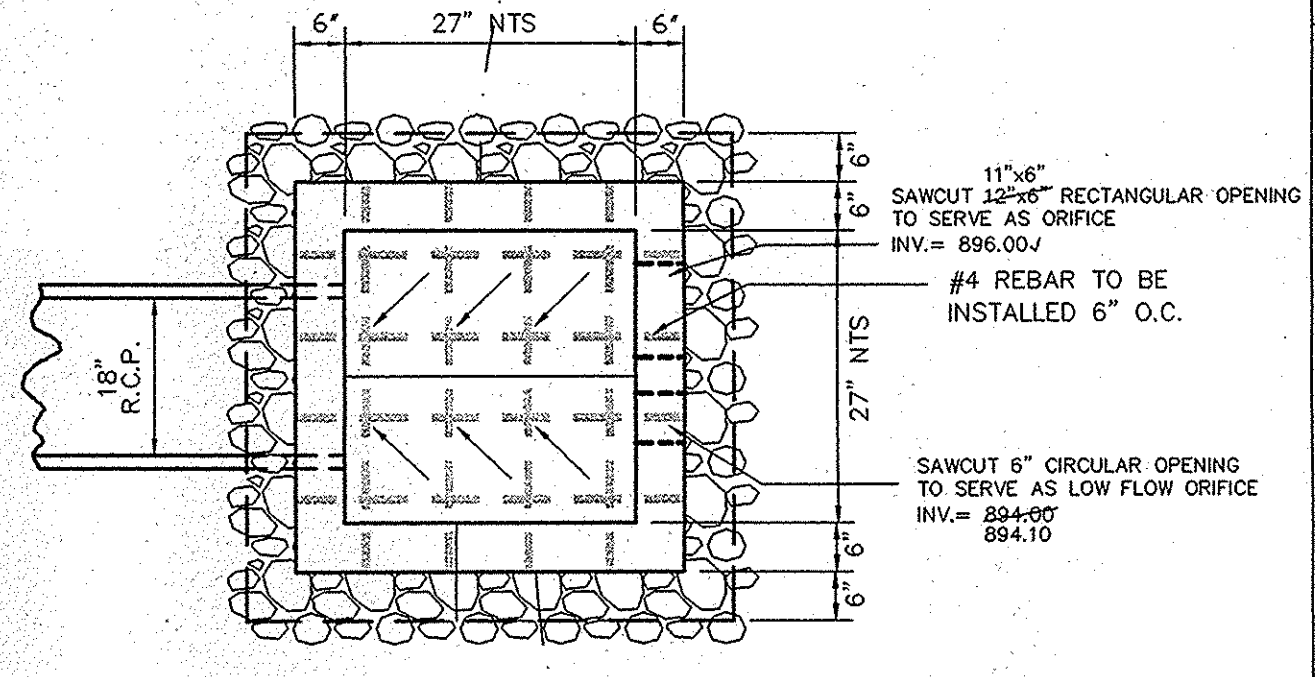
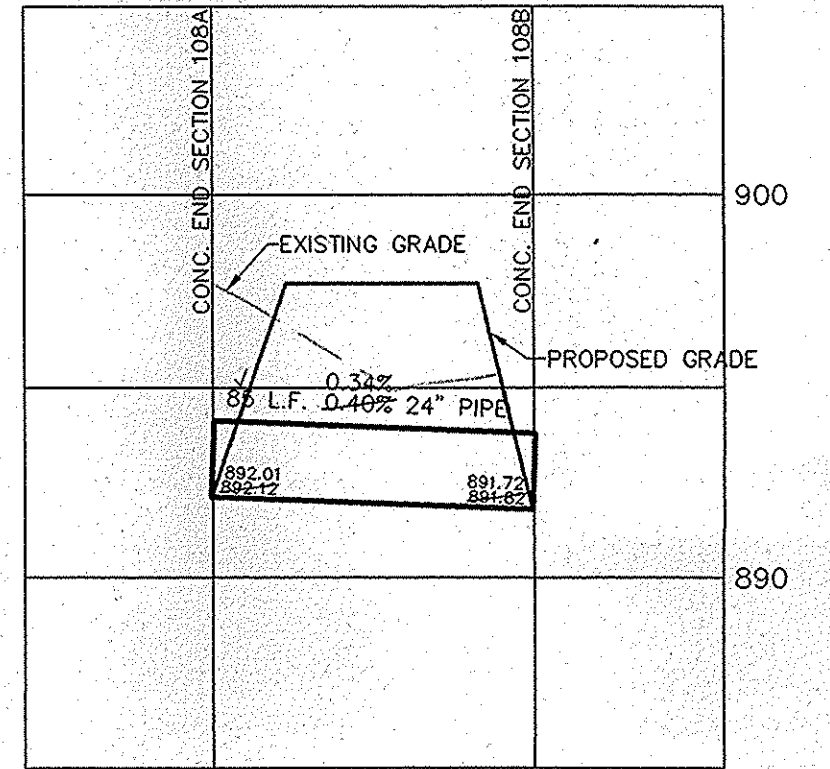
EXISTING POND  
N.P. = 893.00  
2 YEAR ELEV. = 894.93  
10 YEAR ELEV. = 895.46  
100 YEAR ELEV. = 896.70  
BOTTOM ELEV. = 885.00

