



SURVEYOR'S OFFICE

Hamilton County

Kenton C. Ward, Surveyor

Phone (317) 776-8495

Fax (317) 776-9628

Suite 188

One Hamilton County Square

Noblesville, Indiana 46060-2230

To: Hamilton County Drainage Board

February 22, 2006

Re: J.W. Brendel Drain, Saddlebrook at Shelborne Arm

Attached is a petition filed by Leeds, LLC along with a non-enforcement request, plans, calculations, quantity summary and assessment roll for the Saddlebrook at Shelborne Arm, J.W. Brendel 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	8,384 ft.	18" RCP	1,042 ft.	30" RCP	1,345 ft.
12" RCP	303 ft.	18" CMP	13 ft.	36" RCP	447 ft.
15" RCP	1,495 ft.	24" RCP	802 ft.	Twin 5'x7' CMP	16 ft.

The total length of the drain will be 13,847 feet.

With this development, the Oak Tree Drain will be intercepted at Structure 15 of the Stikeleather Relocation of the Oak Tree Drain (see my report approved by the Board on April 19, 1996, Minute Book 4, Page 237). Structure 15 of the Stikeleather Relocation is the same structure as Str. Ex-2 in the Saddlebrook at Shelborne plans. The drain to be removed is from Str. 15 to Str. 21 and Str. 21 to Str. 20, which will remove 842 feet of 8" PVC from the Oak Tree Drain.

The 16 feet of twin 5' x 7' CMP mentioned above extends the J.W. Brendel Drain from the current terminus per the 1934 legal description to the end of the existing pipes under Shelborne Road. The J.W. Brendel Drain is currently enclosed in 52 feet of twin 5'x7' CMP from the 1934 terminus to the east end of the culverts under Shelborne Road. With the Saddlebrook at Shelborne, the existing twin culverts will be extended upstream an additional 40 feet. All 108 feet of the twin 5'x 7' CMP culverts under Shelborne Road will become part of the J.W. Brendel Drain and will replace the existing open drain in that location.

The retention ponds located in Common Area Block "B" 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 ponds, 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 ponds were 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 or in rear yards. Only the main SSD lines, which are located within the easement (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:

The SSD lines in the rear yard swales from Structure 744 to 747 across the north line of Lots 67 and 68 and the east line of Lots 66 and 67, 731 to 734 across the south line of Lots 33 to 39, 729 to 747 across the east side of Lots 65 to 62, and approximately 40 feet running south from Structure 743 across the east side of Lot 50.

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 \$10.00 per acre for common areas and roadway, \$65.00 per platted lot, with a \$65.00 minimum. With this assessment the total annual assessment for this drain/this section will be \$2,732.20.

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

Agent: Madison Community Bank
Date: October 7, 2005
Number: 3256
For: Subsurface Drains
Amount: \$84,348.00

Agent: Madison Community Bank
Date: October 7, 2005
Number: 3254
For: Storm Sewers
Amount: \$374,520.00

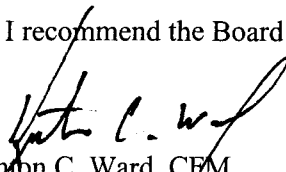
Agent: Madison Community Bank
Date: October 7, 2005
Number: 3255
For: Erosion Control
Amount: \$142,440.00

Parcels assessed for this drain may be assessed for the Long Branch 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 request. The request is for the reduction of the regulated drain easement to those easement widths as shown on the secondary plat for Saddlebrook at Shelborne Section 1 as recorded in the office of the Hamilton County Recorder.

I recommend the Board set a hearing for this proposed drain for October 23, 2006.


Kenton C. Ward, CFM
Hamilton County Surveyor

KCW/pll

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

Leads, LLC

By: Michael H. Stikeleather

Signed

Signed

Michael H. Stikeleather, Manager
Printed Name

Printed Name

7/12/05
Date

Date

Signed

Signed

Printed Name

Printed Name

Date

Date

HAMILTON COUNTY DRAINAGE BOARD
NOBLESVILLE, INDIANA

IN RE: _____)
Hamilton County, Indiana)

PETITION FOR RELOCATION AND RECONSTRUCTION

_____ Leeds, LLC (hereinafter "Petitioner"),

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

- 1. Petitioner owns real estate through which a portion of the _____ Oak Tree Regulated _____ 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 _____ Oak Tree Regulated _____ 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 _____ Oak Tree Regulated _____ Drain, without cost to other property owners on the watershed of the _____ Oak Tree Regulated _____ Drain.
- 5. Proposed relocation and reconstruction will not adversely affect other land owners within the drainage shed.
- 6. Petitioner requests approval of the proposed relocation and reconstruction under IC 36-9-27-52.5.

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

Leeds, LLC
By: Michael H. Stikeleather

Signed
Michael H. Stikeleather, *Manager of Leeds, LLC*

Printed

FINDINGS AND ORDER

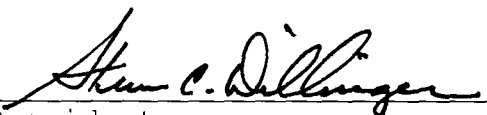
CONCERNING THE MAINTENANCE OF THE

J. W. Brendel Drain, Saddlebrook at Shelborne Section 1 Arm

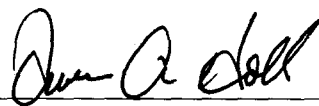
On this **23rd day of October 2006**, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the **J. W. Brendel Drain, Saddlebrook at Shelborne Section 1 Arm**.

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: 

CERTIFICATE OF COMPLETION AND COMPLIANCE

To: Hamilton County Surveyor

Re: Saddlebrook at Shelborne Section 1 and 2 Carmel, Indiana

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.
5. The drainage facilities within the above referenced subdivision to the best of my knowledge, information and belief have been correctly represented on the Record Drawings, Digital Record Drawings and the Structure Data Spreadsheet.

Signature: Christopher M. Wiseman Date: 10-12-07

Type or Print Name: Christopher M. Wiseman

Business Address: 7172 Graham Road

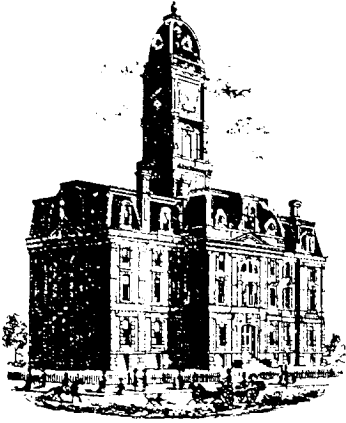
Indianapolis, IN 46250

Telephone Number: 317-842-6777



INDIANA REGISTRATION NUMBER

PE 10504920



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

September 5, 2008

Re: JW Brendle Drain: Saddlebrook at Shelborne Section 1

Attached are as-builts, certificate of completion & compliance, and other information for Saddlebrook at Shelborne 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 February 22, 2006. The report was approved by the Board at the hearing held October 23, 2006. (See Drainage Board Minutes Book 9, Pages 515-517)
 The changes are as follows:

Structure:	Length:	Size	Material:	Up Invert:	Dn Invert	Grade:	Changes:
735-725	122	15	RCP	899.66	898.56	0.9	1
705B-708	33	12	RCP	894.61	894.43	0.55	-2
708-707	28	15	RCP	899.98	894.43	0.28	-2
707-706	52	18	RCP	894.21	894.13	0.15	
705c-705	81	18	RCP	890.33	889.65	0.84	-1
705-704	28	18	RCP	889.59	889.19	1.43	-2
704-703	38	18	RCP	889.19	888.79	1.01	2
703-702	284	18	RCP	888.74	884.91	1.35	
718-717	73	12	RCP	899.98	899.61	0.51	1
717-716	17	12	RCP	899.61	899.54	0.42	2
716-715	28	12	RCP	899.54	899.31	0.81	-2
715-710	166	15	RCP	899.24	897.55	1.02	1
714-713	28	12	RCP	901.99	901.79	0.71	-2
713-712	162	15	RCP	901.79	900.57	0.75	-2
712-711	258	15	RCP	900.57	899.09	0.57	1
711-710	200	18	RCP	899.05	897.54	0.75	
710-709	204	24	RCP	897.54	896.46	0.53	-3
728-727	40	24	RCP	899.14	899.06	0.2	-1
727-726	28	24	RCP	899.06	899.02	0.14	-2
726-725	185	24	RCP	899.02	898.58	0.24	

725-724	193	30	RCP	898.58	898.12	0.22	3
724-723	137	30	RCP	898.1	897.64	0.34	2
723-722	96	30	RCP	897.64	897.14	0.52	1
722-760	91	30	RCP	897.14	896.8	0.38	
760-721	16	36	RCP	896.79	896.75	0.26	
721-720	29	36	RCP	896.62	896.7	0.28	2
720-719	177	36	RCP	896.66	896.18	0.27	-2
737-736	27	15	RCP	900.81	900.66	0.55	-3
736-728	32	15	RCP	900.66	900.33	1.03	2
734-733	161	15	RCP	899.76	898.97	0.49	1
733-732	27	24	RCP	898.94	898.33	2.22	-3
732-724	34	24	RCP	898.3	898.12	0.53	-1
731-730	214	18	RCP	900.36	899.87	0.23	-1
730-729	83	18	RCP	899.87	899.77	0.12	
729-728	145	24	RCP	899.77	899.16	0.42	1
747-746	153	30	RCP	899.24	898.88	0.24	-1
746-745	151	30	RCP	898.88	898.58	0.21	1
745-744	183	30	RCP	898.58	898.45	0.07	3
744-743	108	30	RCP	898.43	898.08	0.32	
742-741	87	30	RCP	897.38	897	0.44	
741-740	28	30	RCP	896.95	896.88	0.25	-2
743-742	125	30	RCP	898.15	897.41	0.59	
740-739	174	30	RCP	896.85	896.3	0.32	4
739-738	36	36	RCP	896.3	896.22	0.17	-12
759-758	119	12	RCP	890.06	888.61	1.22	-2
750-749	141	15	RCP	900.6	899.98	0.44	
748-766	20	24	RCP	899.9	899.85	0.25	
749-748	30	18	RCP	899.98	899.9	0.27	
766-747	142	24	RCP	899.85	899.24	0.42	2
747-746	153	30	RCP	899.24	898.88	0.24	-1
705b-705a	66	15	RCP	895.7	894.74	1.46	-3
705A-705	329	15	RCP	894.59	889.72	1.48	1
702-701	13	18	CMP	884.74	884.4	2.61	

6" SSD

Streets:

Homestretch	1646.5
Whispering Pines	941
Winners Cir	665
x2	

Total: 6505

6" SSD Lots:

33-39	763
66-68	585
62-65	387
69	40

Total: 1775

RCP Pipe Totals:

12	298
15	1492
18	1023
24	825
30	1679

Other Drain:	
18" cmp	13
5x7 cmpa	140

	36	258
Total:	<u>5575</u>	

Total:	<u>153</u>	

The length of the drain due to the changes described above is now **14,008 feet**. It should be noted that the original JW Brendle open ditch was enclosed between Sta 85+87 to Sta 84+97. This was done with 140 feet of twin 5x7 cipa under Shelborne Rd. Therefore, 50 feet of drain was added to the overall JW Brendle watershed.

The non-enforcement was approved by the Board at its meeting on October 23, 2006 and recorded under instrument #200600063999.

The following sureties were guaranteed by Madison Community Bank and released by the Board on its November 13, 2007 meeting.

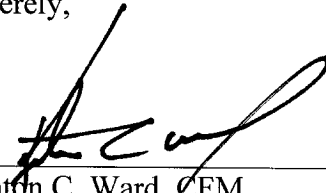
Bond-LC No: 3254
Insured For: Storm Sewers
Amount: \$55,800
Issue Date: October 8, 2006

Bond-LC No: 3255
Insured For: Erosion Control
Amount: \$47,480.00
Issue Date: October 8, 2006

Bond-LC No: 3256
Insured For: Sub-surface Drains
Amount: \$36,396.00
Issue Date: October 8, 2006

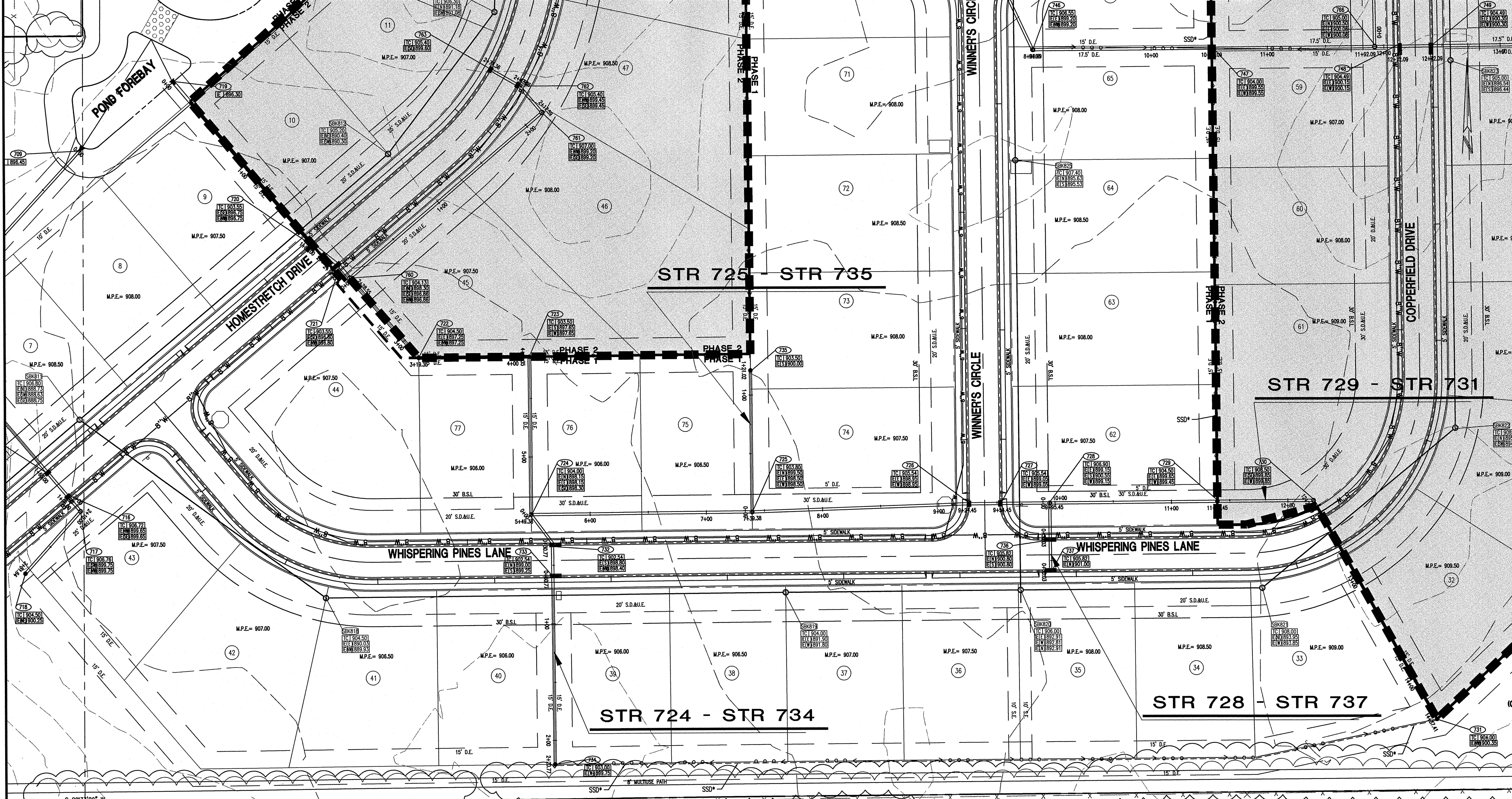
I recommend the Board approve the drain's construction as complete and acceptable.

Sincerely,

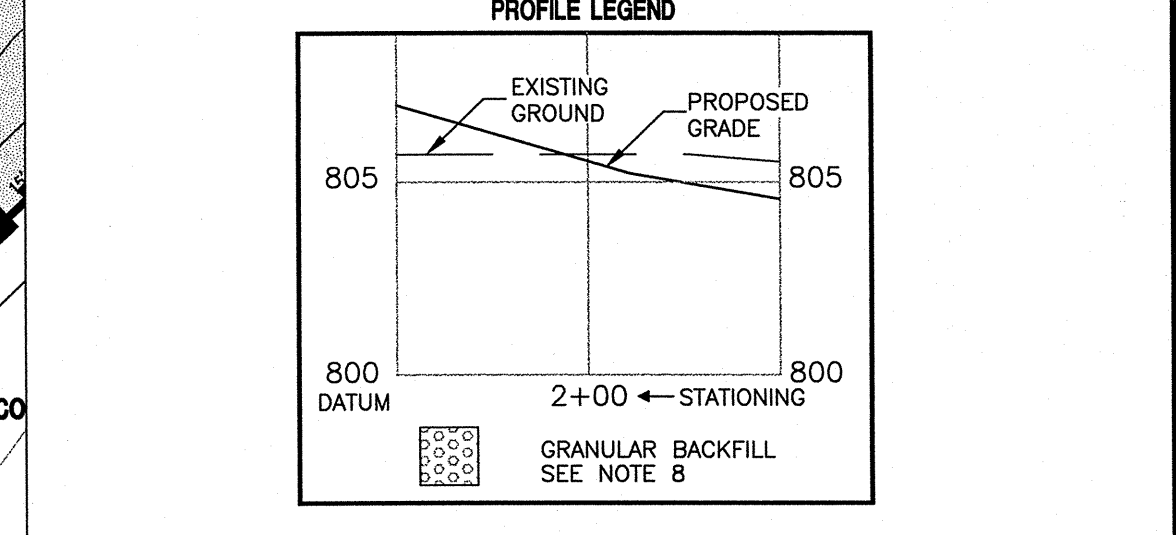
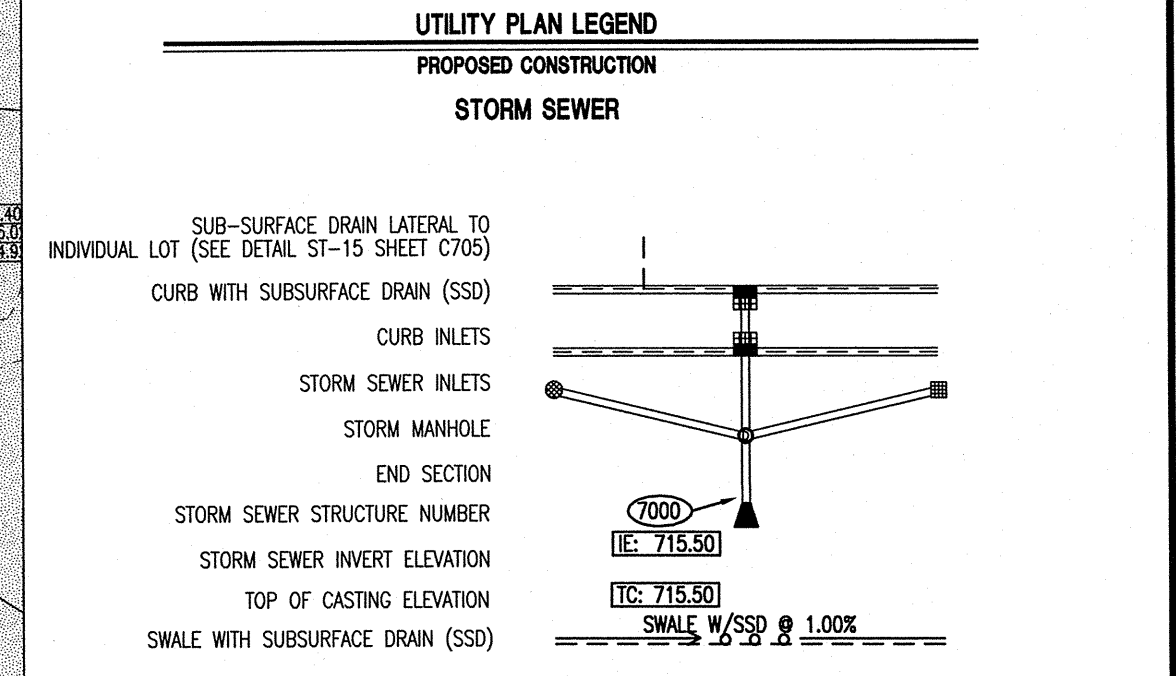


