Drain: WATERWOOD DRAIN **Drain #:** 258

Improvement/Arm: APPLEWOOD - SECTION 2

Operator: JDH **Date:** 6-14-04

Drain Classification: **Urban**/Rural **Year Installed:** 1995

GIS Drain Input Checklist

- Pull Source Documents for Scanning — JDH
- Digitize & Attribute Tile Drains — N/A
- Digitize & Attribute Storm Drains — JDH
- Digitize & Attribute SSD — JDH
- Digitize & Attribute Open Ditch — N/A
- Stamp Plans — JDH
- Sum drain lengths & Validate — JDH
- Enter Improvements into Posse — JDH
- Enter Drain Age into Posse — [illegible]
- Sum drain length for Watershed in Posse — [illegible]
- Check Database entries for errors — JDH

Gasb 34 Footages for Historical Cost
Drain Length Log

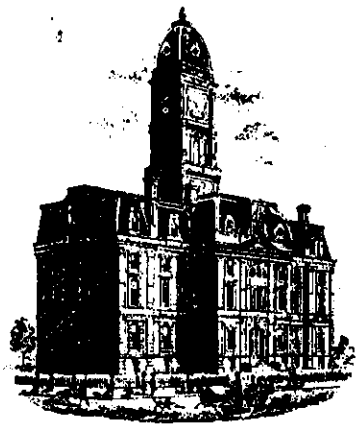
Drain-Improvement: WATERWOOD DRAIN - PARKLE WOOD - SECTION 1

Drain Type:	Size:	Length (SURVEYOR'S RECORD)	Length (DB Query)	Length Reconcile	If Applicable	
					Price:	Cost:
SSD	6"	2,538'	2,538'	Ø		
PVC	12"	Ø'	40'	+40'		
RCP	12"	149'	113'	-36'		
	15"	667'	667'	Ø		
	18"	506'	506'	Ø		
	21"	191'	191'	Ø		
	24"	178'	178'	Ø		
Sum:		4,229'	4,233'	+4'		

Final Report: _____

Comments:

SR AND AB DISAGREE ON 12" PVC + 12" RCP LENGTHS



SURVEYOR'S OFFICE

Hamilton County

Kenton C. Ward, Surveyor
776-8495

Suite 146
One Hamilton County Square
Noblesville, Indiana 46060-2230

January 8, 1996

TO: Hamilton County Drainage Board

RE: Waterwood Drain-Applewood Arm

Attached is a petition, non-enforcement request, plans, calculations, quantity summary and assessment roll for the Applewood Arm-Waterwood Drain. 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	2538 feet	18" RCP	507 feet
12" RCP	150 feet	21" RCP	194 feet
15" RCP	694 feet	24" RCP	180 feet

The total length of the drain will be 4,263 feet.

The retention pond (lake) located in Common Area C (rear of Lots 1-10) is not to be considered part of the regulated drain. Only the inlet and outlet will be maintained as part of the regulated drain. The maintenance of the pond (lake) will be the responsibility of the Homeowners Association. The Board will however, retain jurisdiction for ensuring the storage volume for which the lake 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. Only the main SSD lines which are located within the Right of Way are to be maintained as

regulated drain. Laterals for individual lots will not be considered part of the regulated drain.

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 damage will result to landowners by the construction of this drain. I recommend a maintenance assessment of $20.00 per lot, $5.00 per acre for roadways, with a $20.00 minimum. With this assessment the total annual assessment for this drain/this section will be $ 724.25 .

Parcels assessed for this drain may be assessed for the Osborn-Collins or William Creek Drain at sometime in the future. Parcels assessed for this drain will also be assessed for the Vernon W. Asher Drain.

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. This request is for the reduction of the regulated drain easement Applewood Section 1 as shown on the secondary plat for as recorded in the office of the Hamilton County Recorder.

I recommend the Board set a hearing for this proposed drain for February 1996.