RECORD DRAWING

Dennis D. Olmstead  
Registered Land Surveyor  
No. 900012  
DATE: 12/16/08

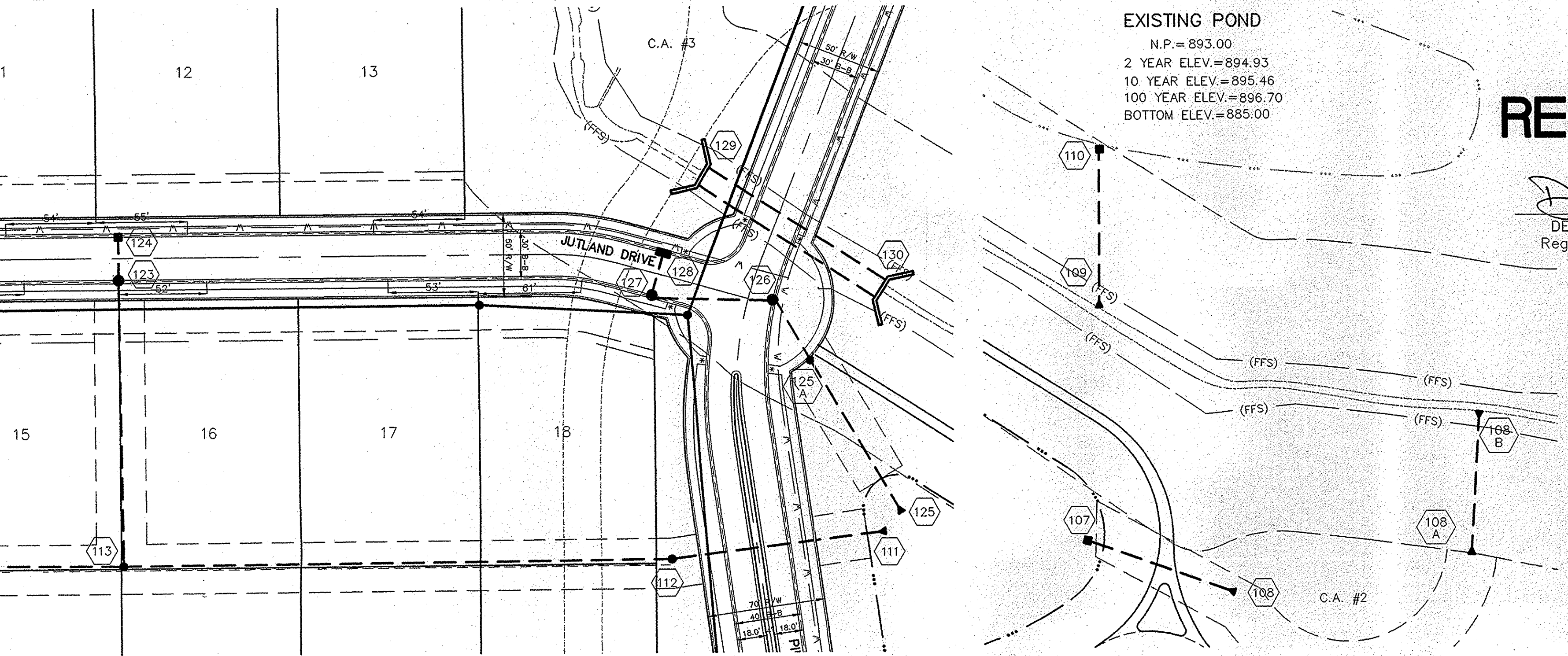


SCALE: 1" = 50' HOR.  
1" = 5' VERT.



NOTE:  
CONTRACTOR SHALL VERIFY PROPER METHOD OF ATTACHING TO OUTLET STRUCTURE PRIOR TO FABRICATION & INSTALLATION

SPECIAL STRUCTURE NO. 134 DETAIL  
NOT TO SCALE



ASBUILT'S  
REVISED PER AGENCY COMMENTS  
REVISED PER AGENCY COMMENTS  
REVISED PER AGENCY COMMENTS  
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REVISED PER AGENCY COMMENTS  
DATE

12/17/08  
1/25/09  
7/19/08  
7/22/08  
7/19/08  
7/19/08  
12/14/07  
11/15/07

MARK

REGISTERED PROFESSIONAL ENGINEER  
No. 19358  
STATE OF INDIANA  
Dennis J. Stoepelwerth  
CERTIFIED: 5/01/07

THIS DRAWING IS NOT INTENDED TO BE ORIGINAL BOUNDARY SURVEY, A ROUTE SURVEY OR A SURVEYOR LOCATION REPORT.

STOEPPELWERTH & ASSOCIATES, INC.  
CONSULTING ENGINEERS & LAND SURVEYORS  
7985 East 106th Street, Fishers, IN 46038-2505  
Phone: (317) 849-5935 Fax: (317) 849-5942  
Toll Free: (800) 728-6917