Kenton C. Ward, CFM
Hamilton County Surveyor

KCW/slm



- STORM SEWER PLAN AND PROFILE NOTES:**
- OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS FOR EXCAVATIONS, FINAL RULE 29 CFR PART 1926, SUBPART T APPLIES TO ALL EXCAVATIONS EXCEEDING FIVE (5) FEET IN DEPTH.
 - IN ADDITION, EXCAVATIONS EXCEEDING TWENTY (20) FEET IN DEPTH REQUIRE THE DESIGN OF A TRENCH SAFETY SYSTEM BY A REGISTERED PROFESSIONAL ENGINEER.
 - ALL STRUCTURES SHALL HAVE CASTINGS, JOINTS, LIFT RINGS, STEPS AND PIPE CONNECTIONS WELL GROUTED, TROWELED SMOOTH AND BRUSH FINISHED.
 - ALL STRUCTURES (IE: MANHOLES, INLETS) SHALL HAVE POURED FLOW LINES AND BENCH WALLS. THE FLOW LINES AND BENCH WALLS SHALL BE TROWELED SMOOTH AND BRUSH FINISHED.
 - FIELD ADJUSTMENTS TO TOP OF CASTING (T.C.) OF STRUCTURES MAY BE REQUIRED TO MEET FIELD CONDITIONS. ADJUSTMENTS EXCEEDING FIVE TENTHS (0.5) OF A FOOT MUST BE APPROVED BY THE ENGINEER TO DETERMINE THE INTEGRITY OF THE STRUCTURE. AT NO COST TO THE OWNER.
 - STORM STRUCTURES WITH INLET CASTINGS SHALL BE SET TO MAINTAIN A POSITIVE DRAINAGE FLOW INTO THE STRUCTURE.
 - STORM PIPE INVERTS AT OUTLET STRUCTURES (IE: END SECTIONS), AND PIPE LENGTHS MAY REQUIRE FIELD ADJUSTMENTS TO MEET ACTUAL FIELD CONDITIONS.
 - FULL DEPTH GRANULAR BACKFILL SHALL BE REQUIRED UNDER AND WITHIN (5) FEET OF ALL PAVED AREAS, INCLUDING CURBS, EDGE OF PAVEMENT, AND SIDEWALKS. (SEE BACKFILL & COVER NOTE ON SHEET C707)
 - SEE SECTION 02720 FOR STORM SEWERAGE SPECIFICATIONS A) IN THE PROJECT MANUAL OR B) ON SHEET C90?
 - PIPE LENGTHS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND INCLUDE END SECTIONS.
 - THE CONNECTION OF THE PROPOSED STORM SEWER TO AN EXISTING BRICK STRUCTURE MUST BE DONE ACCORDING TO THE FOLLOWING CONDITIONS:
 - REHABILITATE AND COAT THE ENTIRE INTERIOR OF THE MANHOLE WITH NON-SHRINKING GROUT.
 - AT THE POINT OF CONNECTION OF THE PROPOSED PIPE, PLACE A THREE FOOT (3') DIAMETER BY A MINIMUM SIX INCH (6") THICK, 4,000 PSI CONCRETE COLLAR WITH 4x4x10 GAUGE WIRE MESH OVER THE EXTERIOR OF THE MANHOLE.
 - ONCE THE CORE HAS BEEN MADE, INSTALL A RUBBER BOOT.
- SHOULD THE INTEGRITY OF THE MANHOLE BE COMPROMISED, THE ENTIRE STRUCTURE MUST BE REPLACED WITH A STANDARD MANHOLE STRUCTURE IN ACCORDANCE WITH THE INDIANAPOLIS SANITARY SEWER DISTRICT STANDARDS, MAY 1989, AND ITS ADDENDUMS.

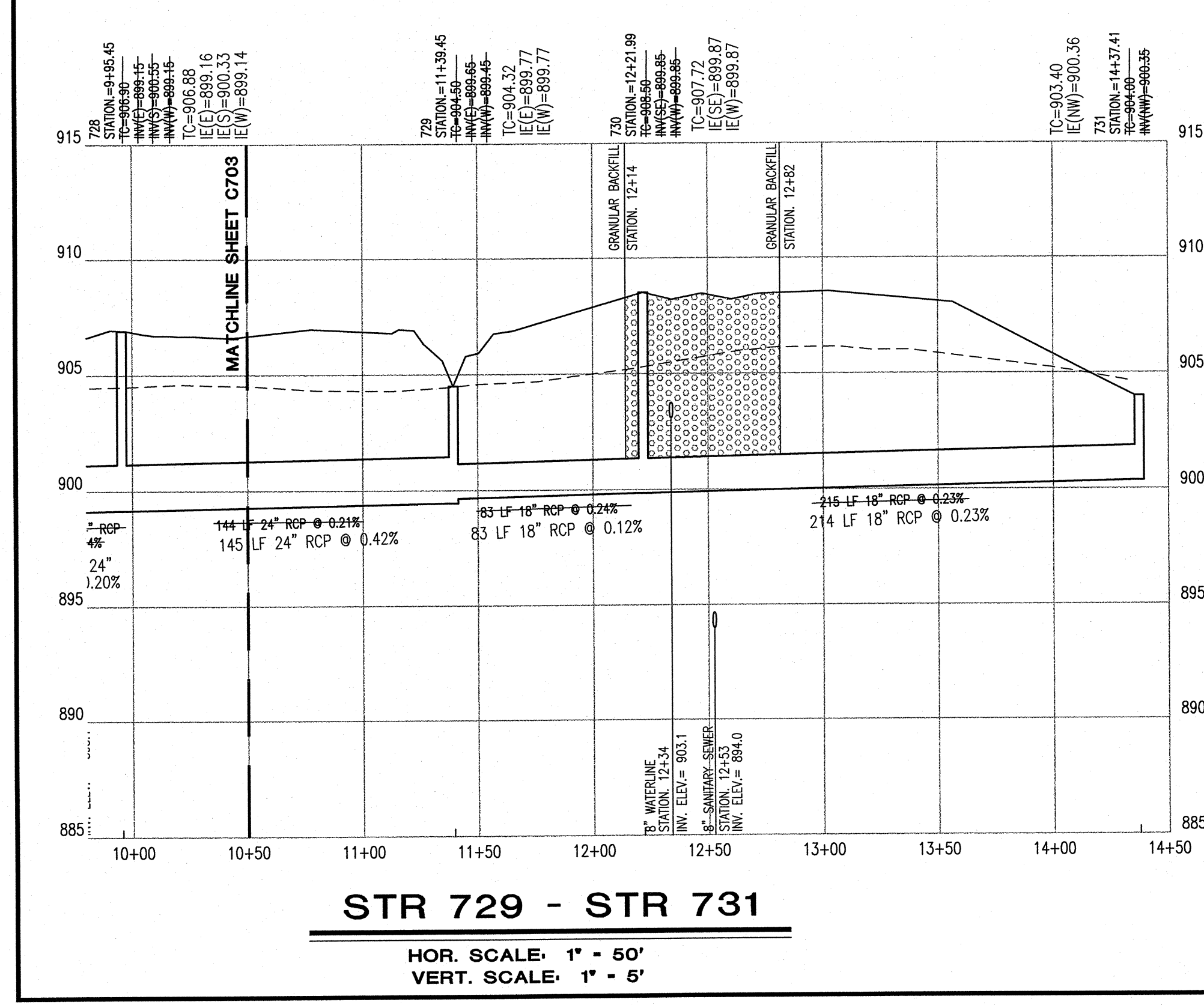


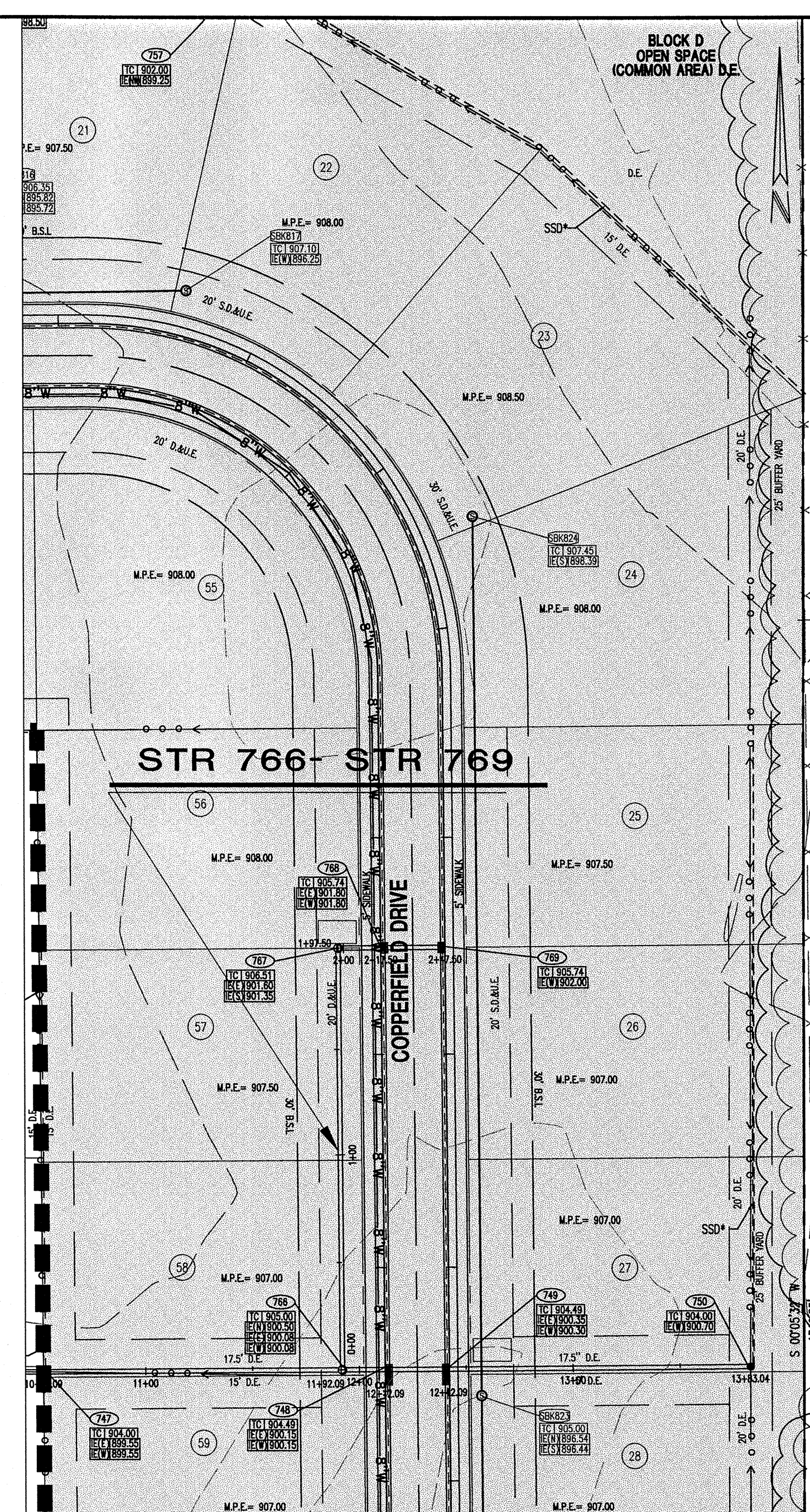
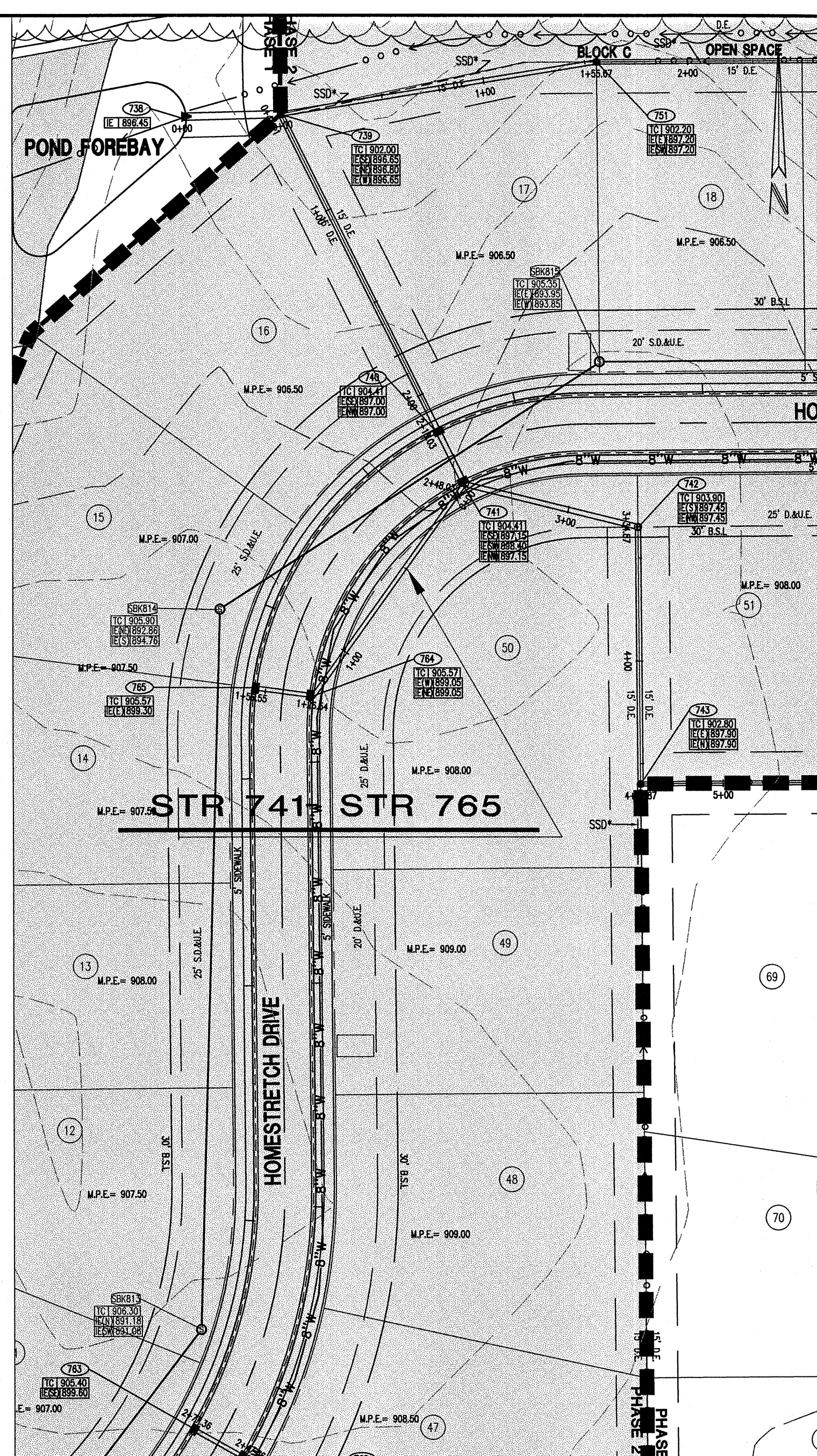
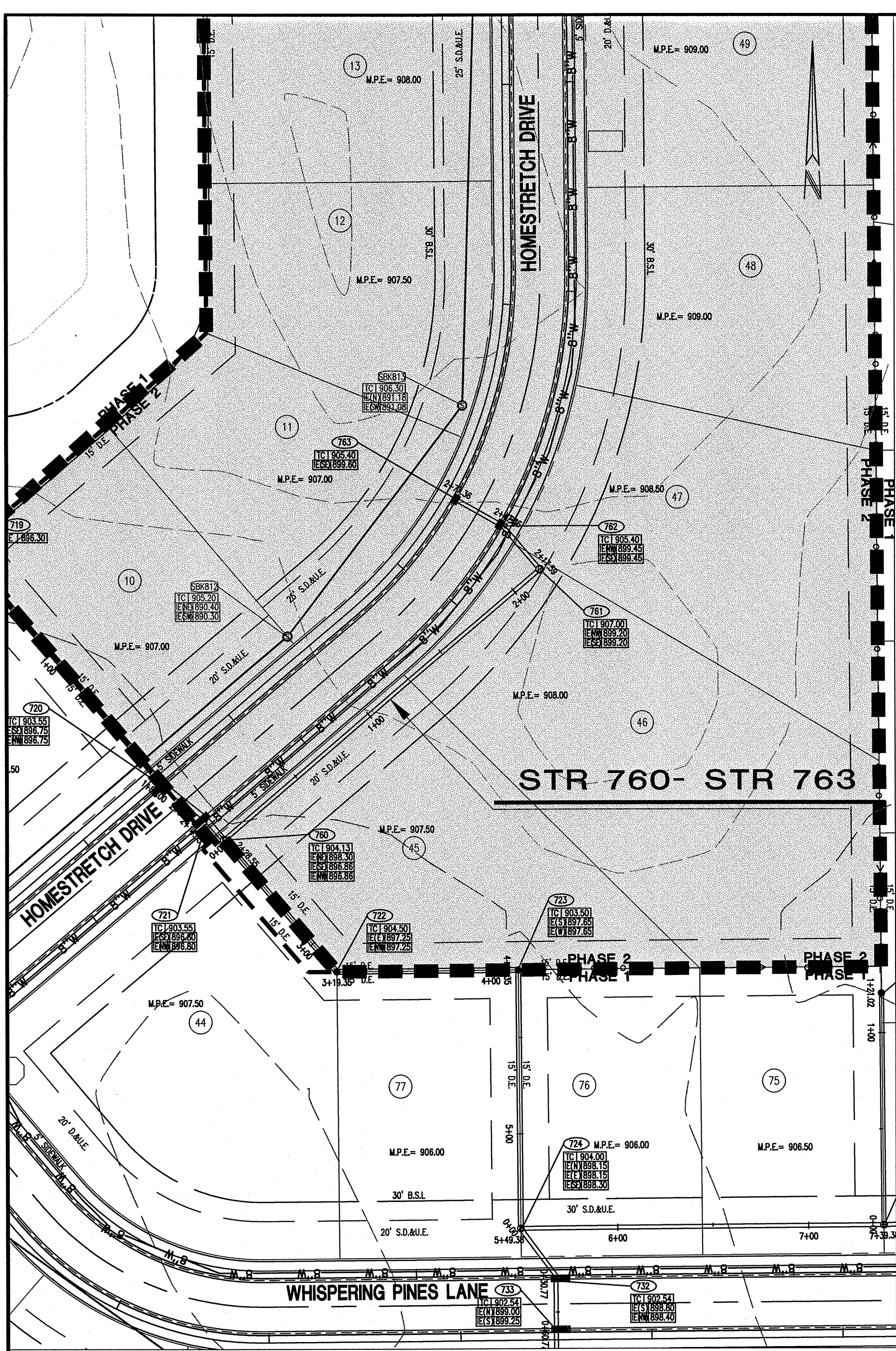
NOTE TO CONTRACTOR / PLAN REVIEWER:

ALL STORM SEWER FACILITIES SHOWN IN PLAN AND PROFILE ON THIS SHEET WILL BE INCLUDED IN SECTION 1 CONSTRUCTION.