Kenton C. Ward
Hamilton County Surveyor
KCW/no

FINDINGS AND ORDER

CONCERNING THE MAINTENANCE OF THE

Waterwood Drain-Applewood Arm

On this 26th day of February, 1996, the Hamilton County Drainage Board has held a hearing on the Maintenance Report and Schedule of Assessments of the Waterwood Drain-Applewood 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 assessments 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:
Administrative Secretary

Revised 12/95

COPY

BUSEY BANK

10291 North Meridian • Suite 170 • Indianapolis, IN 46290 • 317-574-1540 • FAX 317-574-1542 • Member FDIC

IRREVOCABLE LETTER OF CREDIT

May 23, 1995

Hamilton County Board of Commissioners
The Government and Judicial Center
Noblesville, IN 46060-2230

RE: IRREVOCABLE LETTER OF CREDIT NO. 487
Purpose: Storm Sewers and Sub-Surface Drains

Gentlemen:

We hereby open our Irrevocable Letter of Credit No. 487 in your favor for the account of Kirkpatrick & Associates, Inc., for up to $65,898.00 available by your drafts at sight on us and expiring at our close of business on May 23, 1996. You will provide all documentation related to the transaction that will support your payment demand.

This Letter of Credit shall have an expiry date of May 23, 1996. Drafts drawn under this Letter of Credit must be drawn and negotiated not later than the then effective expiry date of this credit.

We hereby agree with you that all drafts drawn under and in compliance with the terms of this credit will be duly honored if drawn and presented for payment at our Indianapolis office, Busey Bank, 10291 North Meridian, Indianapolis, In 46290 or our principal office, Busey Bank, 201 West Main, Urbana, Il 61801.

The credit is subject, as so far as applicable, to "The Uniform Customs and Practice for Documentary Credits, 1993 Revision, The International Chamber of Commerce Publication No. 500."

Busey Bank

By: Will R. Redman
William R. Redman

Its: Senior Vice President

COPY

BUSEY BANK

10291 North Meridian • Suite 170 • Indianapolis, IN 46290 • 317-574-1540 • FAX 317-574-1542 • Member FDIC

IRREVOCABLE LETTER OF CREDIT

May 23, 1995

Hamilton County Board of Commissioners
The Government and Judicial Center
Noblesville, IN 46060-2230

RE: IRREVOCABLE LETTER OF CREDIT NO. 488
Purpose: Erosion Control
Gentlemen:

We hereby open our Irrevocable Letter of Credit No. 488 in your favor for the account of Kirkpatrick & Associates, Inc., for up to $9,411.00 available by your drafts at sight on us and expiring at our close of business on May 23, 1996. You will provide all documentation related to the transaction that will support your payment demand.

This Letter of Credit shall have an expiry date of May 23, 1996. Drafts drawn under this Letter of Credit must be drawn and negotiated not later than the then effective expiry date of this credit.

We hereby agree with you that all drafts drawn under and in compliance with the terms of this credit will be duly honored if drawn and presented for payment at our Indianapolis office, Busey Bank, 10291 North Meridian, Indianapolis, In 46290 or our principal office, Busey Bank, 201 West Main, Urbana, Il 61801.

The credit is subject, as so far as applicable, to "The Uniform Customs and Practice for Documentary Credits, 1993 Revision, The International Chamber of Commerce Publication No. 500."

Busey Bank

By: William R. Redman

William R. Redman

Its: Senior Vice President

CERTIFICATE OF COMPLETION AND COMPLIANCE

To: Hamilton County Surveyor

Re: Applewood Subdivision
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 comformity with all plans and specifications .

Signature: _____ Date: May 14, 1996

Type or Print Name: Donald M. Gwinnup, Jr.