INDIANA

STORM PLAN & PROFILES  
WESTMONT  
SECTION 1  
CARMEL

DRAWN BY: BAH  
CHECKED BY: EEF  
SHEET NO. C601  
S & A JOB NO. 52415PLA

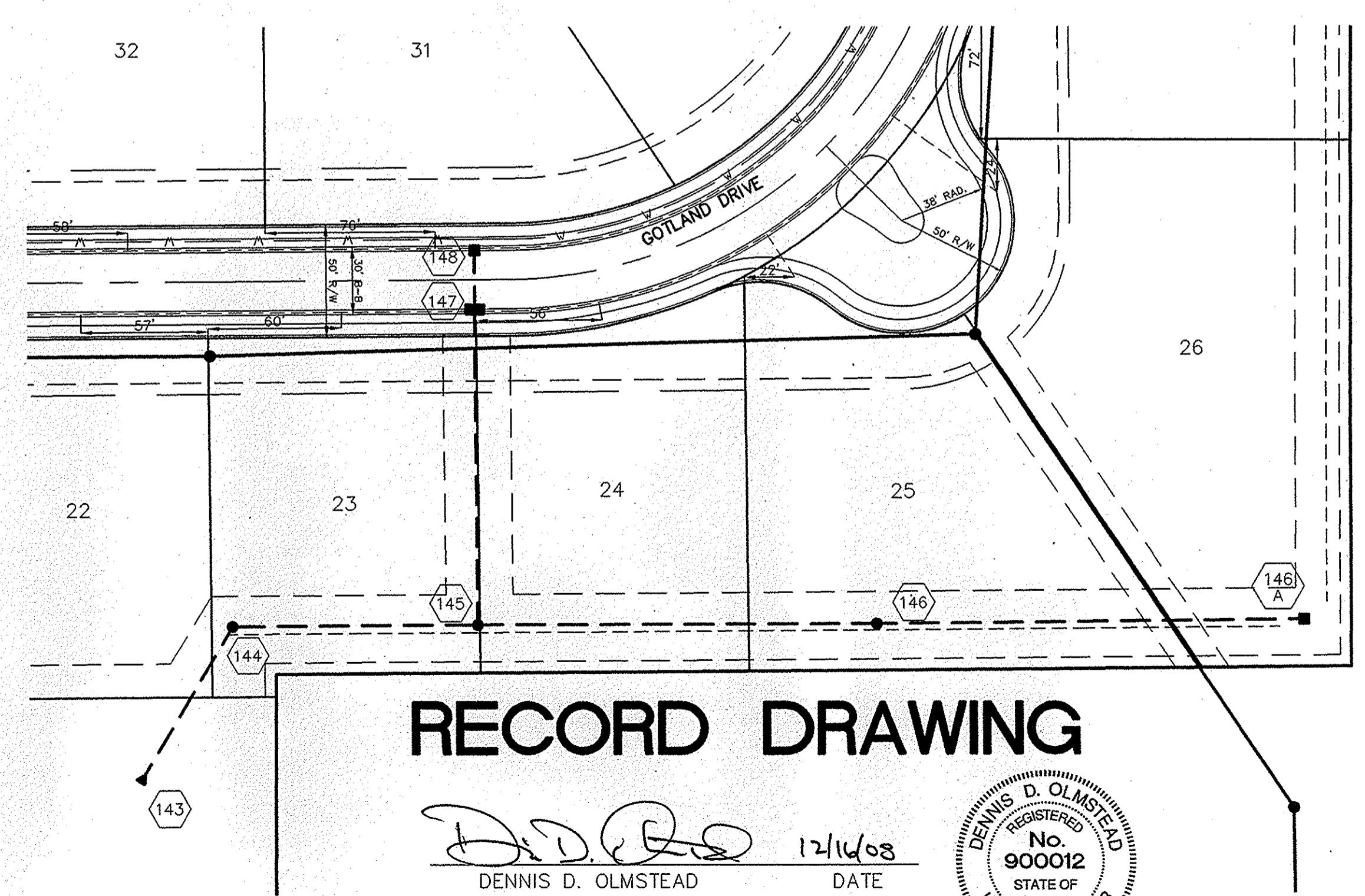
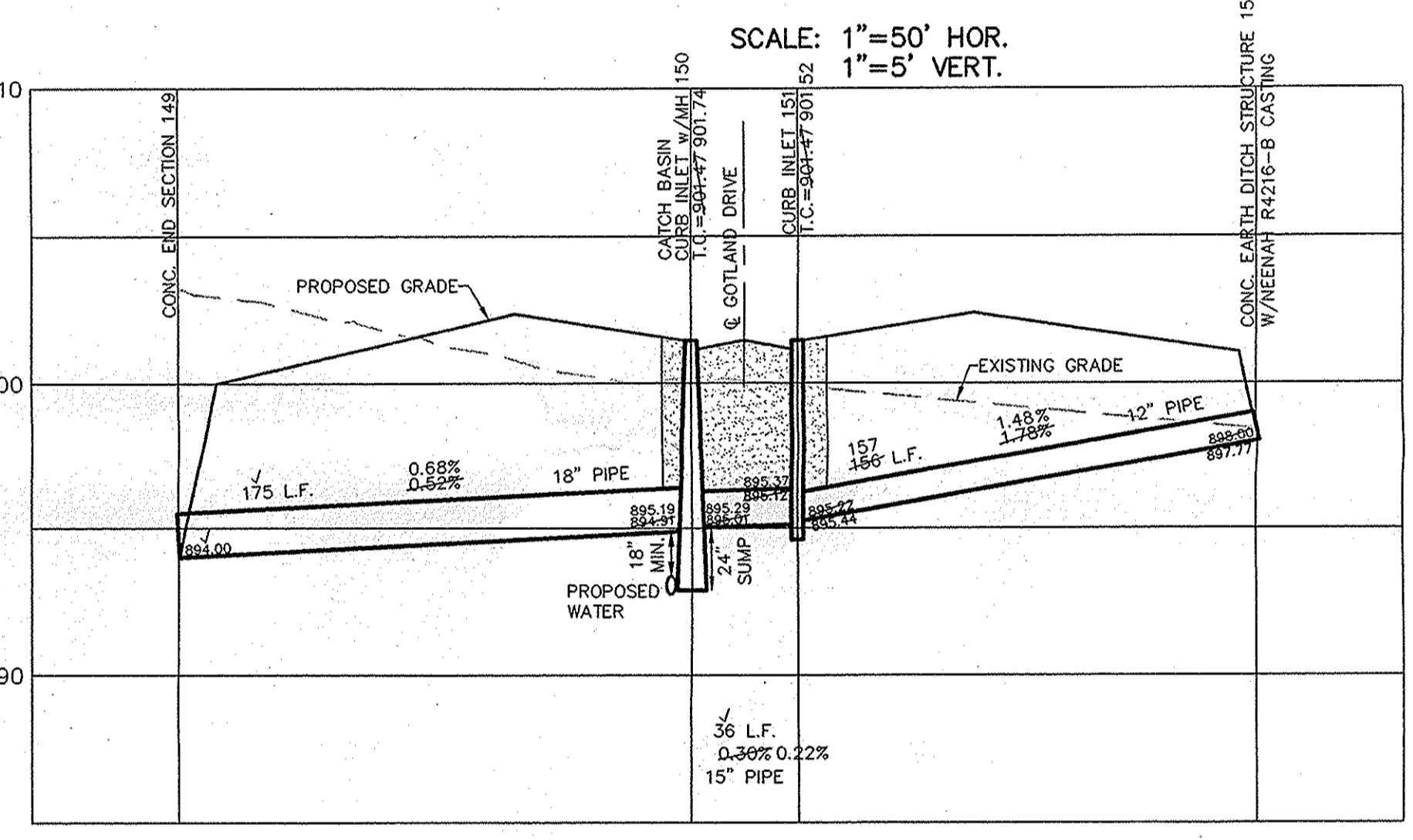
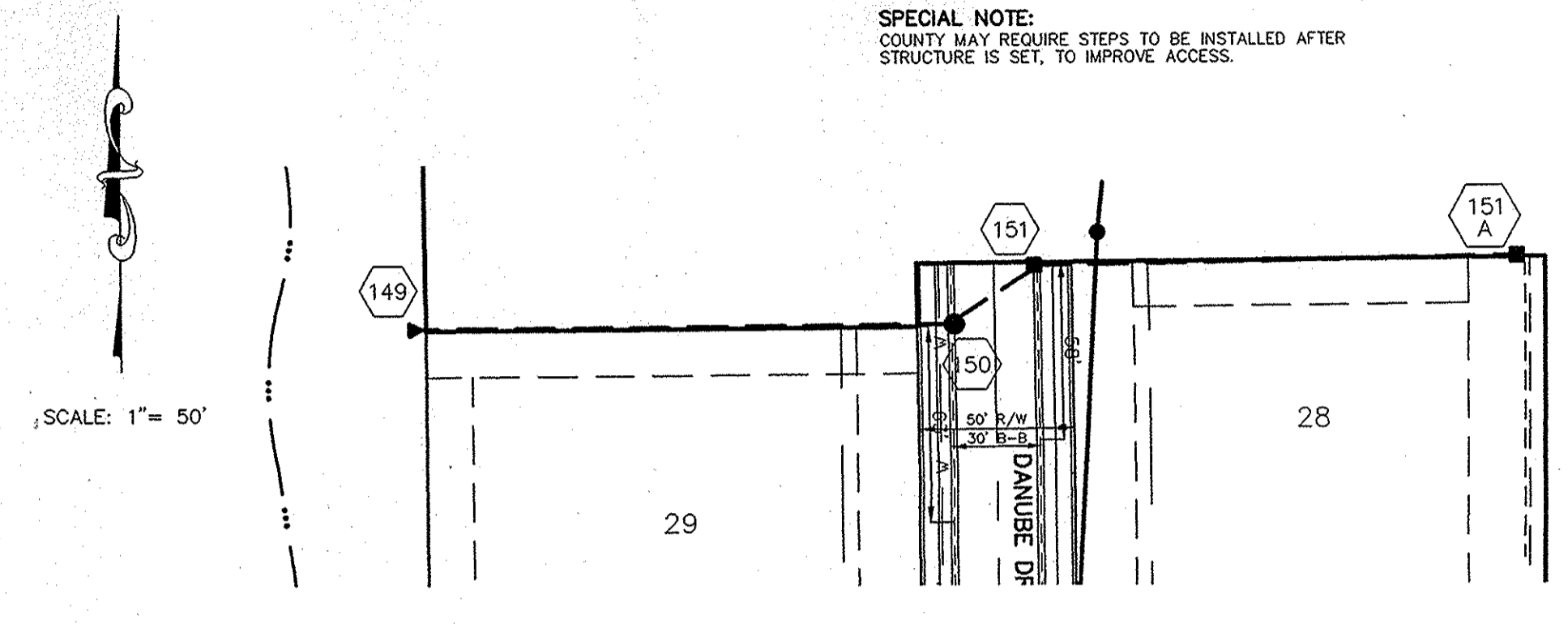