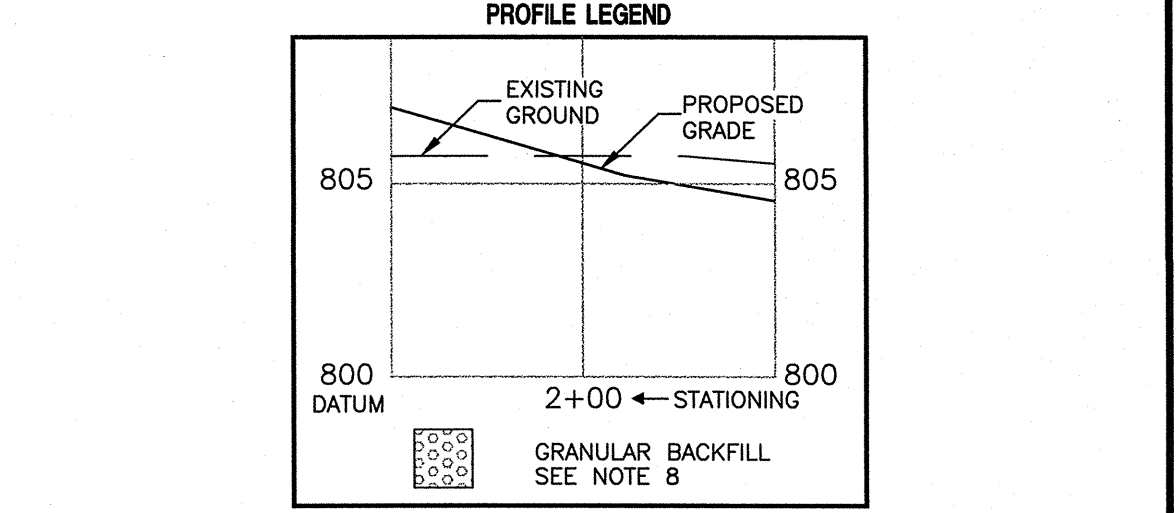
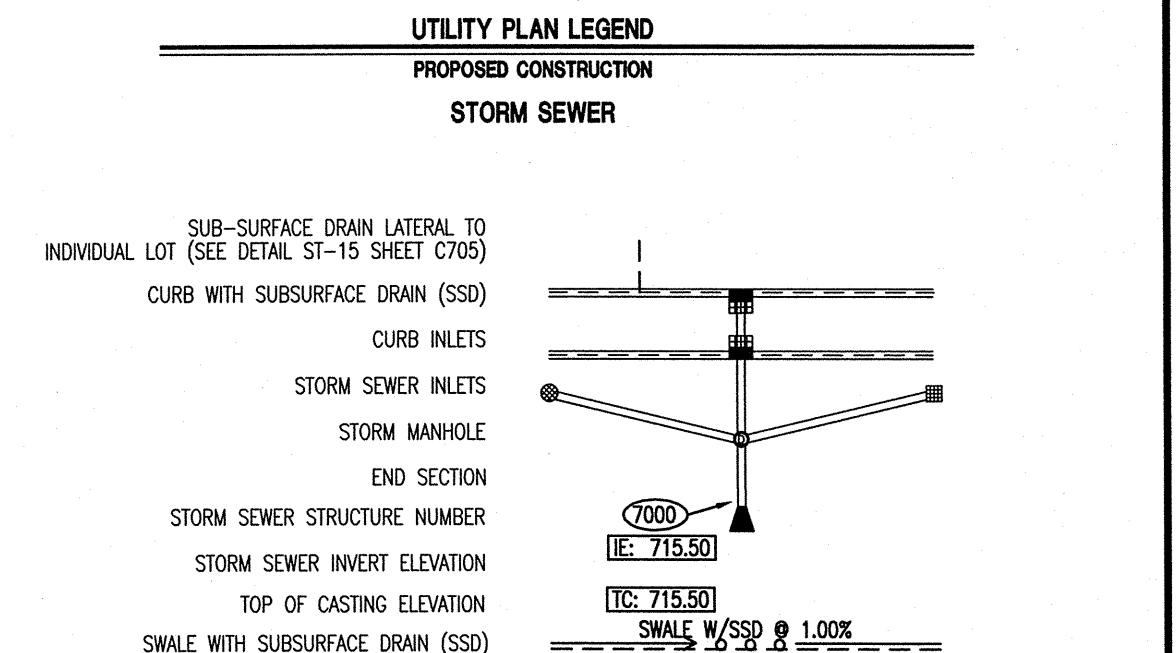
SHADED AREA INDICATES FUTURE SECTION 2 DEVELOPMENT.

NOTE: ALL EARTHWORK FOR SECTION 1 & 2 SHALL BE COMPLETED DURING SECTION 1.





- STORM SEWER PLAN AND PROFILE NOTES:**
- OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS FOR EXCAVATIONS; FINAL RULE 29 CFR PART 1926, SUBPART "P" APPLIES TO ALL EXCAVATIONS EXCEEDING FIVE (5) FEET IN DEPTH.
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 SHOULD THE INTEGRITY OF THE MANHOLE BE COMPROMISED, THE ENTIRE STRUCTURE MUST BE REPLACED WITH A STANDARD MANHOLE STRUCTURE IN ACCORDANCE WITH THE INDIANAPOLIS SANITARY SEWER DISTRICT STANDARDS, MAY 1989, AND ITS ADDENDUMS.

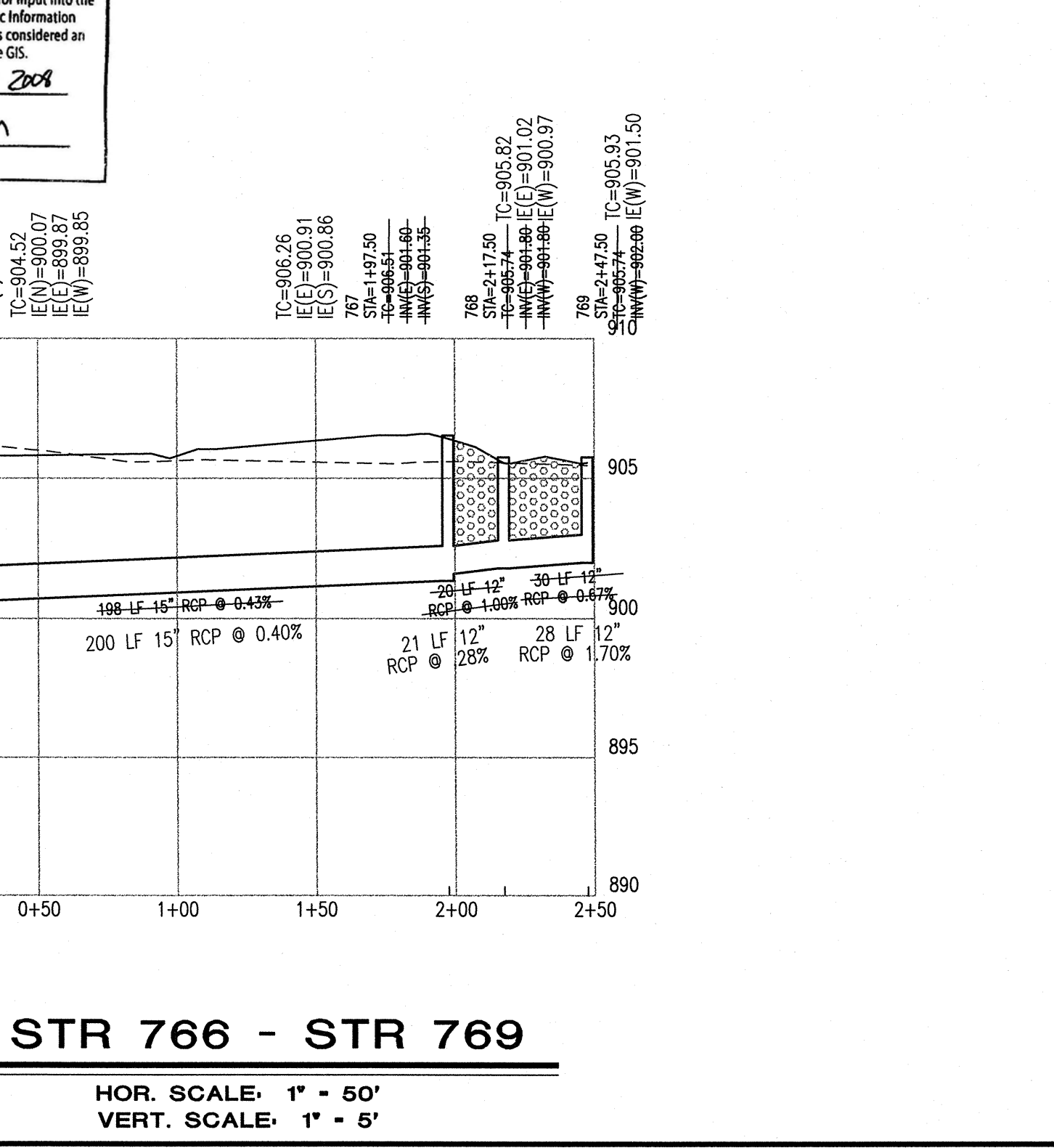
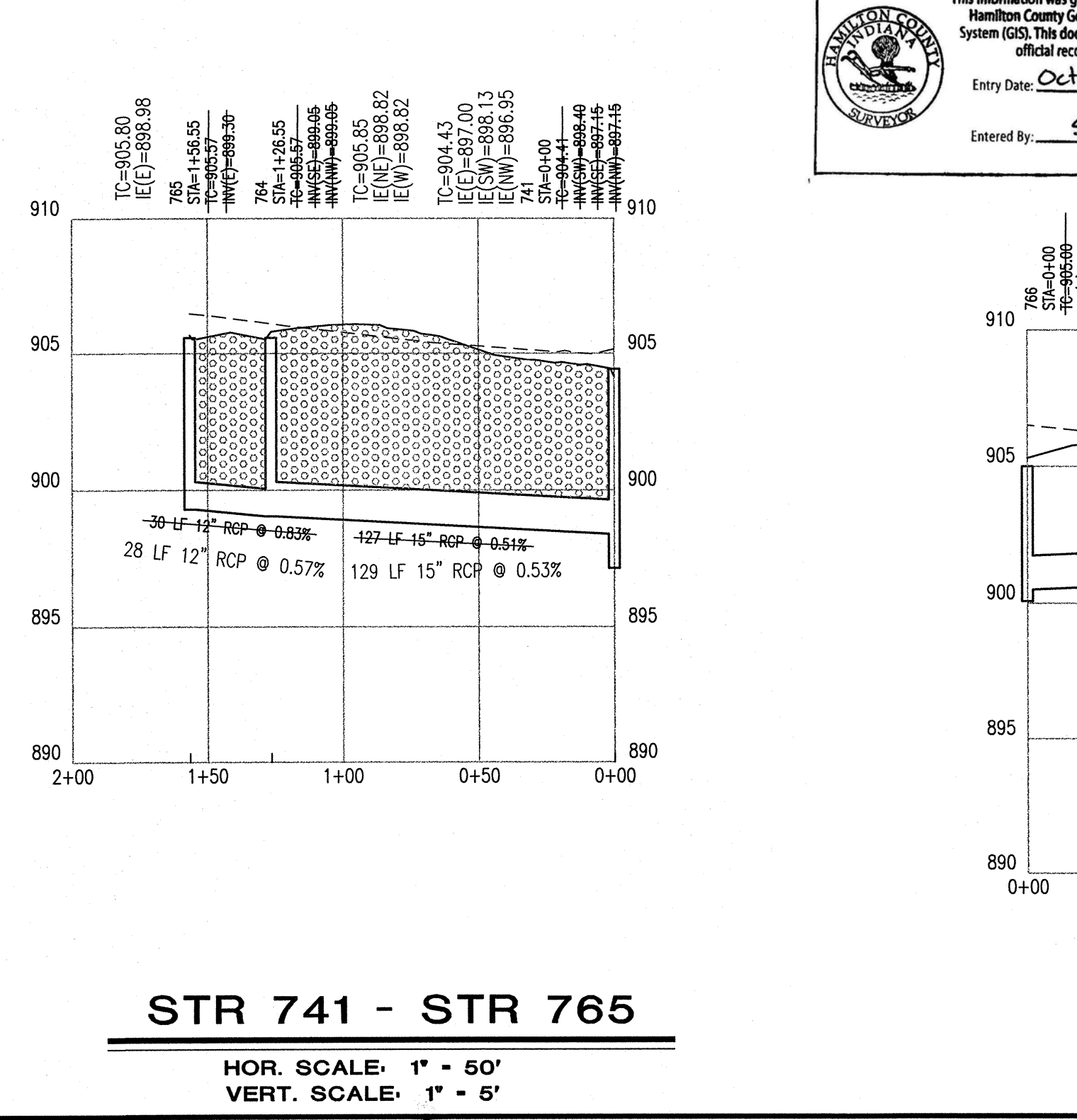
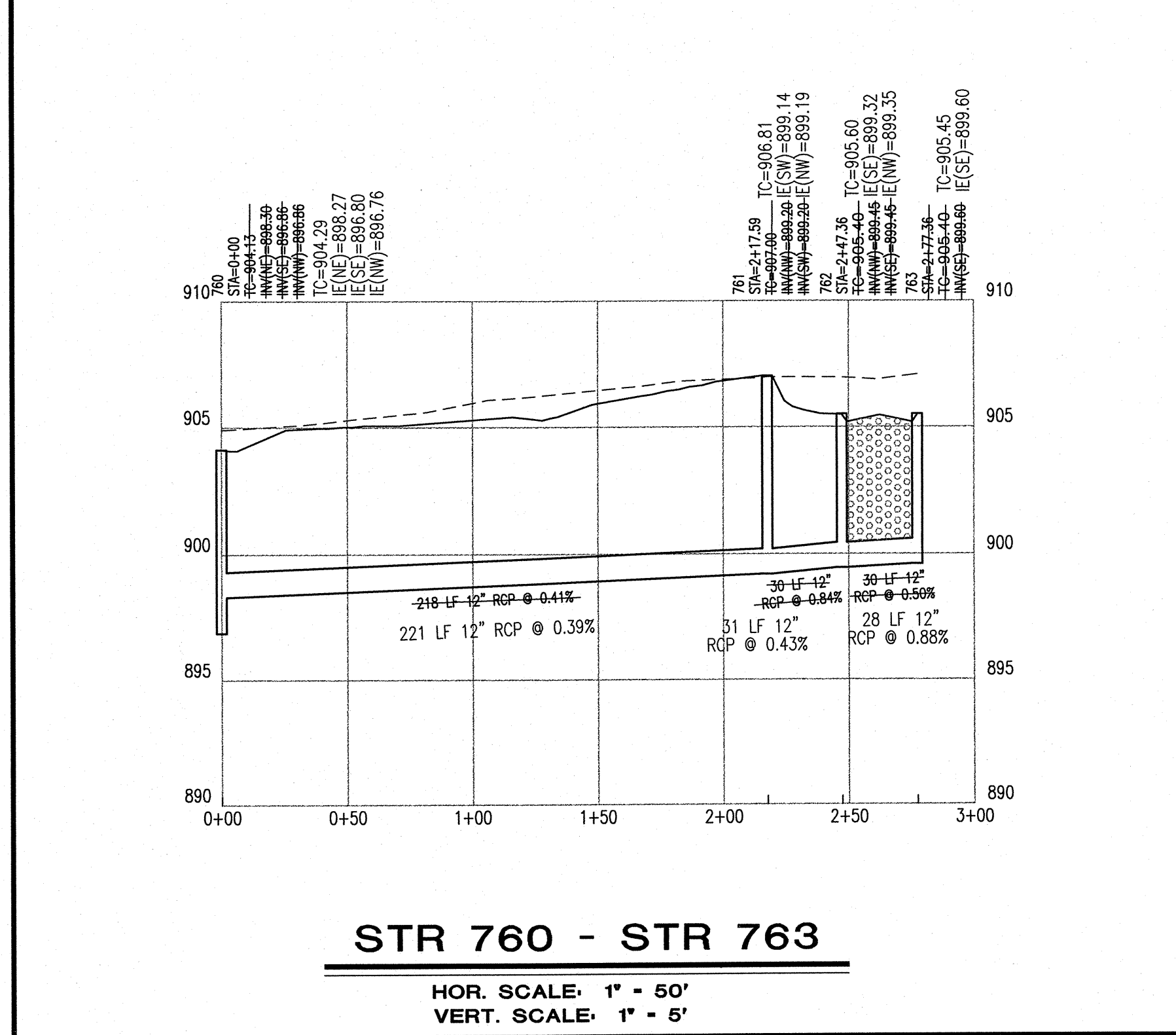


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This information was gathered for input into the Hamilton County Geographic Information System (GIS). This document is considered an official record of the GIS.