Business Address: 6910 North Shadeland Avenue, Suite 200

Indianapolis, Indiana 46220

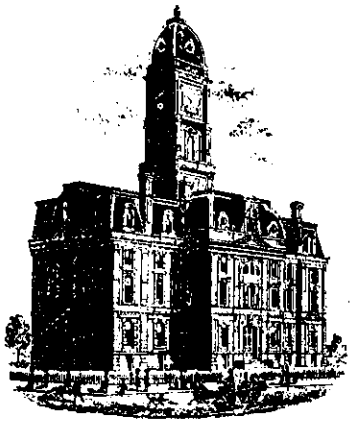
Telephone Number: (317)577-0069

SEAL

INDIANA REGISTRATION NUMBER

19864

Revised 10/95



SURVEYOR'S OFFICE

Hamilton County

Kenton C. Ward, Surveyor
Phone (317) 776-8495
Fax (317) 776-9628

Suite 146
One Hamilton County Square
Noblesville, Indiana 46060-2230

October 17, 1996

TO: Hamilton County Drainage Board

RE: Waterwood Drain-Applewood Arm

Attached are As-Builts, Certificate of Completion and Compliance, and other information for Waterwood Drain-Applewood Arm. An inspection of the drainage facilities for this section has been made and the facilities were found to be complete and acceptable.

During construction, changes were made to the drain which will alter the plans submitted with my report for this drain dated January 8, 1996. The changes are as follows:

STR	20	to	19	18" RCP	shortened	from 138'	to 136 feet
STR	15	to	14	18" RCP	lengthened	from 35'	to 36 feet
STR	14	to	13	18" RCP	shortened	from 147'	to 145 feet
STR	18	to	17	24" RCP	shortened	from 150'	to 148 feet
STR	12	to	11	15" RCP	shortened	from 167'	to 164 feet
STR	11	to	10	15" RCP	shortened	from 448'	to 425 feet
STR	26	to	27	12" RCP	lengthened	from 12'	to 14 feet
STR	21	to	22	21" RCP	shortened	from 164'	to 161 feet
STR	22	to	27	18" RCP	lengthened	from 163'	to 165 feet
STR	27	to	23	15" RCP	shortened	from 16'	to 15 feet
STR	24	to	25	12" RCP	lengthened	from 28'	to 29 feet
STR	31	to	32	12" RCP	shortened	from 44'	to 40 feet

The total length of the drain due to the changes described above is now 4,229 feet.

The non-enforcement request was approved by the Board at its meeting on February 26, 1996.

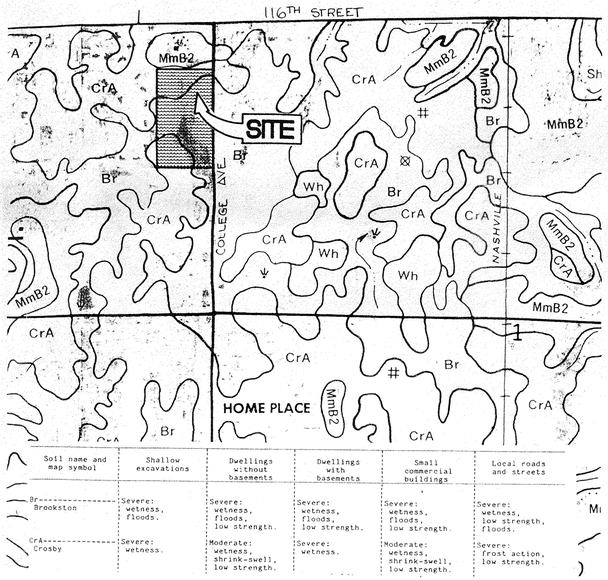
The bonds or letters of credit from Busey Bank, Bank, numbers 487, 488 and 489 for storm sewers, monument and markers and

erosion control, amounts $65,898.00, $9,411.00 and $1,000.00 has been released.

I recommend the drains construction as complete and acceptable.