**CURB INLET TABLE**

PIPE SIZE	STRUCTURES LESS THAN 48" FROM T/C TO INVERT	STRUCTURES GREATER THAN 48" FROM T/C TO INVERT	ANGLE AND QUALITY OF PIPES WILL REQUIRE SPECIAL DESIGN	STEPS REQUIRED	CURB CASTING *R-3501 N	CASTING *3501 TL & TR
12" to 18"	2'x2'		DESIGN APPROVAL	No	Yes	Yes
18" or 21"		MH/BOX	DESIGN APPROVAL	Yes	Yes	Yes
21" or 27"	2'x3'*		DESIGN APPROVAL	No	No	Yes
24" or LARGER	DESIGN APPROVAL		DESIGN APPROVAL	No	No	Yes
24" or LARGER		MH/BOX	DESIGN APPROVAL	Yes**	Yes	Yes

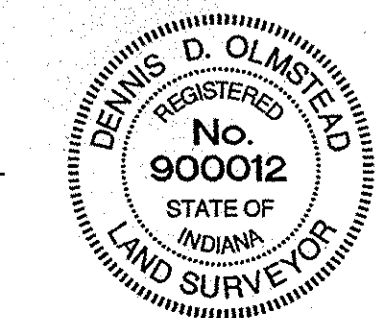
\* PIPES NO LARGER THAN 18" CAN BE USED IN THE 2' SIDE OF THIS BOX  
 \*\* INCOMING AND OUT GOING PIPES EFFECT STEPS IN THIS STRUCTURE

**SPECIAL NOTE:**  
 STRUCTURES DEEPER THAN 48" FROM T/C TO INVERT WILL BE A M.H. OR A BOX WITH STEPS UNLESS SPECIAL DESIGN IS APPROVED.  
**SPECIAL NOTE:**  
 STRUCTURES WILL BE DESIGNED FOR MAXIMUM FLOW IN PIPES  
**SPECIAL NOTE:**  
 COUNTY MAY REQUIRE STEPS TO BE INSTALLED AFTER STRUCTURE IS SET, TO IMPROVE ACCESS.

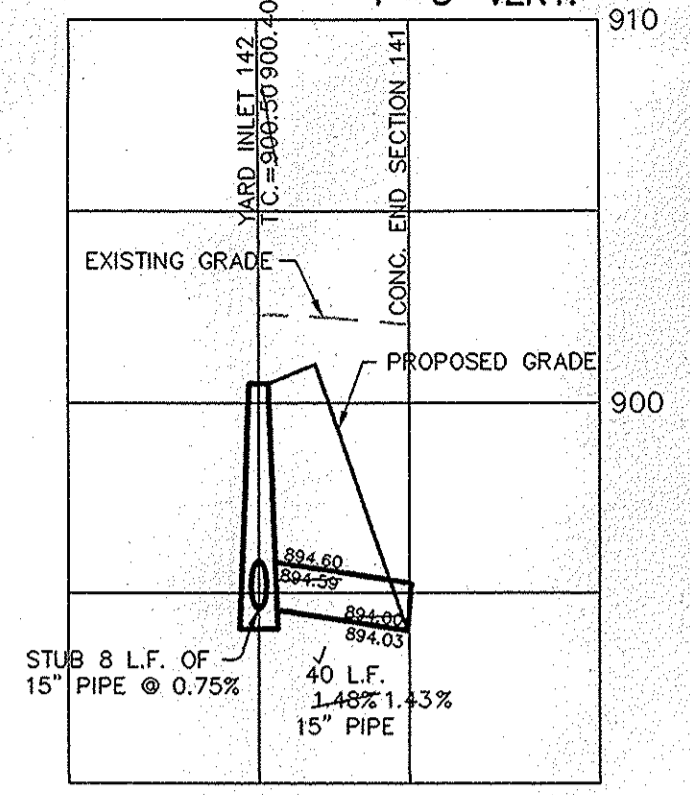


**RECORD DRAWING**

DENNIS D. OLMSTEAD  
 Registered Land Surveyor  
 No. 900012  
 DATE: 12/14/08



SCALE: 1"=50' HOR.  
 1"=5' VERT.