Entry Date: October 2004

Entered By: SLM

Drawing: A:\2001\010463\30000\SADDLEBROOK-142-48\STORM\SET\C701-C705.dwg
 User: jsh
 Date: 05/14/07
 Title: Storm Sewer Plan and Profile
 Scale: 1" = 50'
 Date: 05/14/07
 Project Number: 010463-30300

STORM PLAN AND PROFILE
SADDLEBROOK AT SHELBORNE
LEEDS, LLC
 5300 HESSLER ROAD
 MUNCE, INDIANA 47304

CRIPE
 ARCHITECTS
 CIVIL TRANSPORTATION ENGINEERS
 LAND PLANNING
 LAND SURVEYING
 OWNERS REPRESENTATION

7170 GRANHAM ROAD
 INDIANAPOLIS, INDIANA 46250
 (317) 846-5777 FAX (317) 841-4798
 E-Mail: cripe@cripe.biz

CERTIFIED BY:
JOSEPH A. SHARP
 REGISTERED PROFESSIONAL ENGINEER
 No. 15179
 STATE OF INDIANA
 5-22-07

Drawn By: **AFERESTAD**
 Checked By: **MIGGS**
 Quality Assurance:

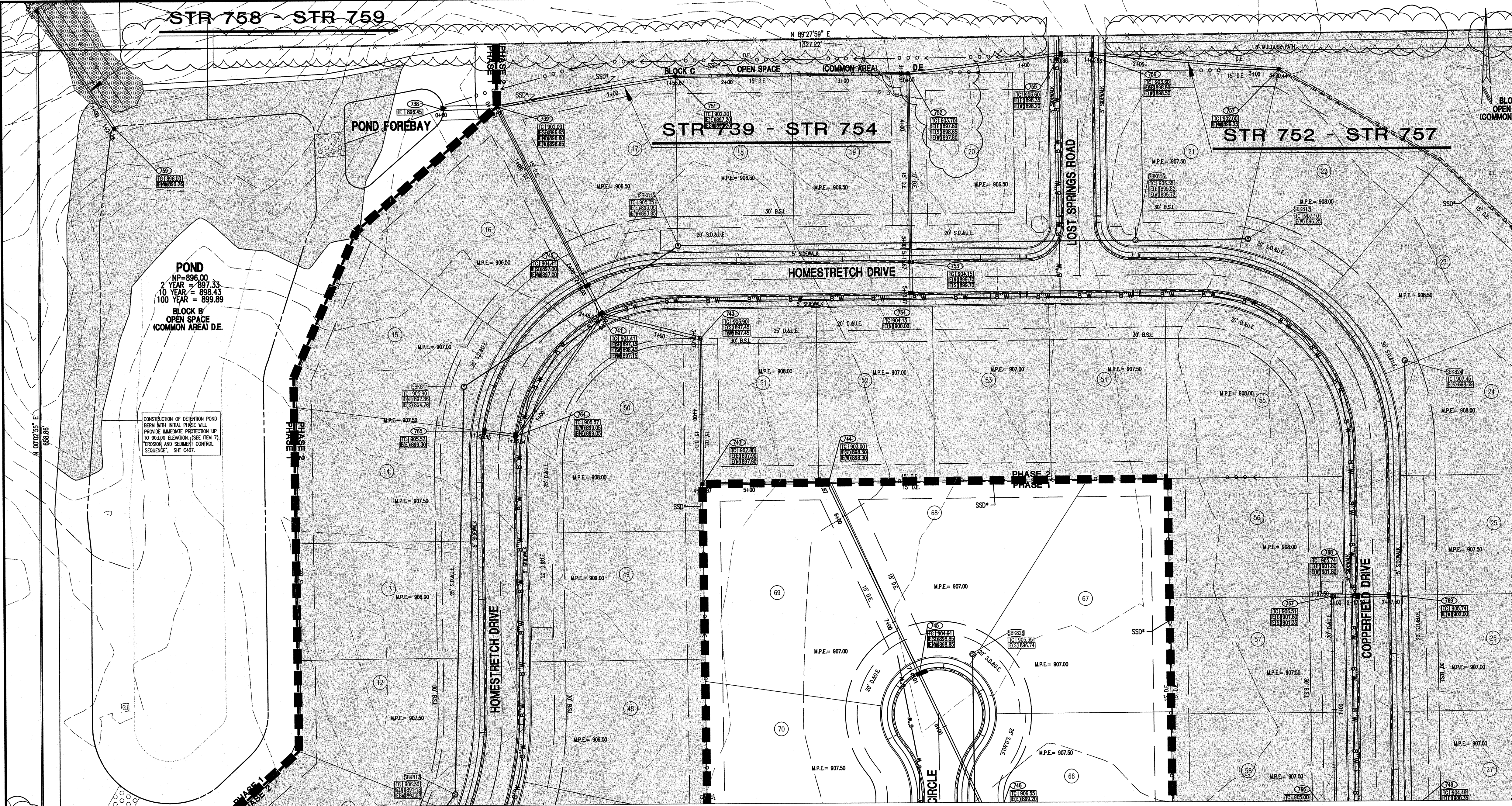
Scale: 1" = 50'
 Date: **05-14-07**
 Project Number: 010463-30300

RECORD DRAWING

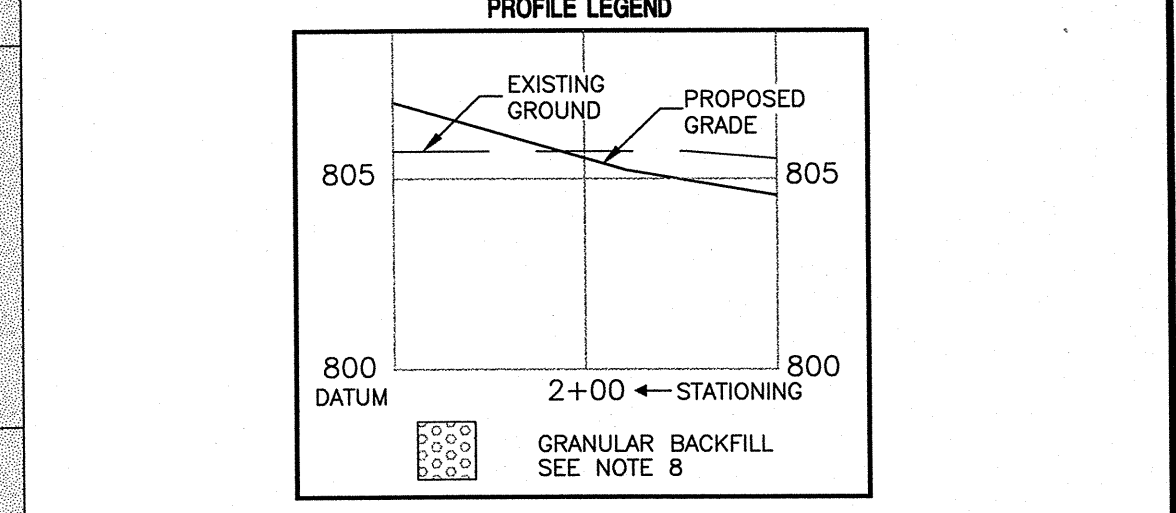
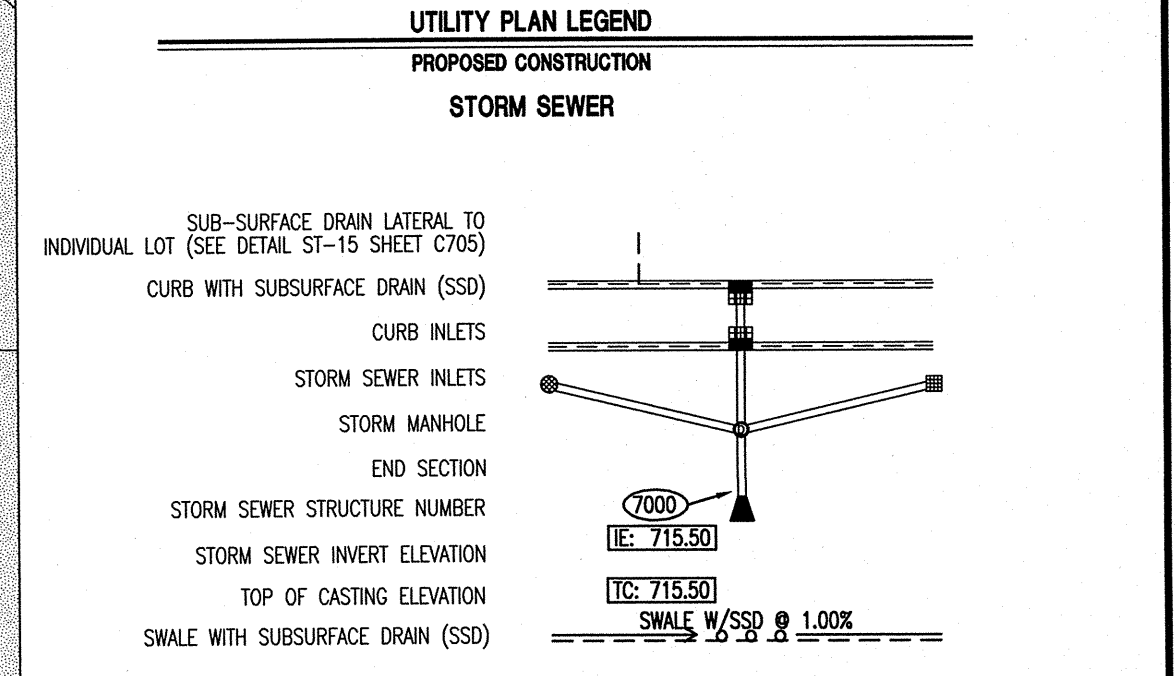
STR 758 - STR 759

STR 739 - STR 754

STR 752 - STR 757



- STORM SEWER PLAN AND PROFILE NOTES:**
1. OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) STANDARDS FOR EXCAVATIONS: FINAL RULE 29 CFR PART 1926, SUBPART "P" APPLIES TO ALL EXCAVATIONS EXCEEDING FIVE (5) FEET IN DEPTH.
 2. IN ADDITION, EXCAVATIONS EXCEEDING TWENTY (20) FEET IN DEPTH REQUIRE THE DESIGN OF A TRENCH SAFETY SYSTEM BY A REGISTERED PROFESSIONAL ENGINEER.
 3. ALL STRUCTURES SHALL HAVE CASTINGS, JOINTS, LIFT RINGS, STEPS AND PIPE CONNECTIONS WELL GROUTED, TROWELED SMOOTH AND BRUSH FINISHED.
 4. ALL STRUCTURES (E.G. MANHOLES, INLETS) SHALL HAVE POURED FLOW LINES AND BENCH WALLS. THE FLOW LINES AND BENCHWALLS SHALL BE TROWELED SMOOTH AND BRUSH FINISHED.
 5. FIELD ADJUSTMENTS OF TOP OF CASTING (T.C.) OF STRUCTURES MAY BE REQUIRED TO MEET FIELD CONDITIONS. ADJUSTMENTS EXCEEDING FIVE TENTHS (0.5) OF A FOOT MUST BE APPROVED BY THE ENGINEER TO DETERMINE THE INTEGRITY OF THE STRUCTURE. AT NO COST TO THE OWNER.
 6. STORM STRUCTURES WITH INLET CASTINGS SHALL BE SET TO MAINTAIN A POSITIVE DRAINAGE FLOW INTO THE STRUCTURE.
 7. STORM PIPE INVERTS AT OUTLET STRUCTURES (E.G. END SECTIONS), AND PIPE LENGTHS MAY REQUIRE FIELD ADJUSTMENTS TO MEET ACTUAL FIELD CONDITIONS.
 8. FULL DEPTH GRANULAR BACKFILL SHALL BE REQUIRED UNDER AND WITHIN (5) FEET OF ALL PAVED AREAS, INCLUDING CURBS, EDGE OF PAVEMENT, AND SIDEWALKS. (SEE BACKFILL & COVER NOTE ON SHEET C707)
 9. SEE SECTION 02720 FOR STORM SEWERAGE SPECIFICATIONS A) IN THE PROJECT MANUAL OR B) ON SHEET C907
 10. PIPE LENGTHS ARE MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE AND INCLUDE END SECTIONS.
 11. THE CONNECTION OF THE PROPOSED STORM SEWER TO AN EXISTING BRICK STRUCTURE MUST BE DONE ACCORDING TO THE FOLLOWING CONDITIONS:
 - A. REHABILITATE AND COAT THE ENTIRE INTERIOR OF THE MANHOLE WITH NON-SHRINKING GROUT.
 - B. AT THE POINT OF CONNECTION OF THE PROPOSED PIPE, PLACE A THREE FOOT (3') DIAMETER BY A MINIMUM SIX INCH (6") THICK, 4000 PSI CONCRETE COLLAR WITH 4x4x10 GAUGE WIRE MESH OVER THE EXTERIOR OF THE MANHOLE.
 - C. ONCE THE CORE HAS BEEN MADE, INSTALL A RUBBER BOOT.



NOTE TO CONTRACTOR / PLAN REVIEWER:

ALL STORM SEWER FACILITIES SHOWN IN PLAN AND PROFILE ON THIS SHEET WILL BE INCLUDED IN SECTION 1 CONSTRUCTION.

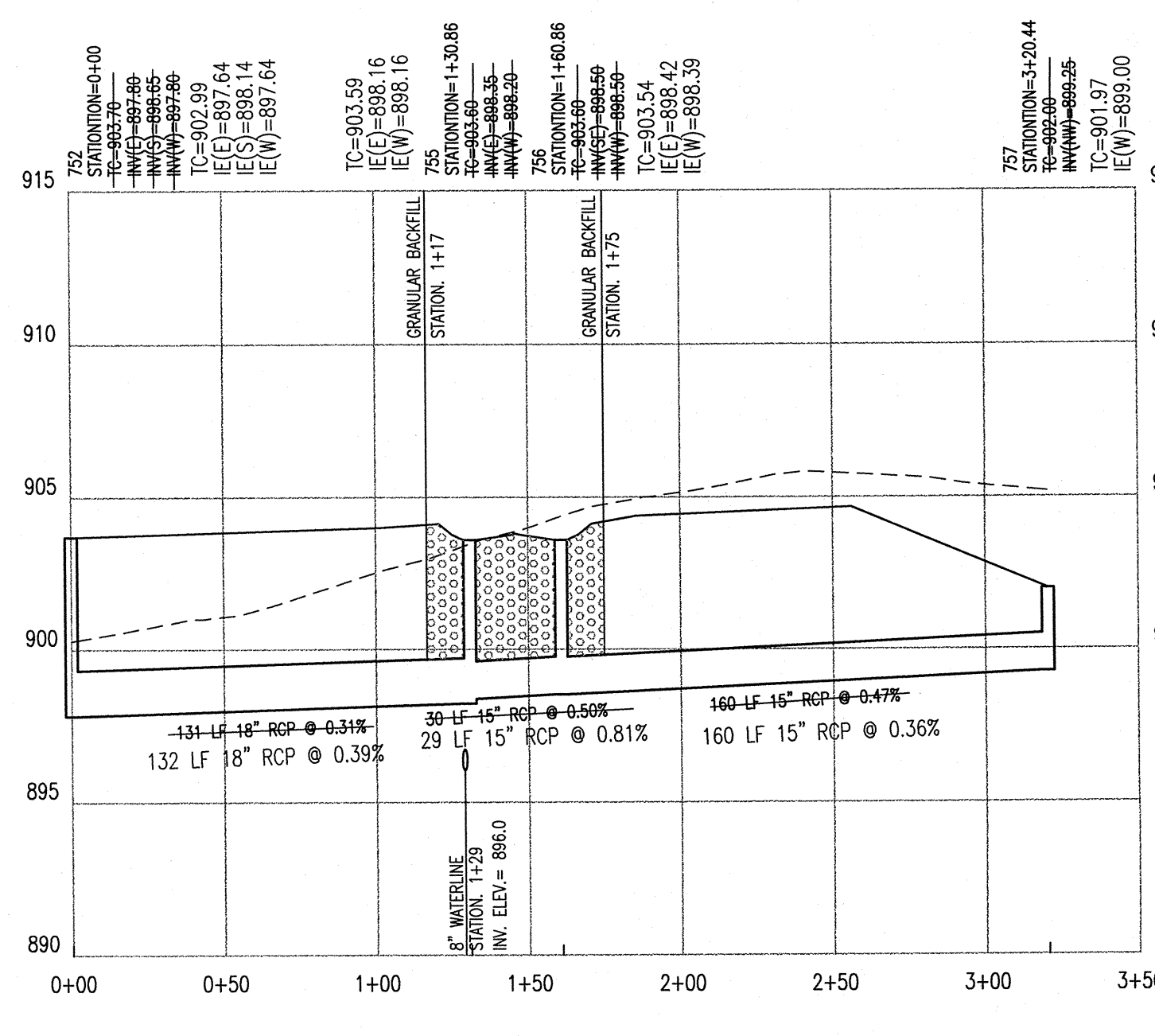
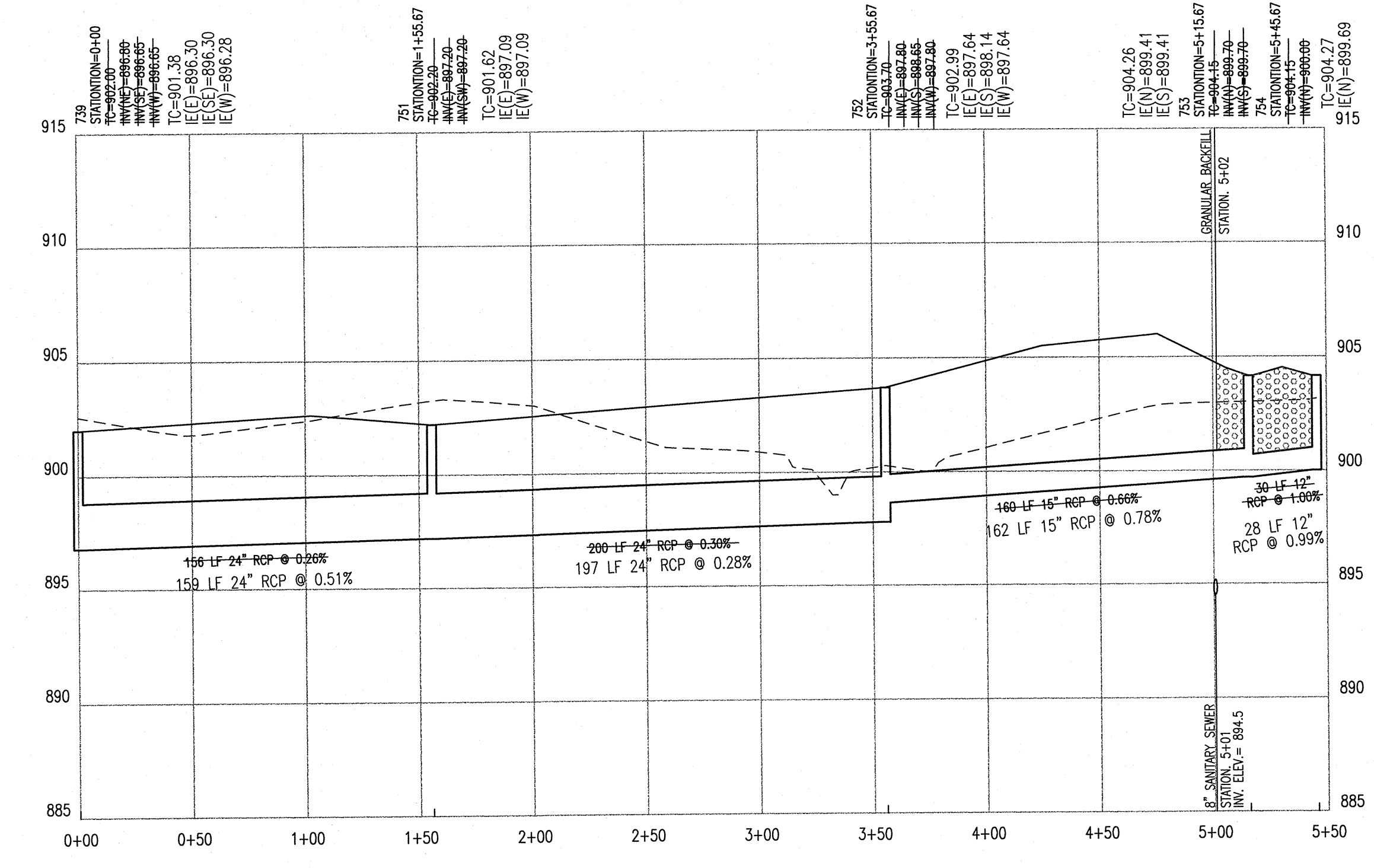
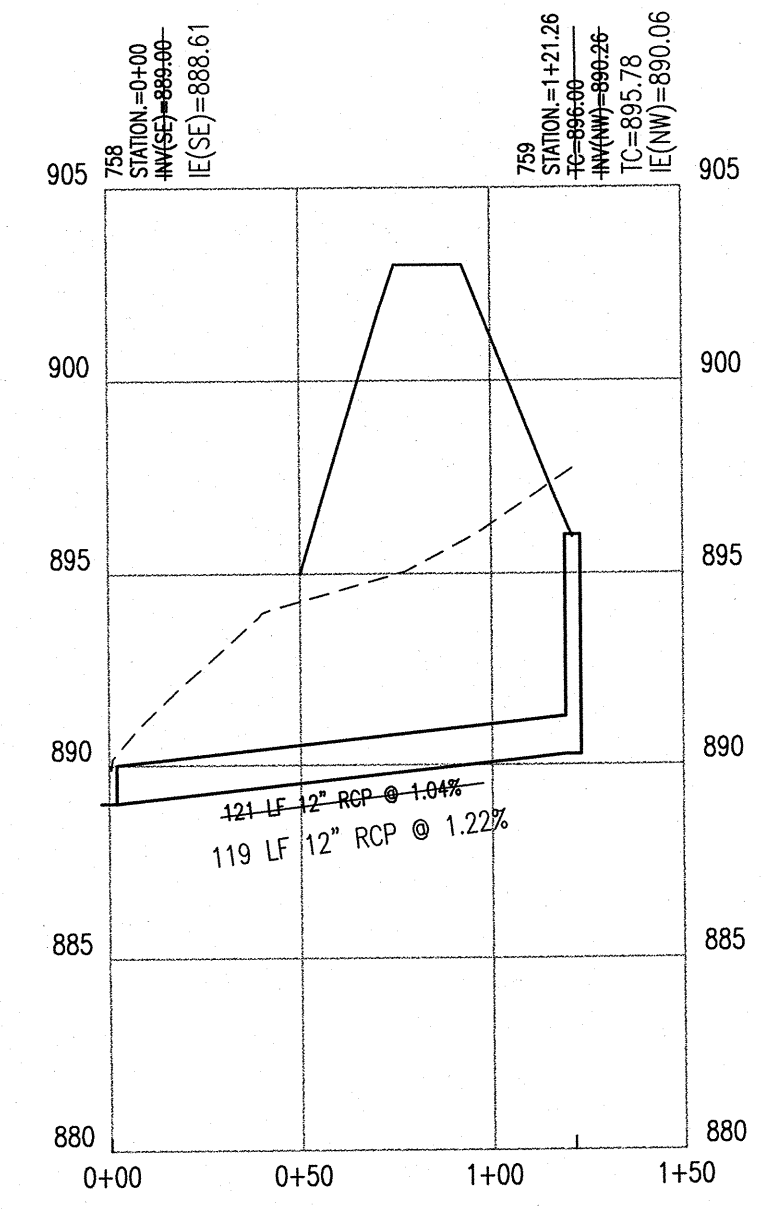
SHADED AREA INDICATES FUTURE SECTION 2 DEVELOPMENT.