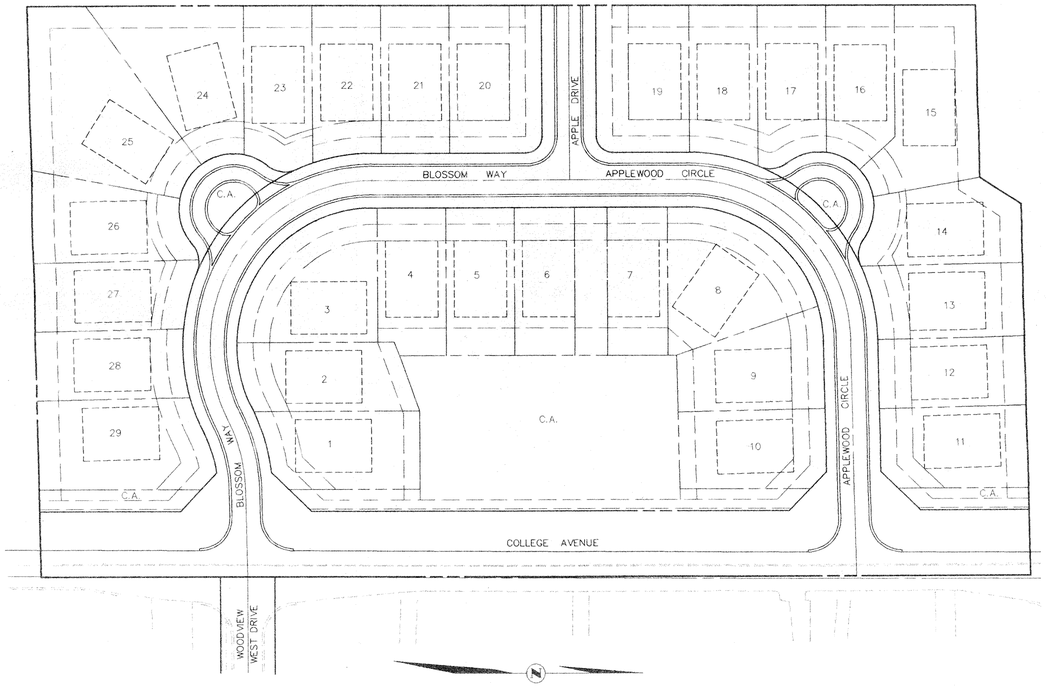
Kenton C. Ward
Hamilton County Surveyor
KCW/no

SITE CONSTRUCTION PLANS
FOR
APPLEWOOD ESTATES
SECTION ONE
CARMEL, INDIANA



Soil name and map symbol	Shallow excavations	Dwellings without basements	Dwellings with basements	Small commercial buildings	Local roads and streets
Br—Brookston	Severe: wetness, floods.	Severe: wetness, floods, low strength.	Severe: wetness, floods, low strength.	Severe: wetness, floods, low strength.	Severe: wetness, low strength, floods.
CrA—Crosby	Severe: wetness.	Moderate: wetness, shrink-swell, low strength.	Severe: wetness.	Moderate: wetness, shrink-swell, low strength.	Severe: frost action, low strength.

SOILS MAP



INDEX	
SHT. NO.	DESCRIPTION
CS	COVER SHEET
C201	SITE DEVELOPMENT PLAN
C202	SOIL EROSION CONTROL PLAN
C301	STREET PLAN AND PROFILE
C302	STREET PLAN AND PROFILE
C401	ENTRY DETAIL
C402	INTERSECTION DETAILS
C501	SANITARY SEWER PLAN AND PROFILE
C701	STORM SEWER PLAN AND PROFILES
C702	STORM SEWER PLAN AND PROFILES
C801	SITE DETAILS
C802	SITE DETAILS
C901	SITE SPECIFICATIONS

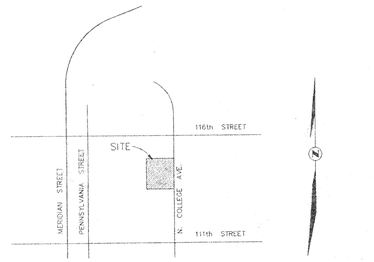
PRINTED
APR 01 1996
MELTON-PACKARD

BENCHMARK

T.B.M.#1

S.E. FACE OF POWER POLE IN THE N.W. CORNER OF 111th STREET AND N. COLLEGE AVENUE.