NOTE:  
 THE STORM SEWER SYSTEM SHALL BE CONSTRUCTED PER DESIGN SPECIFIED AND AS APPROVED BY THE CITY OF CARMEL ON THE FINAL APPROVED CONSTRUCTION PLANS. DEVIATIONS FROM THE APPROVED DESIGN SHALL ONLY BE PERMITTED DUE TO SPECIAL APPROVAL FROM A DESIGNATED REPRESENTATIVE OF THE CITY OF CARMEL IN ADDITION TO DEVIATION SHALL BE INCLUDED AS A REQUIREMENT ON AS-BUILT/RECORD DRAWINGS SUBMITTED FOR RELEASE OF PERFORMANCE GUARANTEES. APPROVED DESIGN SLOPES IDENTIFIED AS GENERATING VELOCITIES OF 2.5 FPS OR LESS OR 10 FPS OR GREATER (AT FULL FLOW CAPACITY) SHALL REQUIRE AS-BUILT CERTIFICATION AT THE TIME OF CONSTRUCTION, PRIOR TO BACKFILLING THE PIPE. THE CONTRACTOR IS INSTRUCTED TO AS-BUILT EACH SECTION OF STORM PIPE AS IT IS BEING INSTALLED TO ENSURE COMPLIANCE WITH THE DESIGN PLANS AND AS APPROVED BY THE CITY OF CARMEL.

■ DENOTES FULL DEPTH GRANULAR BACKFILL PER CITY STANDARDS NOTED ON THIS SHEET.

NOTES: CONSTRUCTION TOLERANCE FOR YARD INLETS WILL BE +0.0' TO -0.20'.

\*EXCEPT FOR FORCE MAINS, CONTRACTOR TO INSTALL CONCRETE CRADLES WHEN THE VERTICAL SEPARATION (AS MEASURED FROM THE EXTERIOR OF THE PIPES) BETWEEN SANITARY SEWER FACILITIES AND STORM SEWERS IS 18" OR LESS.

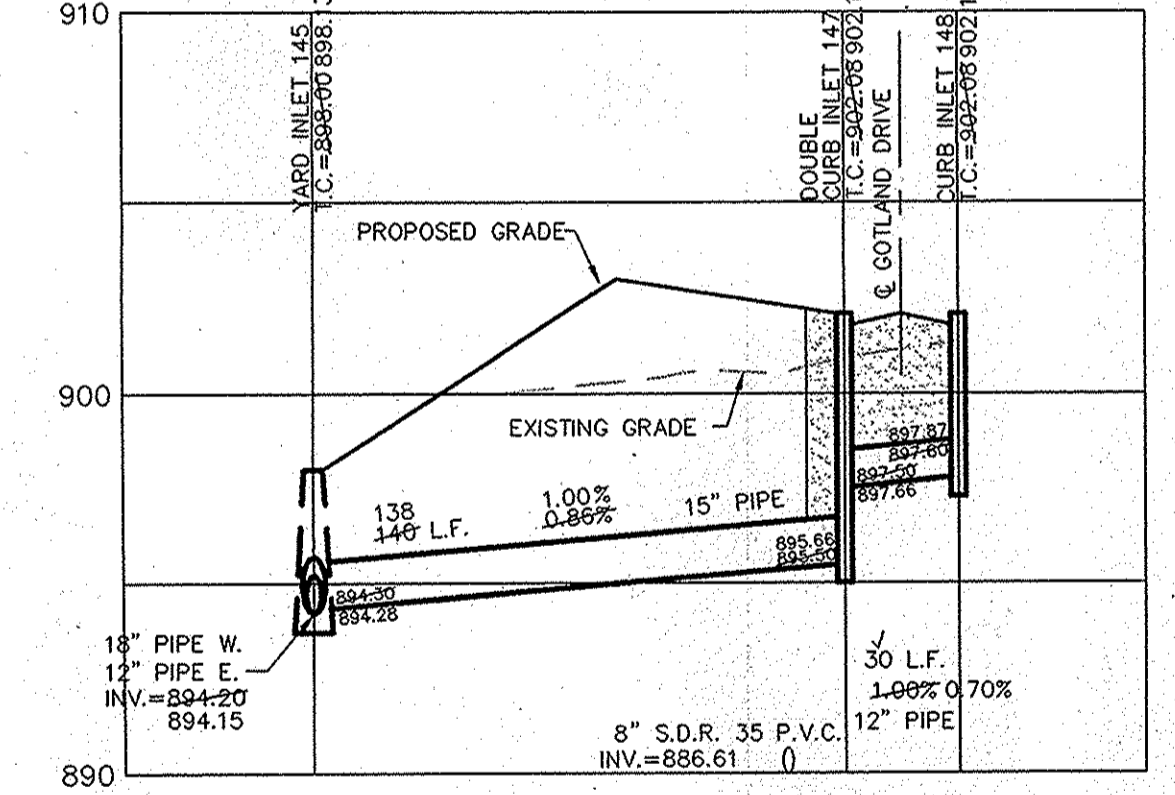
ALL MANHOLES TO BE CONSTRUCTED WITH ONE 4" RISER RING (NO MORE, NO LESS) TO ESTABLISH PLAN CASTING GRADE.