NOTE: ALL EARTHWORK FOR SECTION 1 & 2 SHALL BE COMPLETED DURING SECTION 1.

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Entry Date: October 2008

Entered By: SLM



RECORD DRAWING

"HOLEY MOLEY" SAYS CALL AT LEAST TWO FULL WORKING DAYS BEFORE YOU DIG IT'S THE LAW.

CAUTION

LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS PLAN ARE BASED UPON ABOVE GROUND EVIDENCE (including, but not limited to, manholes, inlets, valves, 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 WAS OBSERVED. THE EXACT LOCATIONS OF SAID EXISTING UNDERGROUND UTILITIES SHOULD BE VERIFIED BY THE CONTRACTOR PRIOR TO ANY AND ALL CONSTRUCTION.

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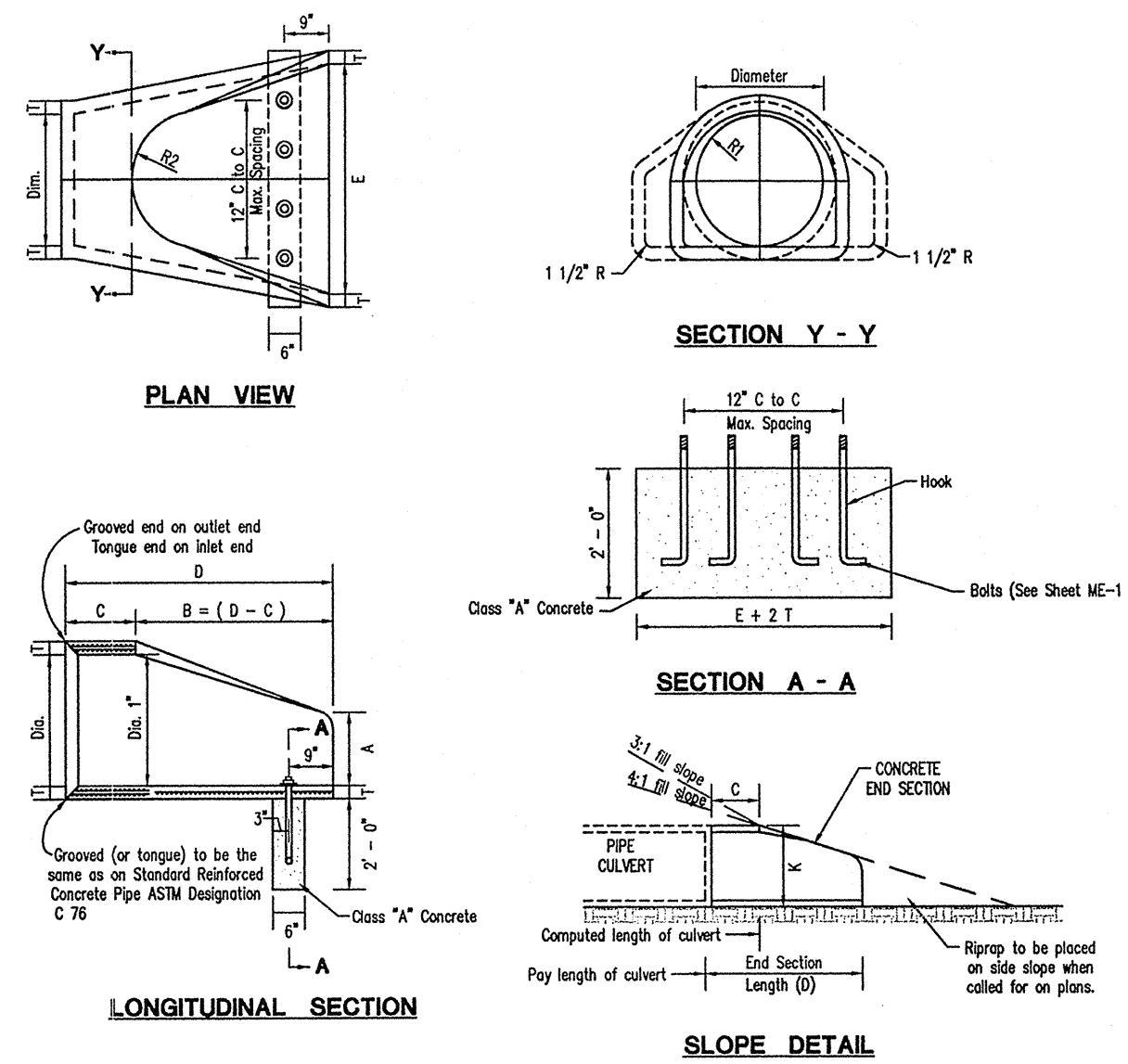
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INDIANAPOLIS, INDIANA 46250
(317) 842-6777 FAX (317) 841-4798
E-Mail: crpe@crpe.biz

STORM PLAN AND PROFILE
SADDLEBROOK AT SHELBORNE
LEEDS, LLC
5300 HESSLER ROAD
MUNCIE, INDIANA 47304

CERTIFIED BY:
Joseph A. Sharp
JOSEPH A. SHARP
REGISTERED PROFESSIONAL ENGINEER
No. 15179
STATE OF INDIANA
5-22-07

Drawn By: **AFERESTAD**
Checked By: **MIGGGS**
Quality Assurance:
Scale: 1" = 50'
Sheet: **C706**
Date: **05-14-07**
Project Number: **010463-30300**

DATE: 05/14/07
PROJECT: SADDLEBROOK AT SHELBORNE - 142-48 STORM (SCL) (C701-C706)
DRAWN: AFERESTAD
CHECKED: MIGGGS
DATE: 05/14/07



- NOTES:**
- CONCRETE IN THESE END SECTIONS SHALL BE THE SAME GRADE AND STRENGTH AS SPECIFIED FOR REINFORCED CONCRETE PIPE, ASTM DESIGNATION C 78 CLASS [] () OR AS SHOWN ON THE DRAWINGS.
 - REINFORCEMENT IN THE "Y" PORTION SHALL BE THE SAME AS SPECIFIED FOR REINFORCED CONCRETE PIPE, ASTM DESIGNATION C 78 CLASS [] () OR AS SHOWN ON THE DRAWINGS.
 - REINFORCEMENT IN THE "A" PORTION SHALL HAVE A CROSS-SECTIONAL AREA EQUAL TO THAT OF ONE LEG OF STEEL IN THE "Y" SECTION.
 - THE END OF PIPE CULVERT SHALL BE PLACED IN THE CONCRETE END SECTION SO THAT THE FORMER PIPE FLANGE, THE JOINT SHALL BE COMPLETELY FILLED WITH GROUT.
 - IN 3:1 OR 4:1 SLOPE, CHANGE TO THE SLOPE OF THE END SECTION IN A SHORTER PLACING SEQUENCE APPROXIMATELY 10' IN LENGTH.
 - WORKING IN HANDINGS - THE THICKNESS OF THE CONCRETE, THE POSITION OF STEEL AND THE SPACING OF THE STEEL SHALL CONFORM WITH THE WORKING IN HANDINGS AS PROVIDED IN THE SPECIFICATIONS FOR REINFORCED CONCRETE CULVERT, STORM SEWER AND SEWER PIPE, ASTM DESIGNATION C 78.
 - WHERE VERIFIED BY GUY OR CAST WITH CULVERT PIPE, THE "A" PIPE END SECTION COMPARED TO THAT OF THE PIPE FOR WHICH IT IS DESIGNED SHALL BE APPROVED BY THE PROJECT ENGINEER.
 - END SECTIONS WILL BE PAID FOR AT THE CONTRACT UNIT PRICE EACH FOR "Y" PIPE END SECTION. COMPLETE IN PLACE AND AS SHOWN.
 - CONCRETE PIPE OR HANDING SHALL BE REINFORCED BY CONCRETE PIPE SECTIONS. THE COST THEREOF SHALL BE INCLUDED IN THE CONTRACT UNIT PRICE PER EACH FOR "Y" PIPE END SECTION.

DIMENSIONS OF PRECAST CONCRETE END SECTIONS

DIA.	T (min.)	A x C	D x E	K	R1	R2	Approx. Weight
12"	2"	5"	4'-3"	6'-2"	2'-0"	1.3	10 1/8"
15"	2 3/4"	7"	6'-0"	8'-2"	2'-0"	1.5	12 1/2"
18"	2 3/4"	11"	8'-0"	10'-2"	3'-0"	1.8	15 1/2"
21"	2 3/4"	11"	10'-0"	12'-2"	3'-0"	2.1	18 1/2"
24"	3"	15"	12'-0"	14'-2"	4'-0"	2.3	20 3/8"
27"	3 1/4"	17"	14'-0"	16'-2"	4'-0"	2.6	22 3/8"
30"	3 1/2"	17"	16'-0"	18'-2"	5'-0"	2.9	24 1/2"
33"	3 3/4"	17"	18'-0"	20'-2"	5'-0"	3.1	26 3/4"
36"	4"	17"	20'-0"	22'-2"	6'-0"	3.4	28 3/8"

x Tolerance ± 1"

ST-3A PRECAST CONCRETE END SECTION
NO SCALE

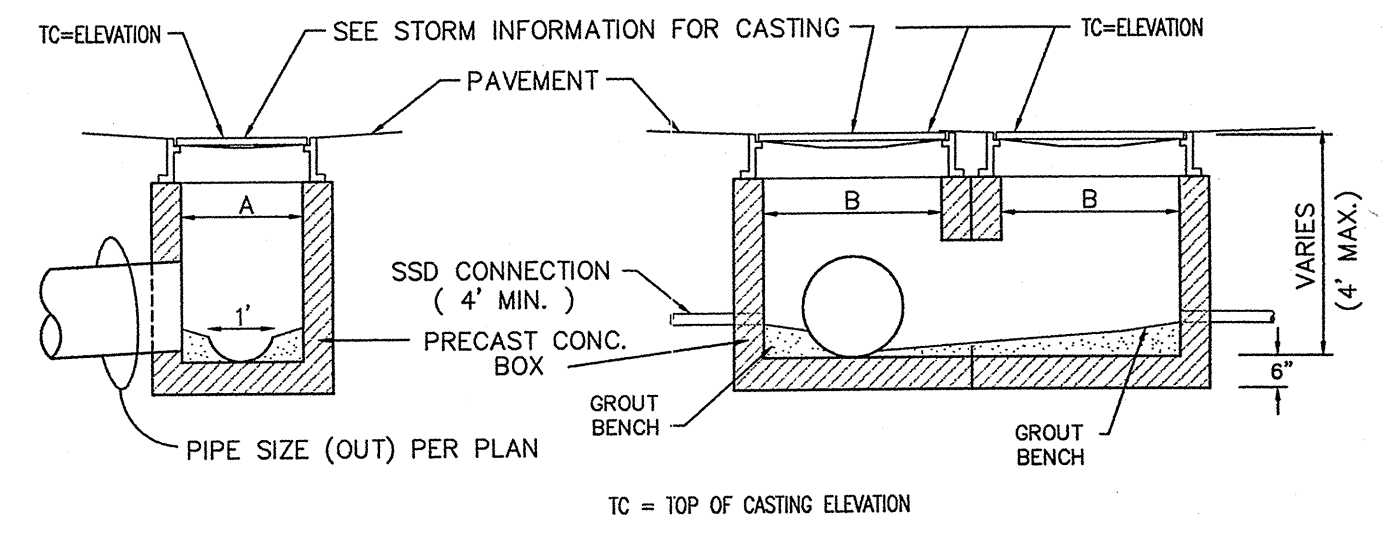
STORM SPECS CITY OF CARMEL
BACKFILL AND COVER

BEDDING, HAUNCHING, AND INITIAL BACKFILL FOR ALL RCP INSTALLATIONS SHALL BE B-BORROW FOR STRUCTURE BACKFILL 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 LINE, THERE REMAINS A 4 INCH MINIMUM DEPTH OF MATERIAL BELOW THE PIPE BARREL AND A MINIMUM OF 3 INCHES BELOW THE BELL. FOR PIPE SIZED 66 INCHES AND LARGER, THE MINIMUM DEPTH OF MATERIAL BELOW THE PIPE BARREL SHALL BE 6 INCHES. 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. HAUNCHING AND INITIAL BACKFILL SHALL BE COMPACTED IN 8 INCH 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. THE LIMIT OF INITIAL BACKFILL SHALL BE 6 INCHES ABOVE THE SPRINGLINE. MINIMUM TRENCH WIDTH SHALL BE THE OUTSIDE DIAMETER OF THE PIPE PLUS 18 INCHES.

FINAL BACKFILL FOR ALL RCP INSTALLATIONS UNDER AND WITHIN 5 FEET OF PAVEMENT (INCLUDING SIDEWALKS) SHALL BE B-BORROW FOR STRUCTURE BACKFILL MEETING THE MATERIAL REQUIREMENTS OF THE INDOT AND SHALL BE COMPACTED IN 6 INCH MAXIMUM LIFTS TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY FOR THE ENTIRE DEPTH OF THE MATERIAL PLACED. THE BACKFILL FOR THE TOP 6 INCHES OF EXCAVATION BELOW THE START OF THE AGGREGATE SUBBASE OF THE PAVEMENT SHALL BE No. 53 STONE MEETING THE MATERIAL REQUIREMENTS OF THE INDOT AND SHALL BE COMPACTED TO NOT LESS THAN 95% STANDARD PROCTOR DENSITY.

FINAL BACKFILL FOR ALL RCP INSTALLATIONS GREATER THAN 5 FEET FROM ANY PAVEMENT SHALL BE CLEAN FILL MATERIAL FREE OF ROCKS LARGER THAN 6 INCHES IN DIAMETER, FROZEN LUMPS OF SOIL, WOOD OR OTHER EXTRANEIOUS MATERIAL. COMPACTED IN 12 INCH MAXIMUM LIFTS TO NOT LESS THAN 90% STANDARD PROCTOR DENSITY FOR THE ENTIRE DEPTH OF THE EXCAVATION.

THESE INSTALLATIONS SHALL CONFORM WITH THE FOLLOWING MINIMUM COVER REQUIREMENTS: FOR INSTALLATION OF STORM MAINS, WATER MAINS, SANITARY MAINS, WATER SERVICE LATERALS, SANITARY SERVICE LATERALS UNDER CITY STREETS, REGARDLESS OF 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 SUBGRADE) PLUS 1'-0". IF THE STANDARD PRACTICE OF THE UTILITY THAT HAS JURISDICTION OVER THE INSTALLATION HAS A MORE STRINGENT COVER REQUIREMENT, THE MORE STRINGENT COVER REQUIREMENT SHALL GOVERN.

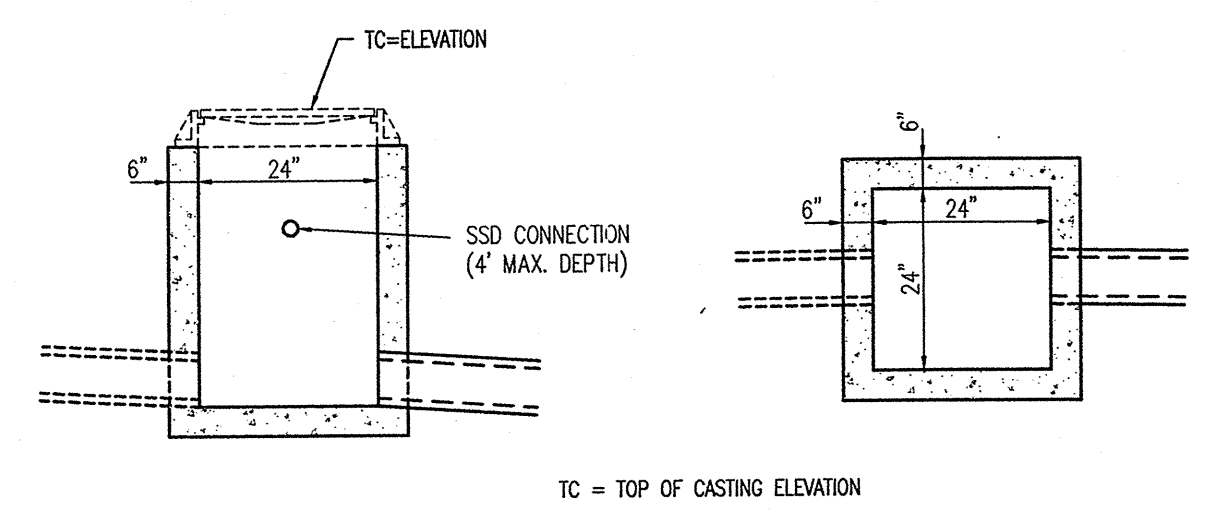


ST-31 DOUBLE INLET DETAIL
NO SCALE

CASTING SCHEDULE

E/W	NEENAH	TYPE	USE	DIM
7490-MI	R-3501-N	CURB INLET	LOW POINT	24" X 24"
7495-LH-RH	R-3501-TL-TR	CURB INLET	FLOW LEFT OR RIGHT	25" X 27"
-	R-3405	INLET	PARKING LOT	25" X 25"
-	R-2501	GRATE	PARKING LOT	24" x
6489	R-4342	DITCH GRATE	SWALES	24" x

* REQUIRES FLAT TOP WITH 24" OPENING



ST-36 PRECAST TYPE 'A' INLET
NO SCALE MODIFIED

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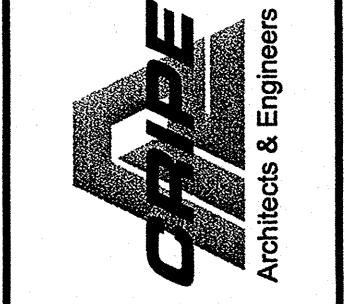
Entry Date: October 2009

Entered By: SLM

Revision	Date	Description

ARCHITECTS/ENGINEERS
CIVIL ENGINEERS
LANDSCAPE ARCHITECTURE
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STORM SEWER DETAILS

SADDLEBROOK AT SHELBORNE SECTION 2

LEEDS, LLC
5300 HESSLER ROAD
MUNCIE, INDIANA 47304

CERTIFIED BY:

Joseph A. Sharp

JOSEPH A. SHARP
REGISTERED
No. 15179
STATE OF INDIANA
PROFESSIONAL ENGINEER

Drawn By: **E POPS**

Checked By: **J SHARP**

Quality Assurance: **D LACH**

Scale: 0 Scale: 1" = 16'

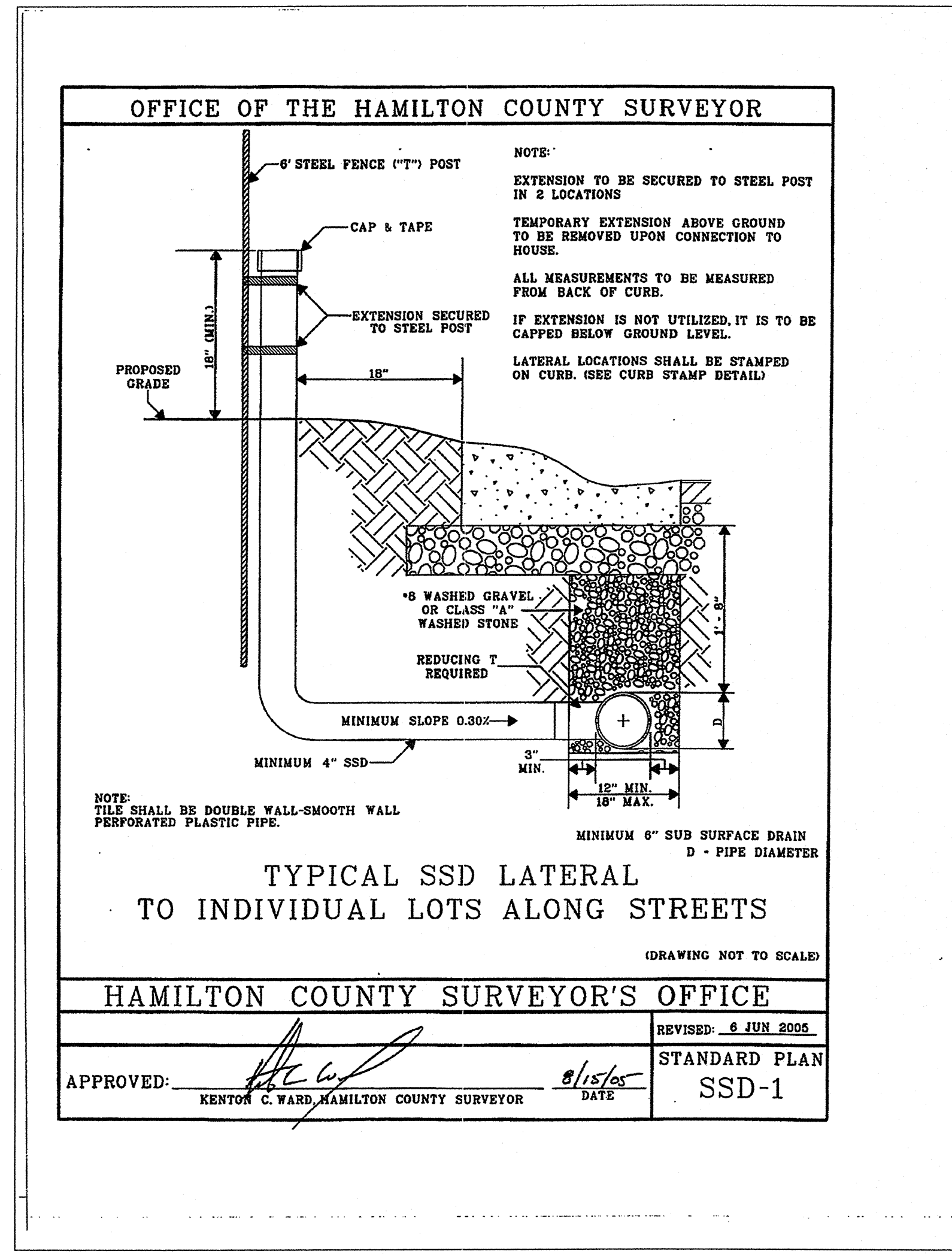
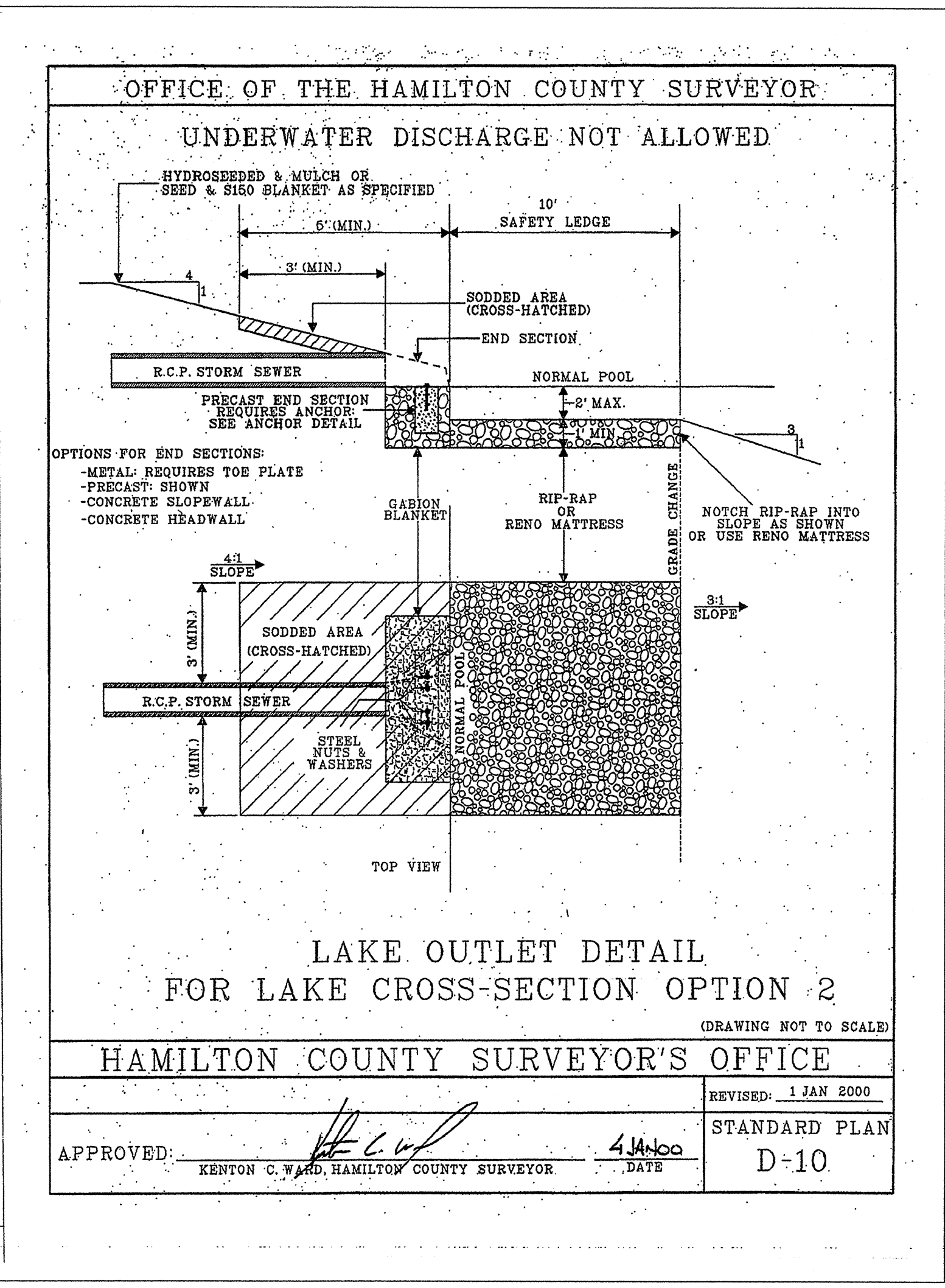
Sheet: **C707**

Date: **05/02/08**

Project Number: **010463-20100**

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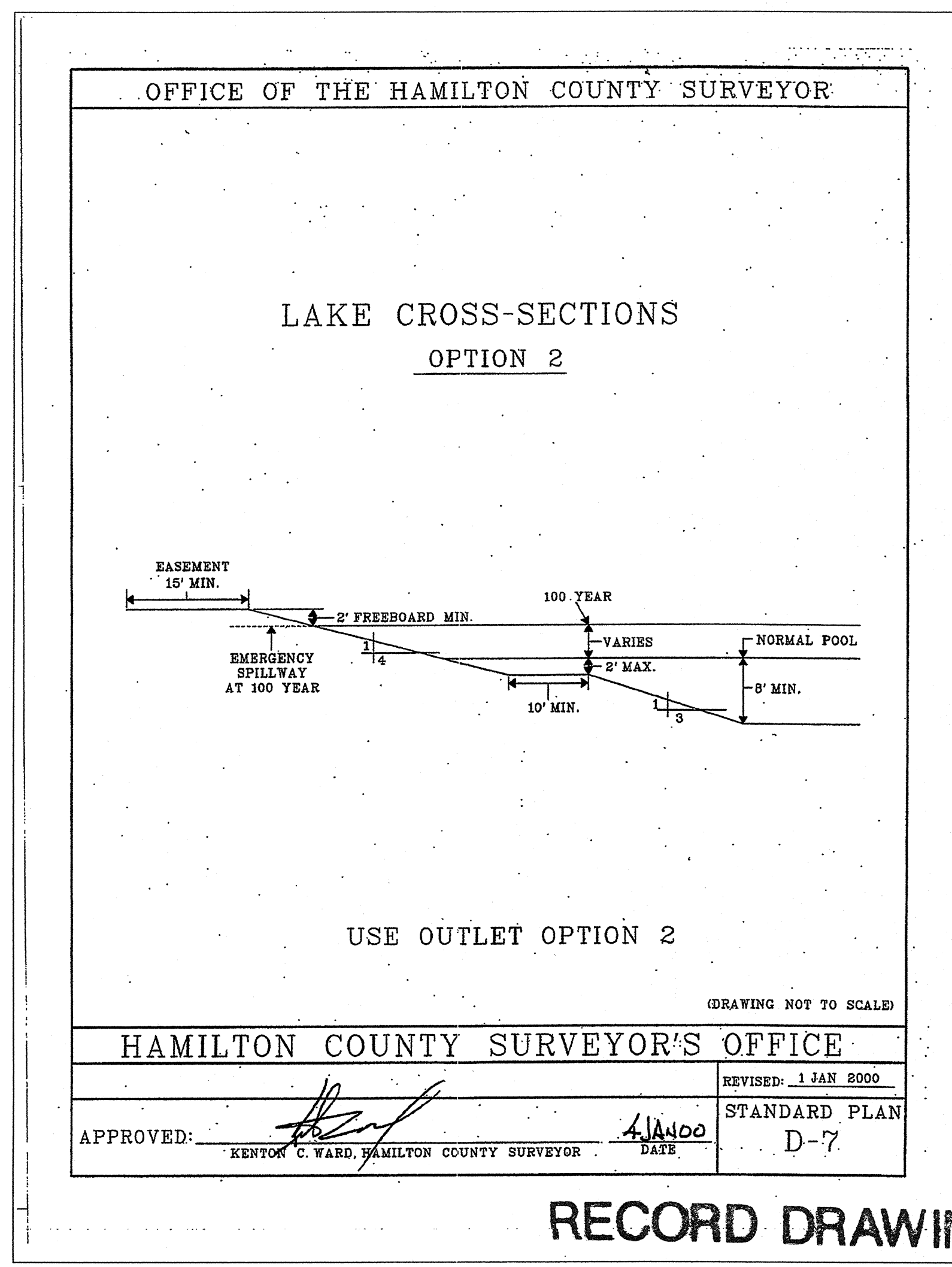
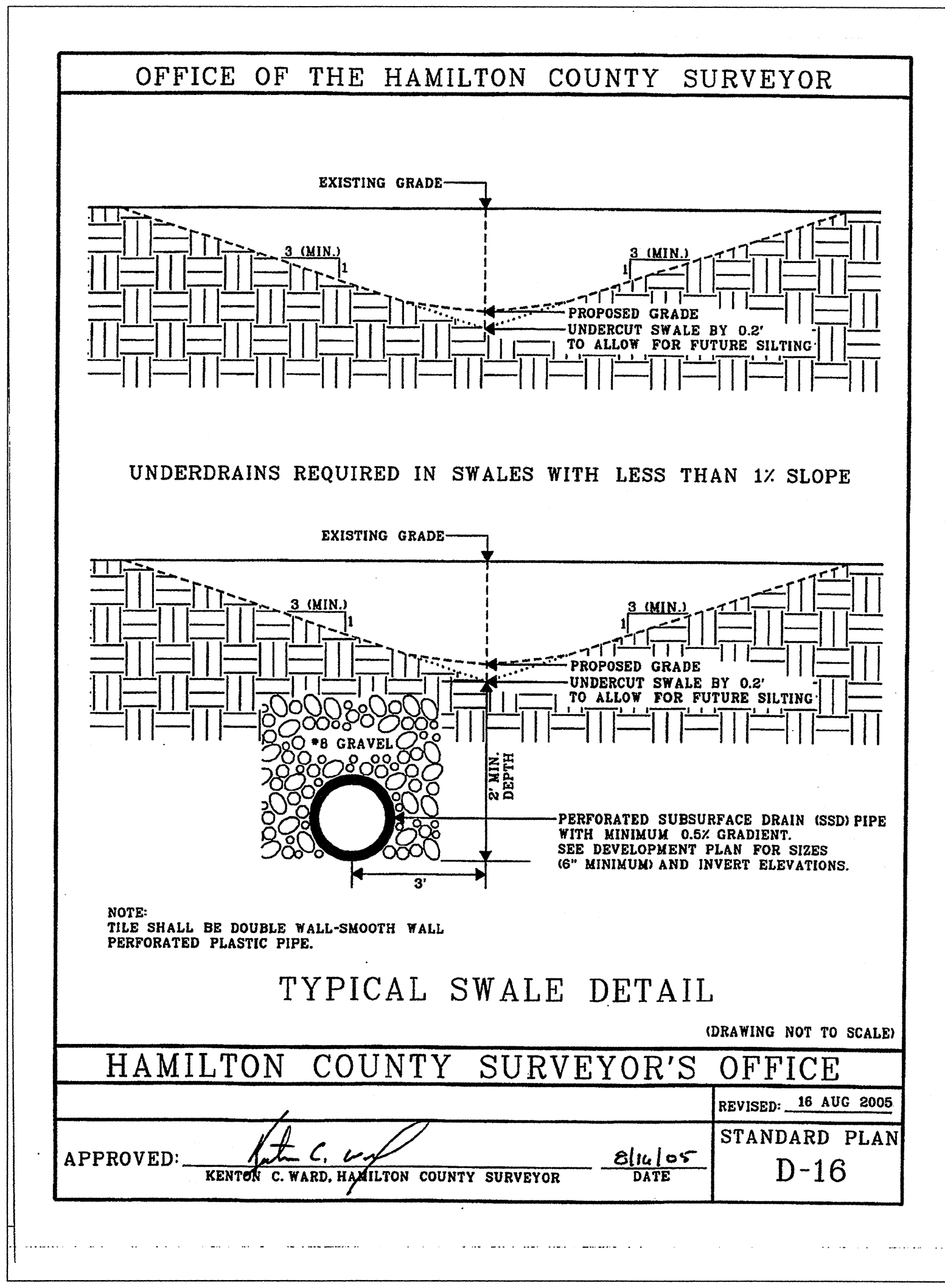
OFFICE OF THE HAMILTON COUNTY SURVEYOR

STRUCTURE SIZING TABLE

PIPE SIZE (INCHES)	STRUCTURES LESS THAN 48" FROM T/C TO INVERT (INCHES)	STRUCTURES GREATER THAN 48" FROM T/C TO INVERT	ANGLE AND QUALITY OF PIPES WILL REQUIRE SPECIAL DESIGN	STEPS REQUIRED	CURB CASTING *R-SSOIN	CASTING *SSOIN TL & TR
12 TO 18	24 X 24	***	DESIGN APPROVAL	NO	YES	YES
18 TO 21	30 X 30	***	DESIGN APPROVAL	NO	YES	YES
18 TO 21		MH/BOX	DESIGN APPROVAL	YES	YES	YES
21 TO 27	24 X 36 OR 36 X 36	***	DESIGN APPROVAL	NO	NO	YES
18 TO 24	36 X 36	***	DESIGN APPROVAL	NO	YES	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.