THERE SHALL BE NO CASTINGS IN PAVED AREAS, CURBING, OR SIDEWALKS IN THE PUBLIC RIGHT-OF-WAY WITH THE EXCEPTION OF CURB INLETS AS SHOWN. ALL EXISTING OFF-SITE DRAIN TILES THAT ARE ENCOUNTERED SHALL BE TIED INTO THE PROPOSED STORM SEWER SYSTEM WITH A POSITIVE OUTFLOW ALL STORM SEWER CASTINGS SHALL BE LABELED "DUMP NO WASTE-DRAINS TO WATERWAY". CONTRACTOR TO USE R.C.P. PIPE STORM PIPE

**NOTES:**

1. BEDDING AND HAUNCHING FOR ALL RCP INSTALLATIONS SHALL BE #3 STONE MEETING THE MATERIAL REQUIREMENTS OF THE MOOT. BEDDING SHALL BE PLACED IN THE TRENCH BOTTOM SUCH THAT AFTER THE PIPE IS INSTALLED TO GRADE AND LINE, THERE REMAINS A 4" MINIMUM DEPTH OF MATERIAL BELOW THE PIPE BARREL AND A MINIMUM OF 3" BELOW THE BELL. FOR PIPE SIZES 66" AND LARGER, THE MINIMUM DEPTH OF MATERIAL BELOW THE PIPE BARREL SHALL BE 6". BEDDING SHALL BE PLACED TO BE UNIFORM AS POSSIBLE, BUT SHALL BE LOOSELY PLACED UNCOMPACTED MATERIAL UNDER THE MIDDLE THIRD OF THE PIPE FROM TO PLACEMENT OF THE PIPE. IF THE UNDERLYING SOILS OF THE TRENCH BOTTOM ARE SOFT OR YIELDING, THE SOIL SHALL BE UNDERCUT TO SUCH A DEPTH THAT WHEN REPAIRED WITH #2 STONE IT WILL PRODUCE A UNIFORM AND STABLE FOUNDATION ALONG THE ENTIRE LENGTH OF THE PIPE. HAUNCHING AND INITIAL BACKFILL SHALL BE COMPACTED IN 6" MAXIMUM LIFTS TO NOT LESS THAN 90% STANDARD PROCTOR DENSITY FOR THE ENTIRE DEPTH OF THE MATERIAL PLACED. THE BACKFILL SHALL BE BROUGHT UP EVENLY ON BOTH SIDES OF THE PIPE FOR THE FULL LENGTH OF THE PIPE. HAUNCHING SHALL EXTEND TO THE SPRINGLINE OF THE PIPE. MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 18".
2. FINAL BACKFILL FOR ALL RCP INSTALLATIONS WHERE "L" IS 5' OR LESS SHALL BE B-BORROW FOR STRUCTURE BACKFILL MEETING THE MATERIAL REQUIREMENTS OF THE MOOT AND SHALL BE COMPACTED IN 6" MAXIMUM LIFTS TO NOT LESS THAN 90% STANDARD PROCTOR DENSITY FOR THE ENTIRE DEPTH OF THE MATERIAL PLACED. THE BACKFILL FOR THE TOP 6" OF THE EXCAVATION BELOW THE START OF THE AGGREGATE SUBBASE OF THE PAVEMENT SHALL BE #3 STONE MEETING THE MATERIAL REQUIREMENTS OF THE MOOT AND SHALL BE COMPACTED TO NOT LESS THAN 90% STANDARD PROCTOR DENSITY. FINAL BACKFILL FOR ALL RCP INSTALLATIONS WHERE "L" IS GREATER THAN 5' SHALL BE CLEAN FILL MATERIAL FREE OF ROCKS LARGER THAN 6" IN DIAMETER, FROZEN LUMPS OF SOIL, WOOD OR OTHER EXTRANEOUS MATERIAL. COMPACTED IN 12" MAXIMUM LIFTS TO NOT LESS THAN 90% STANDARD PROCTOR DENSITY FOR THE ENTIRE DEPTH OF THE EXCAVATION. THE FINAL 6 INCHES OF THE EXCAVATION SHALL CONSIST OF TOPSOIL.
3. THE MINIMUM COVER FROM THE TOP OF THE INSTALLED PAVEMENT TO THE TOP OF THE INSTALLED PIPE SHALL BE THE PAVEMENT SECTION THICKNESS (ALL BITUMINOUS AND AGGREGATE MATERIAL ABOVE THE SUBGRADE) PLUS 1'-0", BUT UNDER NO CIRCUMSTANCES SHALL THE COVER ALONG ANY PART OF THE PIPE FROM THE FINAL PAVEMENT ELEVATION TO THE TOP OF THE PIPE BE LESS THAN 2.5 FEET.
4. IF EXISTING SUBGRADE HAS BEEN LIKE STABILIZED, BACKFILL WITH B-BORROW UP TO BOTTOM OF UNTREATED EXISTING SUBGRADE AND FILL TO TOP OF TREATED SUBGRADE WITH THE STABILIZED SOIL.
5. THESE STANDARDS SHALL APPLY FOR STORM SEWERS INSTALLED WITHIN CITY EXISTING AND PROPOSED R/W REGARDLESS OF JURISDICTION OVER STORM PIPES.
6. ALL STORM PIPE WITHIN EXISTING OR PROPOSED CITY R/W SHALL BE REINFORCED CONCRETE PIPE REGARDLESS OF JURISDICTION OVER STORM PIPES.

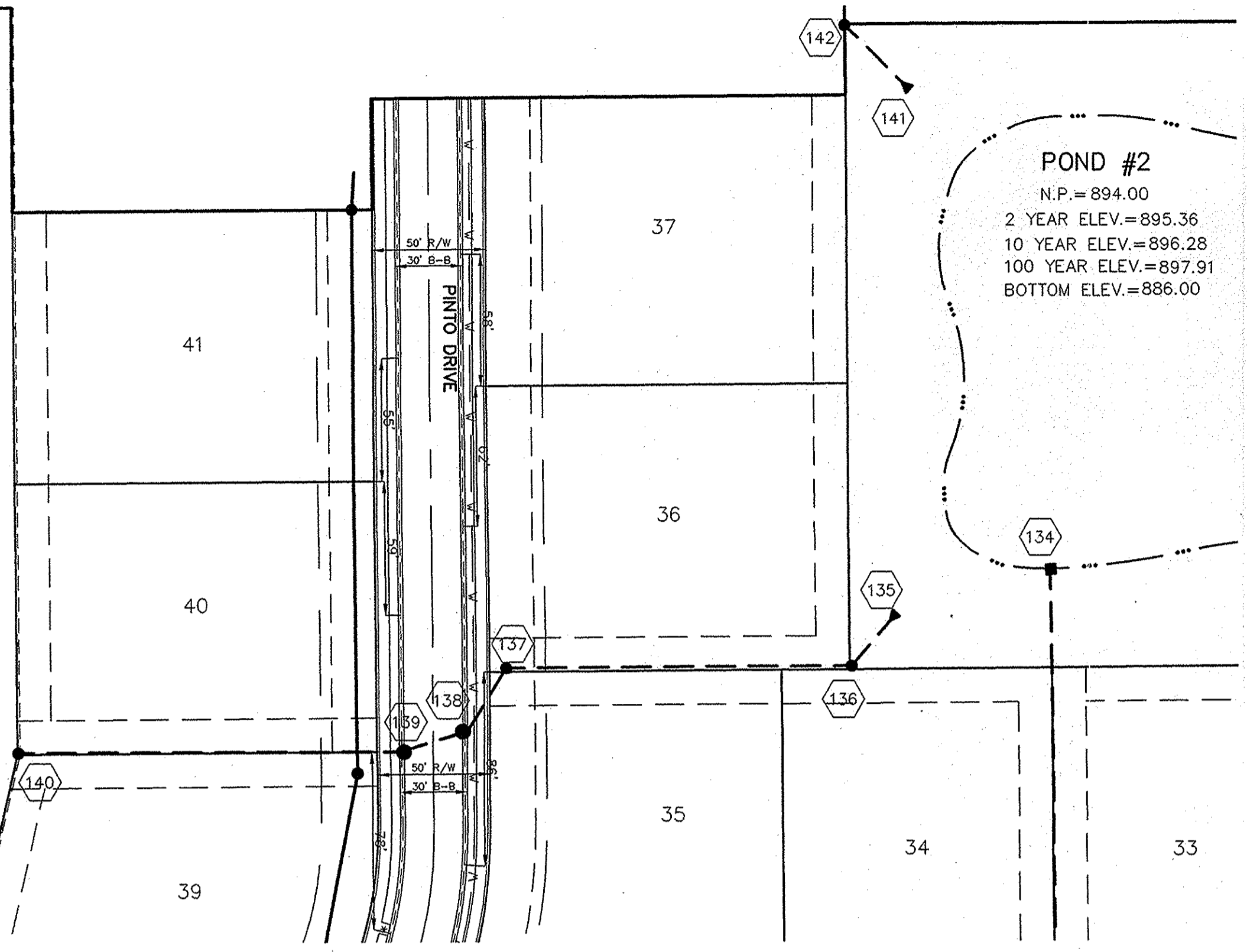
SCALE: 1"=50' HOR.  
 1"=5' VERT.