HAMILTON COUNTY SURVEYOR'S OFFICE
 REVISED: 1 FEB 2002
 APPROVED: KENTON C. WARD, HAMILTON COUNTY SURVEYOR DATE: 2/1/02 STANDARD PLAN D-18



RECORD DRAWING

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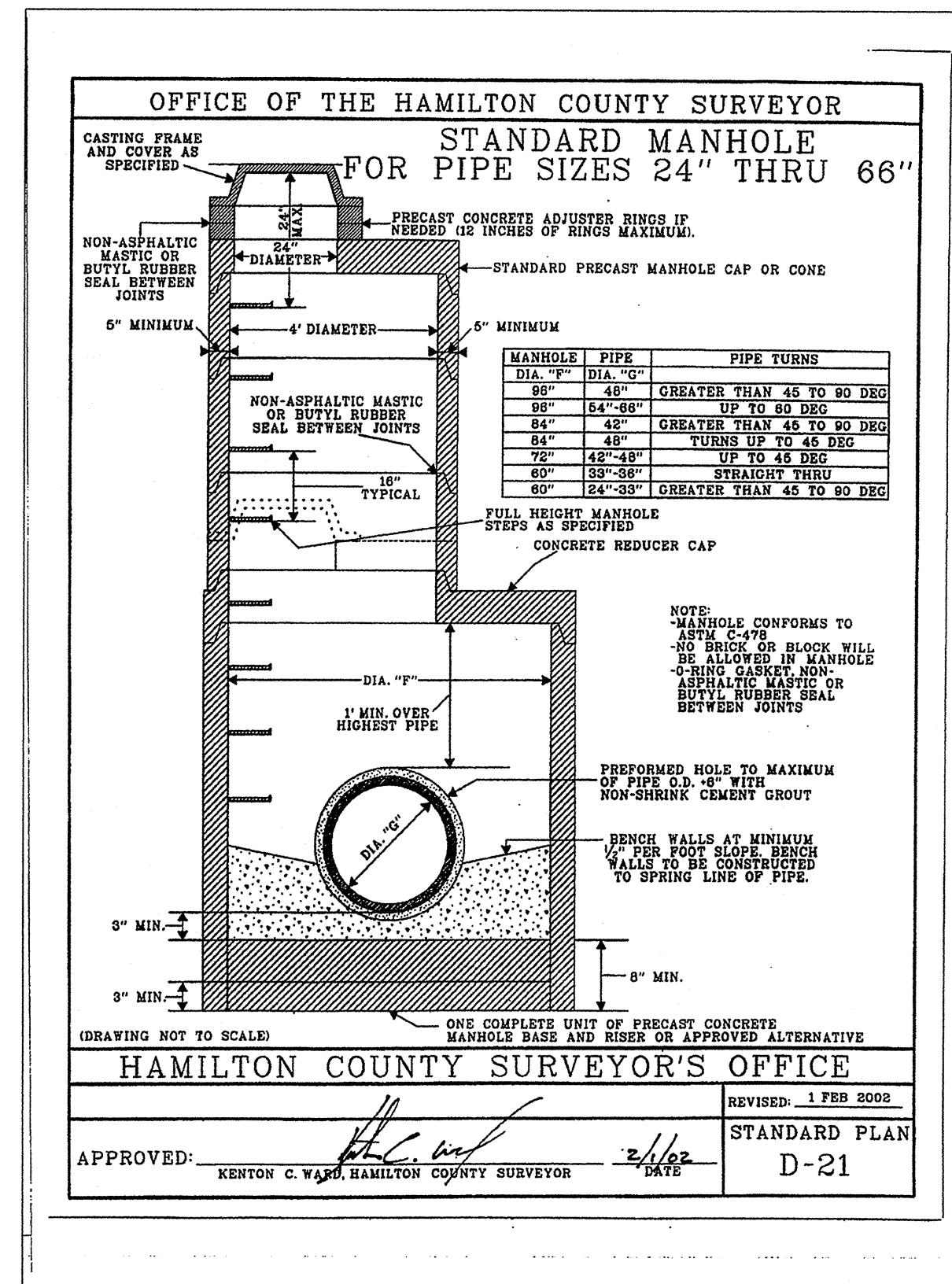
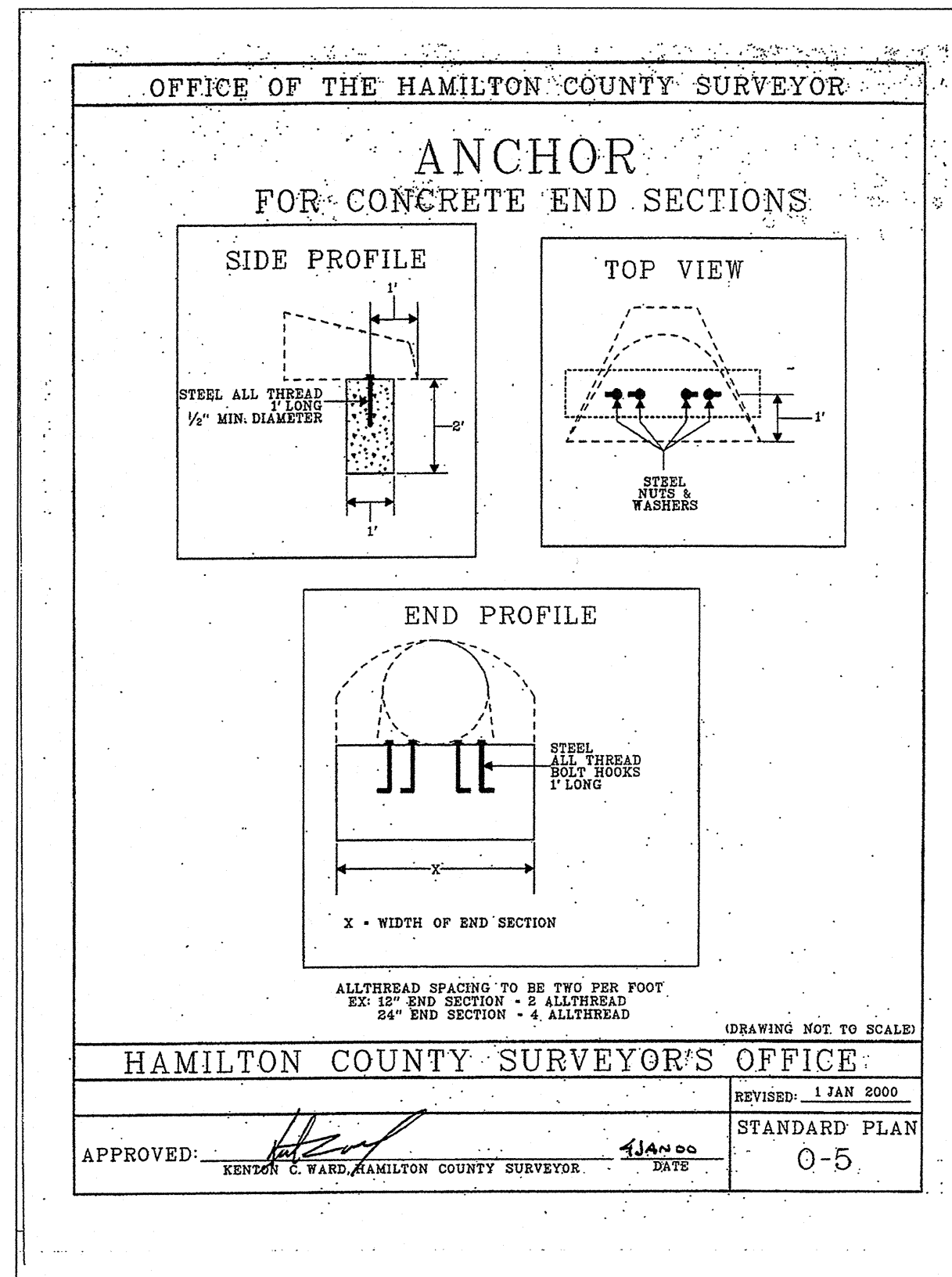
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 Architects & Engineers

STORM SEWER DETAILS
 SADDLEBROOK AT SHELBORNE SECTION 2
 LEEDS, LLC
 5300 HESSLER ROAD
 MUNCIE, INDIANA 47304

CERTIFIED BY:
Joseph A. Sharp
 REGISTERED PROFESSIONAL ENGINEER
 No. 15179
 STATE OF INDIANA

Drawn By: E POPS
 Checked By: J SHARP
 Quality Assurance: D LACH
 Scale: 0" = 1" = 16'
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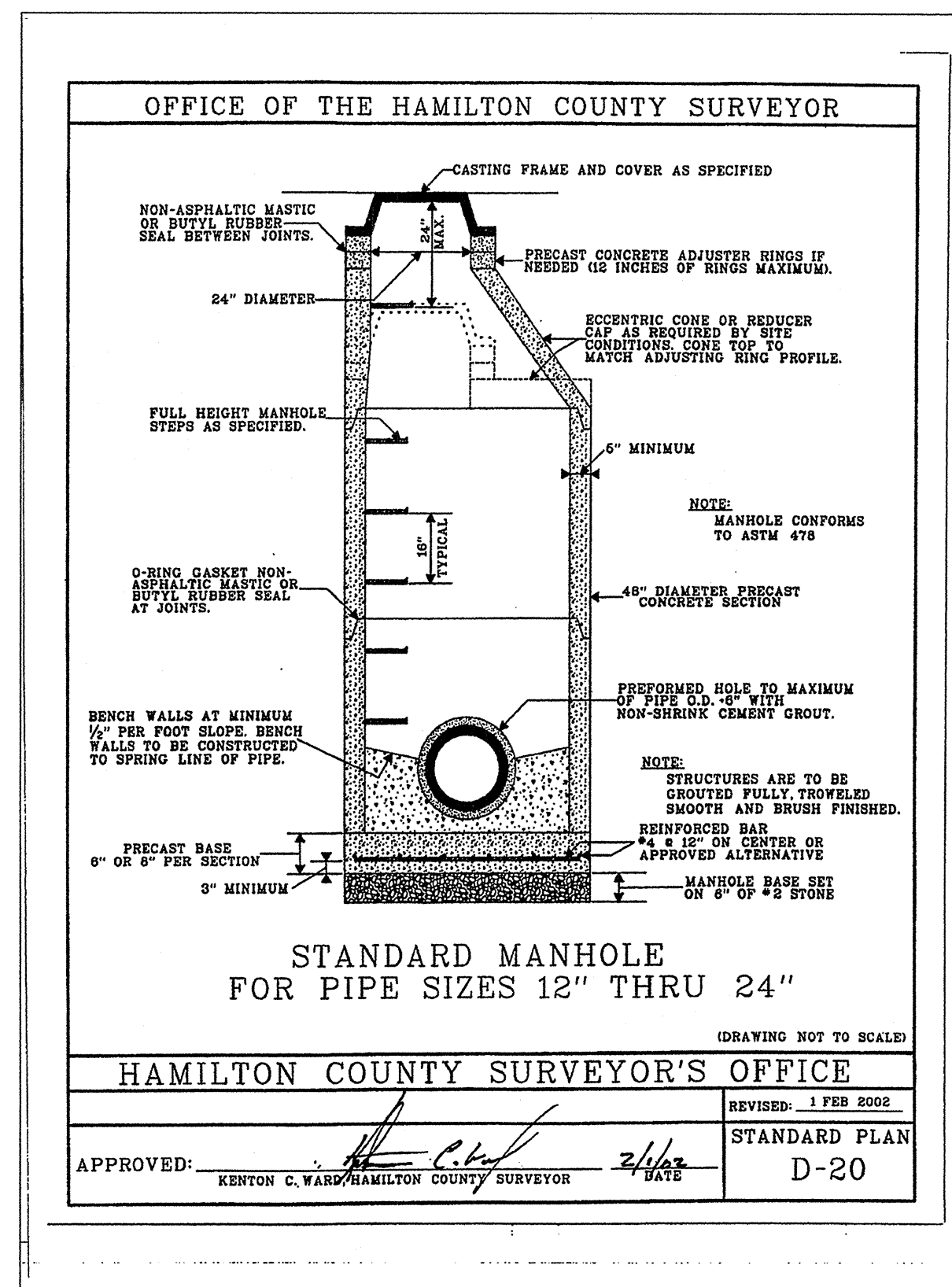
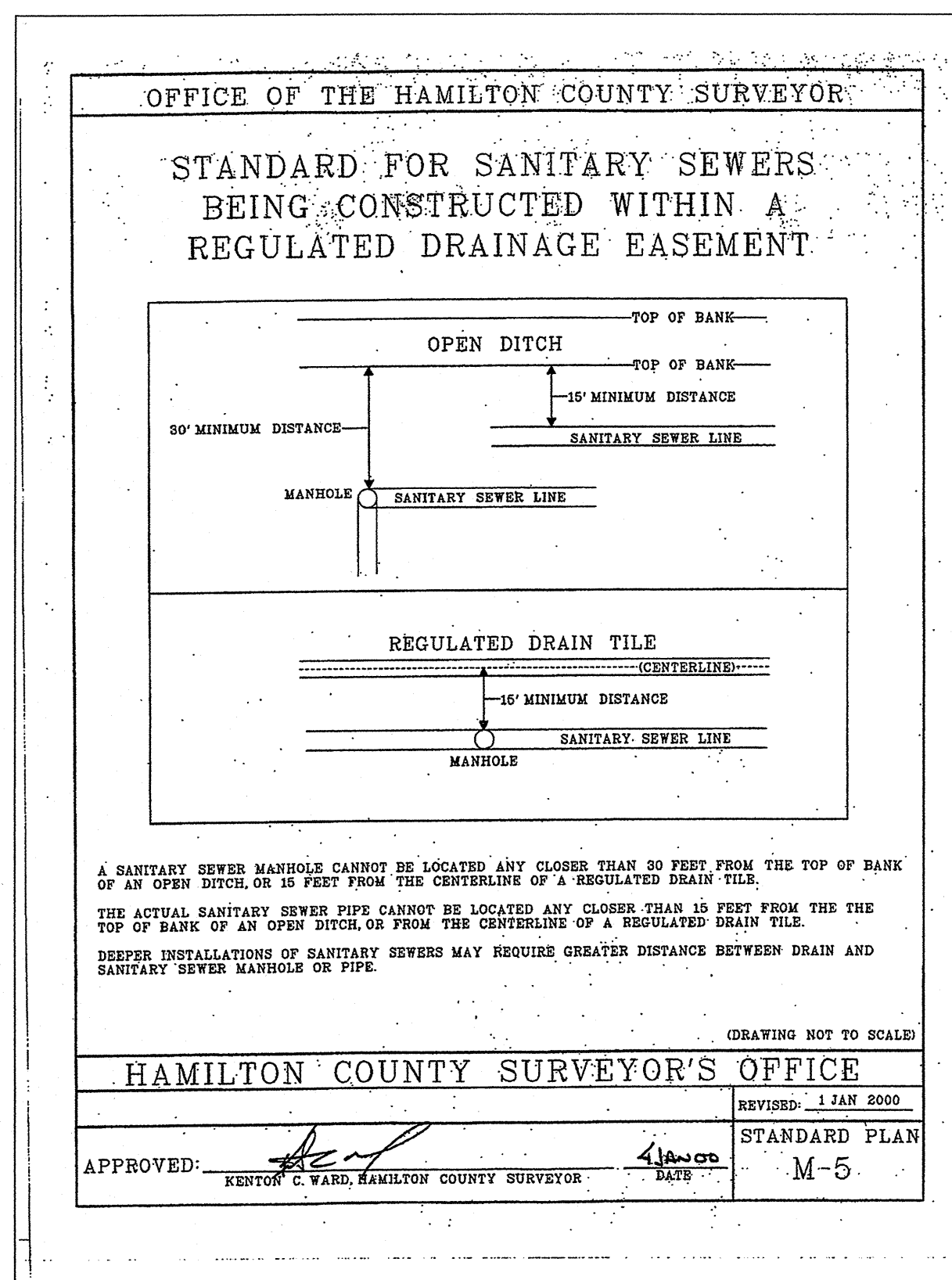


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STR. NO	TC / RIM ELEV.	INV. IN	INV. OUT	DEPTH IN FEET	STR. SIZE	STR. TYPE	CASTING TYPE	PIPE SIZE	DIRECTION OF PIPE IN / OUT
EX-1	898.90	890.15	890.10	7.00	48"	D-20	R-4342	15", 18"	E / NE
EX-2	900.27	895.67	894.52	3.92	48"	D-20	R-4342	8", 15"	S / N
701		884.40			18"	ST-3A	END SECTION	18"	NW OUT
702	889.50	885.00	885.00	1.20	24"x36"	ST-36	R-4342	18"	S / NW
703	894.50	888.85	885.85	6.85	72"	D-20	R-4342	18"	S / N
704	893.41	889.25	889.25	2.36	72"	D-20	R-3501-N	18"	S / N
705	893.41	889.50	889.50	2.11	48"	D-20	R-3501-N	18"	S / N
705A	898.00	894.73	894.73	2.18	48"	D-20	R-4342	15"	E / W
706		894.22			18"	ST-3A	END SECTION	18"	NW OUT
707	900.15	894.35	894.35	3.99	24"x36"	ST-36	R-3501-TL	15", 18"	S / NW
708	900.15	895.05	894.43	4.22	24"x36"	ST-36	R-3501-TR	8", 15"	SE / N
709		896.45			24"	ST-3A	END SECTION	24"	SW OUT
710	905.00	898.00	898.00	4.69	48"	D-21	R-4342	18", 24"	SW / NE
711	905.00	899.00	899.00	4.20	48"	D-20	R-4342	15", 18"	W / NE
712	907.50	900.80	900.80	5.20	48"	D-20	R-4342	15"	S / E
713	906.51	901.85	901.85	3.16	24"x36"	ST-31	R-3501-TL	12", 15"	S / N
714	906.51	902.10	902.10	3.12	24"x36"	ST-31	R-3501-TR	12"	N OUT
715	906.72	899.45	899.45	5.77	24"x36"	ST-36	R-3501-TL	12", 15"	SE / NW
716	906.72	899.65	899.65	5.83	24"x36"	ST-36	R-3501-TR	12"	SE / NW
717	906.76	899.75	899.75	5.77	48"	D-20	R-4342	12"	SW / NW
718	904.50	890.25	890.25	3.01	48"	D-20	R-4342	12"	NE OUT
719		896.30			36"	ST-3A	END SECTION	36"	NW OUT
720	903.55	896.75	896.75	3.40	48"	D-21	R-3501-N	36"	SE / NW
721	903.55	896.80	896.80	3.35	48"	D-21	R-3501-N	36"	SE / NW
722	904.50	897.25	897.25	4.40	60"	D-21	R-4342	30"	E / NW
723	903.50	897.65	897.65	2.99	60"	D-21	R-4342	30"	S / W
724	904.00	898.15	898.15	1.64	60"	D-21	R-4342	30"	E / N
725	903.80	898.50	898.50	2.44	48"	D-21	R-4342	24", 30"	E / W
726	905.54	898.95	898.95	4.28	48"	D-21	R-3501-N	24"	E / W
727	905.54	899.05	899.05	4.18	48"	D-21	R-3501-N	24"	E / W
728	906.90	899.15	899.15	5.44	48"	D-21	R-4342	24"	E / W
729	904.50	899.65	899.65	2.74	48"	D-21	R-4342	18", 24"	E / W
730	908.50	899.85	899.85	6.85	48"	D-20	R-4342	18"	SE / W
731	904.00	890.35	890.35	1.35	48"	D-20	R-4342	18"	NW OUT

HAMILTON COUNTY SURVEYOR'S OFFICE
APPROVED: *Kenton C. Ward* KENTON C. WARD, HAMILTON COUNTY SURVEYOR
REVISOR: *2/1/02* DATE
REVISION: 1 FEB 2002
STANDARD PLAN
D-19

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Entered By: *SLM*



OFFICE OF THE HAMILTON COUNTY SURVEYOR

STR. NO	TC / RIM ELEV.	INV. IN	INV. OUT	DEPTH IN FEET	STR. SIZE	STR. TYPE	CASTING TYPE	PIPE SIZE	DIRECTION OF PIPE IN / OUT
732	902.54	898.80	898.40	0.80	48"	D-21	R-3501-N	18", 24"	S / NW
733	902.54	899.25	899.00	0.71	24"x36"	ST-36	R-3501-N	15", 18"	S / N
734	903.00		899.75	1.75	48"	D-20	R-4342	15"	N OUT
735	903.00		900.00	1.50	48"	D-20	R-4342	15"	S OUT
736	905.82	900.80	900.80	3.52	24"x36"	ST-31	R-3501-TL	12", 15"	S / N
737	905.82		901.00	3.58	24"x36"	ST-31	R-3501-TR	12"	N OUT
738			896.45		36"	ST-3A	END SECTION	36"	W OUT
739	902.00	896.65	896.65	0.95	60"	D-21	R-4342	36"	SE / W
740	904.41	897.00	897.00	4.01	60"	D-21	R-3501-N	30", 36"	SE / NW
741	904.41	898.40	897.15	4.46	60"	D-21	R-3501-N	30"	SE / NW
742	903.90	897.45	897.45	3.60	60"	D-21	R-4342	30"	S / NW
743	902.80	897.90	897.90	2.05	60"	D-21	R-4342	30"	E / N
744	903.00	898.30	898.30	1.85	60"	D-21	R-4342	30"	SE / W
745	904.91	898.85	898.85	3.21	60"	D-21	R-3501-N	30"	SE / NW
746	906.55	899.20	899.20	4.50	60"	D-21	R-4342	30"	E / NW
747	903.50	899.55	899.55	1.10	60"	D-21	R-4342	24", 30"	E / W
748	904.49	900.15	900.15	2.03	48"	D-20	R-3501-N	24"	E / W
749	904.49	900.35	900.30	2.39	24"x36"	ST-36	R-3501-N	15", 18"	E / W
750	904.00		900.70	1.30	48"	D-20	R-4342	15"	W OUT
751	902.20	897.20	897.20	2.69	48"	D-21	R-4342	24"	E / W
752	903.70	898.65	897.80	3.59	48"	D-21	R-4342	15", 24"	S / W
753	904.15	899.70	899.70	2.95	24"x36"	ST-36	R-3501-N	12", 15"	S / N
754	904.15		900.00	2.91	24"x36"	ST-36	R-3501-N	12"	N OUT
755	903.60	898.35	898.20	3.60	24"x36"	ST-36	R-3501-TR	15", 18"	E / W
756	903.60	898.50	898.50	3.60	24"x36"	ST-36	R-3501-TL	15"	E / W
757	902.00		899.25	1.25	48"	D-20	R-4342	15"	W OUT
758	889.00	889.00				ST-3A	END SECTION	12"	NW OUT
759	896.00		890.26	5.74	48"	D-20	R-2560E	12"	NW OUT
760	904.13	898.30	896.86	4.58	48"	D-21	R-1772	30"	NW / SE
761	907.00	899.20	899.20	6.55	48"	D-21	R-1772	12"	NW / SW
762	905.40	899.45	899.45	4.70	24"x36"	ST-36	R-3501-TL	12"	NW / SE
763	905.40		899.60	4.55	24"x36"	ST-36	R-3501-TR	12"	SE
764	905.57	899.05	899.05	5.27	24"x36"	ST-36	R-3501-TR	12"	W / NE
765	905.57		899.30	5.02	24"x36"	ST-36	R-3501-TL	12"	E / W
766	905.00	900.50	900.08	3.25	48"	D-21	R-1772	24"	E / W
767	906.51	901.60	901.35	3.66	48"	D-21	R-1772	12"	E / S
768	905.74	901.80	901.80	2.69	24"x36"	ST-36	R-3501-TL	12"	E / W
769	905.74		902.00	2.49	24"x36"	ST-36	R-3501-TR	12"	W

HAMILTON COUNTY SURVEYOR'S OFFICE
APPROVED: *Kenton C. Ward* KENTON C. WARD, HAMILTON COUNTY SURVEYOR
REVISOR: *2/1/02* DATE
REVISION: 1 FEB 2002
STANDARD PLAN
D-19

NOTE TO CONTRACTOR
ALL CASTINGS SHALL BE LABELED "DUMP NO WASTE - DRAINS TO WATERWAY" CONTRACTOR SHALL CONSTRUCT ALL STRUCTURES BASED ON DATA SHOWN ON THE PLAN AND PROFILE SHEETS IN THIS PLAN SET.

RECORD DRAWING

7172 GRAHAM ROAD
INDIANAPOLIS, INDIANA 46250
(317) 842-4545 FAX (317) 841-4796
E-Mail: crpe@crpe.biz

ARCHITECTURE
LANDSCAPE ARCHITECTURE
LAND PLANNING
LAND SURVEYING
TRANSPORTATION ENGINEERS
GIS

STORM SEWER DETAILS
SADDLEBROOK AT SHELBORNE SECTION 2
LEEDS, LLC
5300 HESSLER ROAD
MUNCIE, INDIANA 47304

CERTIFIED BY:
Joseph A. Sharp
REGISTERED PROFESSIONAL ENGINEER
No. 15179
STATE OF INDIANA

Drawn By: E POPS
Checked By: J SHARP
Quality Assurance: D LACH
Scale: 1" = 10'
Sheet: C709
Date: 05/02/06
Project Number: 010463-20100

OFFICE OF THE HAMILTON COUNTY SURVEYOR

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: October 2008

Entered By: SLM

OFFICE OF THE HAMILTON COUNTY SURVEYOR

14 1/2" (368mm) DIA. ANCHOR BOLT HOLES ON A 32" (813mm) DIA. B.C.

1/2" (12.7mm) TYPE "B" RECESSED PICKETS

2" (50.8mm) RAISED LETTERS FLUSH TO TOP SURFACE OF LID

MADE IN USA

1 7/8" (46mm) FULL RADIUS

1/4" (6.35mm)

1" (25.4mm)

3/4" (19.05mm)

3/8" (9.525mm)

ANCHOR HOLE DETAIL FULL SCALE

PICKHOLE DETAIL QUARTER SCALE

NEENAH	1642 or 1772
EAST JORDAN	1045

NOTE: ALL DIMENSIONS SHOWN ARE IN ENGLISH AND METRIC. MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 30B. FINISH: NO PAINT. WEIGHT: FRAME 150#, LID 15#

* Or approved by Hamilton County Surveyor's Office (DRAWING NOT TO SCALE)

HAMILTON COUNTY SURVEYOR'S OFFICE

MANHOLE/SOLID LID CASTING

REVISOR: 11/18/2004

APPROVED: KENTON C. WARD, HAMILTON COUNTY SURVEYOR DATE: 14 FEB 05 STANDARD PLAN CT-1

OFFICE OF THE HAMILTON COUNTY SURVEYOR

1 1/2" (38.1mm) HIGH LETTERS

1/2" (12.7mm) TYPE "B" RECESSED PICKETS

2" (50.8mm) RAISED LETTERS FLUSH TO TOP SURFACE OF LID

MADE IN USA

1 7/8" (46mm) FULL RADIUS

1/4" (6.35mm)

1" (25.4mm)

3/4" (19.05mm)

3/8" (9.525mm)

ANCHOR HOLE DETAIL FULL SCALE

PICKHOLE DETAIL QUARTER SCALE

NEENAH	2015
EAST JORDAN	105021 M1

NOTE: ALL DIMENSIONS SHOWN ARE IN ENGLISH AND METRIC. MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 30B. FINISH: NO PAINT. WEIGHT: LID 28#

* Or approved by Hamilton County Surveyor's Office (DRAWING NOT TO SCALE)

HAMILTON COUNTY SURVEYOR'S OFFICE

MANHOLE SLOTTED GRATE AND FRAME CASTING

REVISOR: 11/18/2004

APPROVED: KENTON C. WARD, HAMILTON COUNTY SURVEYOR DATE: 14 FEB 05 STANDARD PLAN CT-2

OFFICE OF THE HAMILTON COUNTY SURVEYOR

3/8" (9.525mm) ANCHOR BOLT HOLES ON A 32" (813mm) DIA. B.C.

1 1/2" (38.1mm) HIGH LETTERS

1/2" (12.7mm) TYPE "B" RECESSED PICKETS

2" (50.8mm) RAISED LETTERS FLUSH TO TOP SURFACE OF LID

MADE IN USA

1 7/8" (46mm) FULL RADIUS

1/4" (6.35mm)

1" (25.4mm)

3/4" (19.05mm)

3/8" (9.525mm)

ANCHOR HOLE DETAIL FULL SCALE

PICKHOLE DETAIL QUARTER SCALE

NEENAH	3010
EAST JORDAN	7010

NOTE: ALL DIMENSIONS SHOWN ARE IN ENGLISH AND METRIC. MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 30B. FINISH: NO PAINT. WEIGHT: APPROX. 167#

REFER TO SHEET CT-6

* Or approved by Hamilton County Surveyor's Office (DRAWING NOT TO SCALE)

HAMILTON COUNTY SURVEYOR'S OFFICE

FRAME W/ 4 SIDED SEAT

REVISOR: 11/18/2004

APPROVED: KENTON C. WARD, HAMILTON COUNTY SURVEYOR DATE: 14 FEB 05 STANDARD PLAN CT-4

OFFICE OF THE HAMILTON COUNTY SURVEYOR

1 1/2" (38.1mm) HIGH LETTERS

1/2" (12.7mm) TYPE "B" RECESSED PICKETS

2" (50.8mm) RAISED LETTERS FLUSH TO TOP SURFACE OF LID

MADE IN USA

1 7/8" (46mm) FULL RADIUS

1/4" (6.35mm)

1" (25.4mm)

3/4" (19.05mm)

3/8" (9.525mm)

ANCHOR HOLE DETAIL FULL SCALE

PICKHOLE DETAIL QUARTER SCALE

NEENAH	3010
EAST JORDAN	7010

NOTE: ALL DIMENSIONS SHOWN ARE IN ENGLISH AND METRIC. MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 30B. FINISH: NO PAINT. WEIGHT: 92#

REFER TO SHEET CT-4

* Or approved by Hamilton County Surveyor's Office (DRAWING NOT TO SCALE)

HAMILTON COUNTY SURVEYOR'S OFFICE

1/2" RADIUS OPEN CURB BOX

REVISOR: 11/18/2004

APPROVED: KENTON C. WARD, HAMILTON COUNTY SURVEYOR DATE: 14 FEB 05 STANDARD PLAN CT-5

OFFICE OF THE HAMILTON COUNTY SURVEYOR

1 1/2" (38.1mm) HIGH LETTERS

1/2" (12.7mm) TYPE "B" RECESSED PICKETS

2" (50.8mm) RAISED LETTERS FLUSH TO TOP SURFACE OF LID

MADE IN USA

1 7/8" (46mm) FULL RADIUS

1/4" (6.35mm)

1" (25.4mm)

3/4" (19.05mm)

3/8" (9.525mm)

ANCHOR HOLE DETAIL FULL SCALE

PICKHOLE DETAIL QUARTER SCALE

NEENAH	3405
EAST JORDAN	5250

NOTE: ALL DIMENSIONS SHOWN ARE IN ENGLISH AND METRIC. MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 30B. FINISH: NO PAINT. WEIGHT: FRAME 150#, GRATE 130#

* Or approved by Hamilton County Surveyor's Office (DRAWING NOT TO SCALE)

HAMILTON COUNTY SURVEYOR'S OFFICE

PARKING LOT INLET CASTING

REVISOR: 11/18/2004

APPROVED: KENTON C. WARD, HAMILTON COUNTY SURVEYOR DATE: 14 FEB 05 STANDARD PLAN CT-6

OFFICE OF THE HAMILTON COUNTY SURVEYOR

1 1/2" (38.1mm) HIGH LETTERS

1/2" (12.7mm) TYPE "B" RECESSED PICKETS

2" (50.8mm) RAISED LETTERS FLUSH TO TOP SURFACE OF LID

MADE IN USA

1 7/8" (46mm) FULL RADIUS

1/4" (6.35mm)

1" (25.4mm)

3/4" (19.05mm)

3/8" (9.525mm)

ANCHOR HOLE DETAIL FULL SCALE

PICKHOLE DETAIL QUARTER SCALE

NEENAH	3501-L2
EAST JORDAN	7495-M4

NOTE: ALL DIMENSIONS SHOWN ARE IN ENGLISH AND METRIC. MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 30B. FINISH: NO PAINT. WEIGHT: FRAME 214#, GRATE 177#

* This casting to be used when curb flow comes from both directions

* Or approved by Hamilton County Surveyor's Office (DRAWING NOT TO SCALE)

HAMILTON COUNTY SURVEYOR'S OFFICE

CURB BI-DIRECTIONAL CASTING

REVISOR: 11/18/2004

APPROVED: KENTON C. WARD, HAMILTON COUNTY SURVEYOR DATE: 14 FEB 05 STANDARD PLAN CT-7

OFFICE OF THE HAMILTON COUNTY SURVEYOR

1 1/2" (38.1mm) HIGH LETTERS

1/2" (12.7mm) TYPE "B" RECESSED PICKETS

2" (50.8mm) RAISED LETTERS FLUSH TO TOP SURFACE OF LID

MADE IN USA

1 7/8" (46mm) FULL RADIUS

1/4" (6.35mm)

1" (25.4mm)

3/4" (19.05mm)

3/8" (9.525mm)

ANCHOR HOLE DETAIL FULL SCALE

PICKHOLE DETAIL QUARTER SCALE

NEENAH	3501-TL or TR
EAST JORDAN	7495-M2 or M1

NOTE: ALL DIMENSIONS SHOWN ARE IN ENGLISH AND METRIC. MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 30B. FINISH: NO PAINT. WEIGHT: FRAME 214#, GRATE 150#

* Or approved by Hamilton County Surveyor's Office (DRAWING NOT TO SCALE)

HAMILTON COUNTY SURVEYOR'S OFFICE

CURB INLET CASTING

REVISOR: 11/18/2004

APPROVED: KENTON C. WARD, HAMILTON COUNTY SURVEYOR DATE: 14 FEB 05 STANDARD PLAN CT-8

OFFICE OF THE HAMILTON COUNTY SURVEYOR

1 1/2" (38.1mm) HIGH LETTERS

1/2" (12.7mm) TYPE "B" RECESSED PICKETS

2" (50.8mm) RAISED LETTERS FLUSH TO TOP SURFACE OF LID

MADE IN USA

1 7/8" (46mm) FULL RADIUS

1/4" (6.35mm)

1" (25.4mm)

3/4" (19.05mm)

3/8" (9.525mm)

ANCHOR HOLE DETAIL FULL SCALE

PICKHOLE DETAIL QUARTER SCALE

NEENAH	4342
EAST JORDAN	6489N

NOTE: ALL DIMENSIONS SHOWN ARE IN ENGLISH AND METRIC. MATERIAL: CAST GRAY IRON ASTM A-48, CLASS 30B. FINISH: NO PAINT. WEIGHT: 280#

FREE OPEN AREA: 278 SQUARE INCHES

* Or approved by Hamilton County Surveyor's Office (DRAWING NOT TO SCALE)

HAMILTON COUNTY SURVEYOR'S OFFICE

BEEHIVE INLET CASTING

REVISOR: 11/18/2004

APPROVED: KENTON C. WARD, HAMILTON COUNTY SURVEYOR DATE: 14 FEB 05 STANDARD PLAN CT-10

ARCHITECTURE
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CRPE
Architects & Engineers

STORM SEWER DETAILS
SADDLEBROOK AT SHELBORNE SECTION 2
LEEDS, LLC
5300 HESSLER ROAD
MUNCIE, INDIANA 47304

CERTIFIED BY:
Joseph A. Sharp

JOSEPH A. SHARP
No. 15179
STATE OF INDIANA
PROFESSIONAL ENGINEER

Drawn By: E POPS
Checked By: J SHARP
Quality Assurance: D LACH

Scale: 1" = 1'-0"
Sheet: C711
Date: 05/02/06
Project Number: 010463-20100