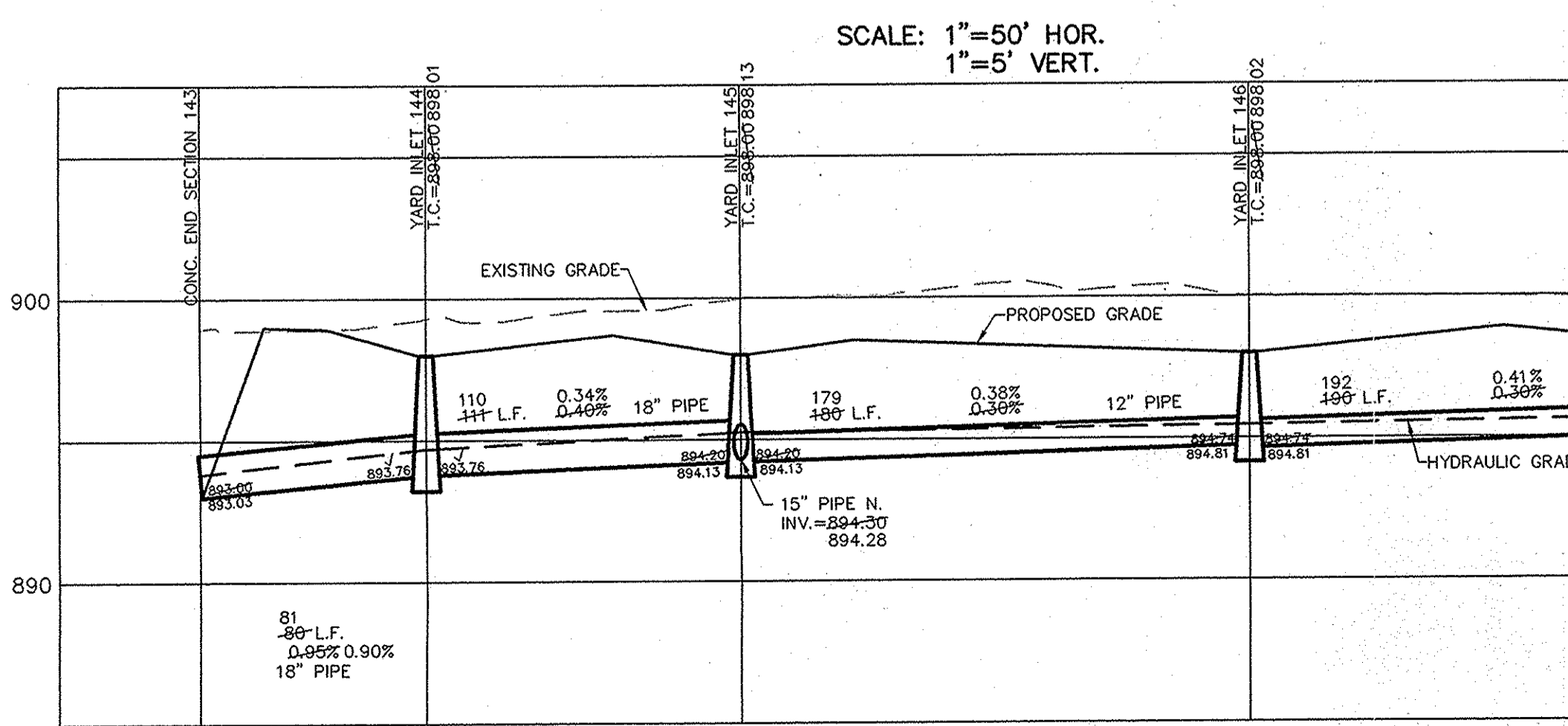
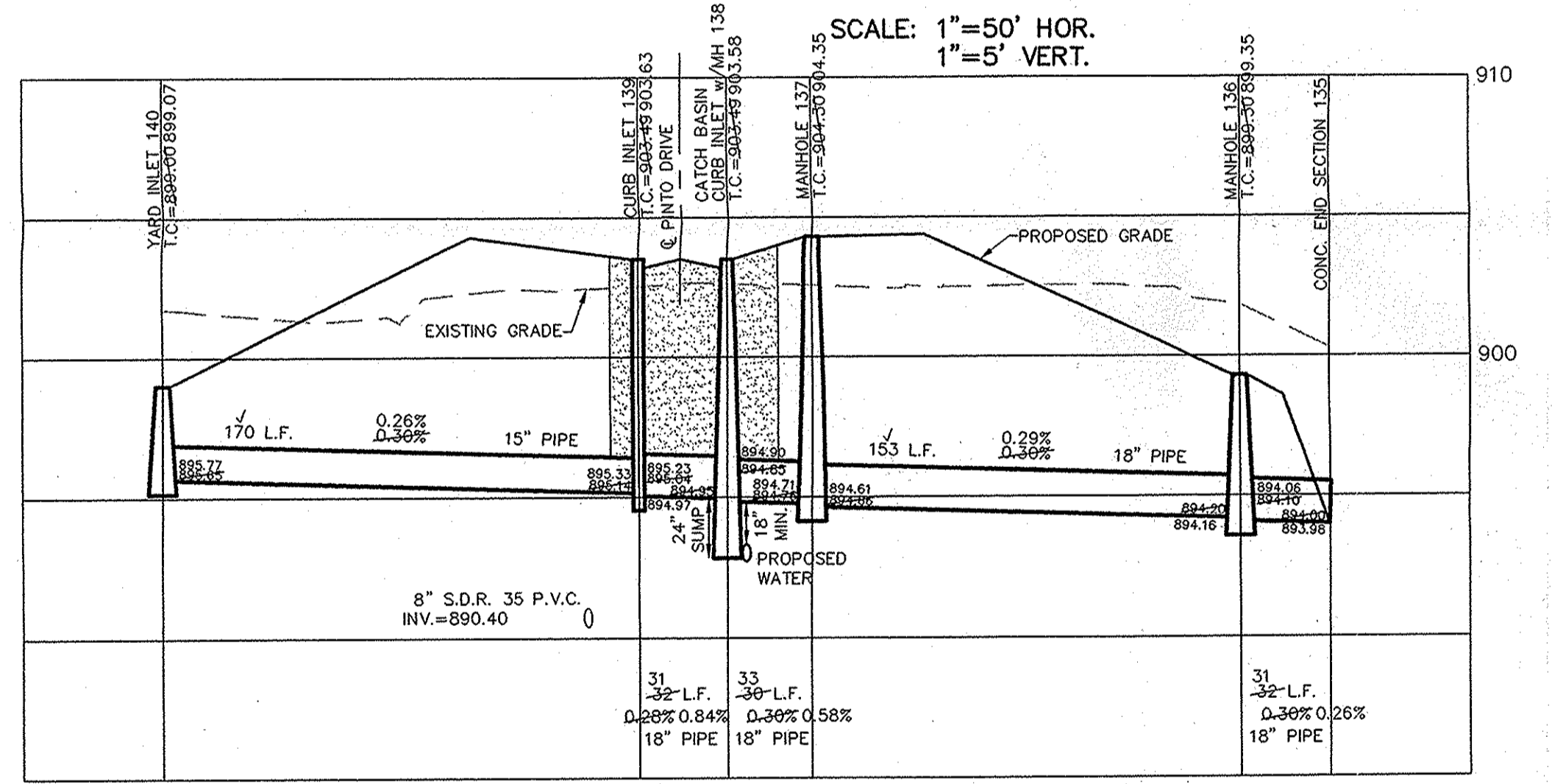
NO EARTH DISTURBING ACTIVITY MAY TAKE PLACE WITHOUT AN APPROVED STORM WATER MANAGEMENT PERMIT.

NOTE:  
 FOR INSTALLATION OF STORM MAINS, WATER MAINS, SANITARY MAINS, WATER SERVICE LATERALS, SANITARY SERVICE LATERALS UNDER CITY STREETS, REGARDLESS OF THE JURISDICTION OF THE UTILITY, THE MINIMUM COVER FROM THE TOP OF THE INSTALLED PAVEMENT TO THE TOP OF THE INSTALLED PIPE SHALL BE THE PAVEMENT SECTION THICKNESS (ALL BITUMINOUS AND AGGREGATE MATERIAL ABOVE THE SUBGRADE) PLUS 1'-0", BUT UNDER NO CIRCUMSTANCES SHALL THE COVER ALONG ANY PART OF THE PIPE FROM THE FINAL PAVEMENT ELEVATION TO THE TOP OF THE PIPE BE LESS THAN 2.5 FEET.

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 Entry Date: 1-7-2010  
 Entered By: SLM



**POND #2**  
 N.P. = 894.00  
 2 YEAR ELEV. = 895.36  
 10 YEAR ELEV. = 896.28  
 100 YEAR ELEV. = 897.91  
 BOTTOM ELEV. = 886.00



THIS DRAWING IS NOT INTENDED TO BE USED AS A BASIS FOR A ROUTE SURVEY OR A SURVEYOR LOCATION REPORT.

CERTIFIED: 5/01/07  
 David J. Stoppelwerth  
 REGISTERED PROFESSIONAL ENGINEER  
 No. 19358  
 STATE OF INDIANA

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INDIANA  
 CARMEL

**STORM PLAN & PROFILES**  
**WESTMONT**  
**SECTION 1**

DRAWN BY: BAH CHECKED BY: EEF  
 SHEET NO. C602  
 3 & A JOB NO. 52415PLA