ELEVATION = 849.51



LOCATION MAP

FILED
MAY 13 1996
OFFICE OF HAMILTON COUNTY SURV

RECORD DRAWINGS 12/14/95

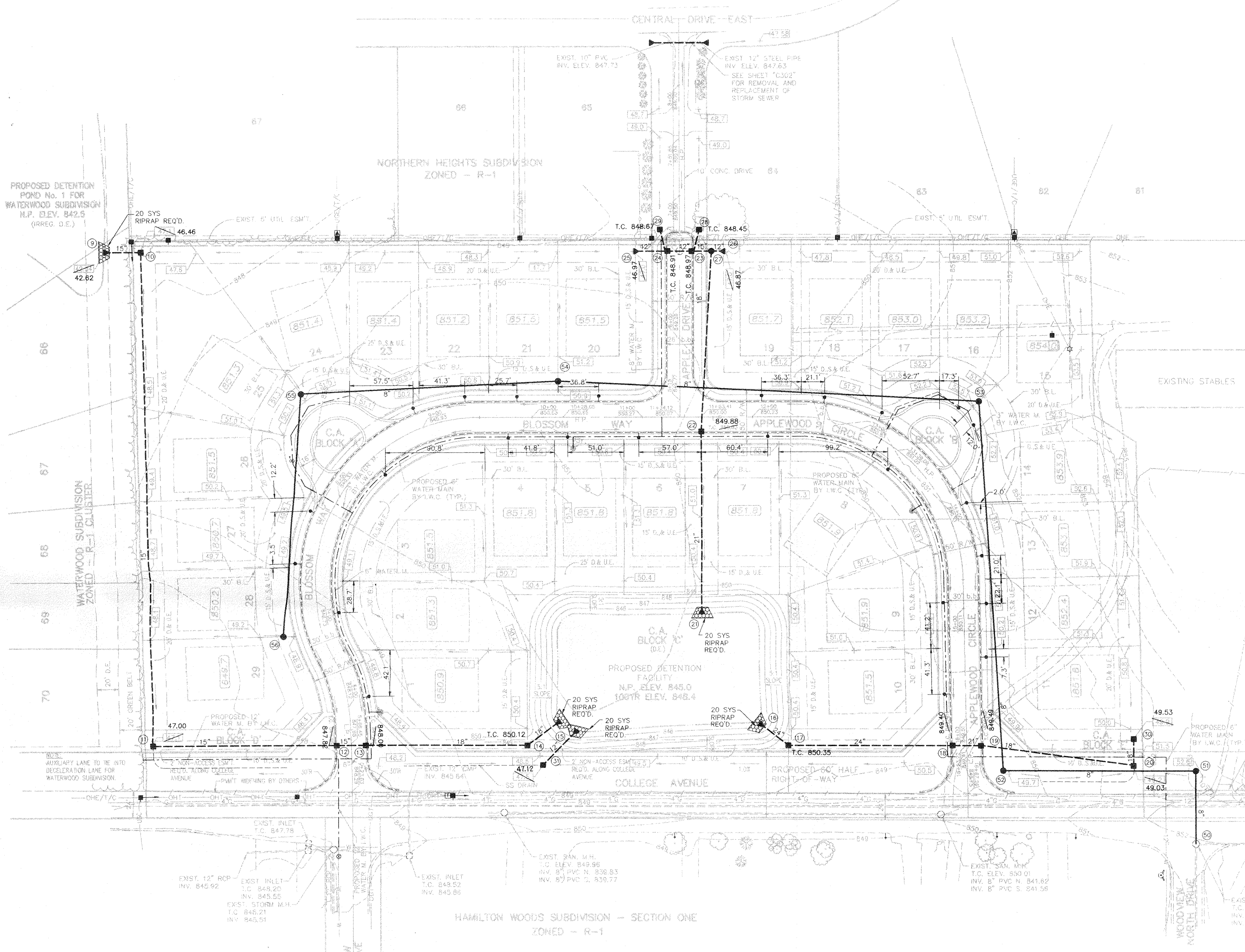
PLANS PREPARED FOR:

KIRKPATRICK & ASSOCIATES
3801 EAST 82nd STREET
INDIANAPOLIS, INDIANA 46240
(317) 595-2121

PLANS PREPARED BY:

MPA

MELTON-PACKARD AND ASSOCIATES
6910 SHADELAND AVENUE, SUITE 200
INDIANAPOLIS, INDIANA 46220
(317) 577-0069



LAND DESCRIPTION

A part of the Northeast Quarter of Section 2, Township 17 North, Range 3 East of the Second Principal Meridian, Hamilton County, Indiana, more particularly described as follows:

Commencing at the Northeast corner of said Northeast Quarter; thence South 00°00'00" West (assumed bearing) along the East line of said Northeast Quarter a distance of 424.04 feet to the POINT OF BEGINNING; thence continuing South 00°00'00" West along said East line a distance of 910.00 feet to the Southeast corner of the North Half of said Northeast Quarter; thence South 88°47'39" West along the South line of said North Half a distance of 521.50 feet; thence North 00°00'00" East parallel with the East line of said Northeast Quarter a distance of 872.29 feet; thence North 88°44'39" East parallel with the North line of said Northeast Quarter a distance of 158.42 feet; thence North 32°35'23" East a distance of 44.84 feet; thence North 88°44'39" East parallel with said North line a distance of 338.93 feet to the Point of Beginning. Containing 10.744 Acres (467,991 Square Feet), more or less.

STORM STRUCTURE TABLE

STR. NO.	DESCRIPTION	TOP OF CASTING	DNSTRM. PIPE	SLOPE	UPSTRM. INV.	DNSTRM. INV.
9	CONC. END SECTION	–	–	–	842.52	–
10	INLET TYPE "E"	847.10	33' OF 15" RCP	0.0033	842.61	842.52
11	INLET TYPE "E"	847.10	448' OF 15" RCP	0.0026	843.77	842.61
12	INLET TYPE "L"	847.96	167' OF 15" RCP	0.0030	844.27	843.77
13	INLET TYPE "E"	847.96	30' OF 15" RCP	0.0030	844.36	844.27
14	INLET TYPE "E"	850.25	147' OF 18" RCP	0.0037	844.90	844.36
15	CONC. END SECTION	–	35' OF 18" RCP	0.0030	845.00	844.90
16	CONC. END SECTION	–	–	–	845.00	–
17	INLET TYPE "E"	850.25	30' OF 24" RCP	0.0050	845.15	845.00
18	INLET TYPE "E"	849.45	150' OF 24" RCP	0.0023	845.50	845.15
19	INLET TYPE "E"	849.45	30' OF 21" RCP	0.0050	845.65	845.50
20	INLET TYPE "E"	849.20	135' OF 18" RCP	0.0060	846.46	845.65
21	CONC. END SECTION	–	–	–	845.00	–
22	INLET TYPE "E"	850.03	164' OF 21" RCP	0.0020	845.33	845.00
23	INLET TYPE "L"	849.00	16' OF 15" RCP	0.0050	845.90	845.82
24	INLET TYPE "L"	849.00	26' OF 12" RCP	0.0050	846.30	846.17
25	CONC. END SECTION	–	28' OF 12" RCP	0.0214	846.90	846.30
26	CONC. END SECTION	–	12' OF 12" RCP	0.0500	846.90	846.30
27	INLET TYPE "E"	849.30	163' OF 18" RCP	0.0030	845.82	845.33
28	INLET TYPE "L"	848.50	20' OF 12" RCP	0.0100	846.37	846.17
29	INLET TYPE "L"	848.50	20' OF 12" RCP	0.0100	846.50	846.30
30	INLET TYPE "E"	849.90	24' OF 18" RCP	0.0050	846.46	846.58
31	INLET TYPE "L"	847.50	40' OF 12" RCP	0.0050	845.20	845.00

EXISTING

- SPOT ELEVATION
- CONTOUR
- MANHOLE/INLET
- INLET
- PIPE END SECTION
- AREA/STREET LIGHT
- UTILITY POLE
- UTILITY POLE WITH GUY LINE
- OVERHEAD ELECTRIC
- OVERHEAD TELEPHONE
- OVERHEAD CABLE TELEVISION
- TELEPHONE RISER
- TRANSFORMER
- UNDERGROUND TELEPHONE
- UNDERGROUND ELECTRIC
- UNDERGROUND CABLE TELEVISION
- WATER LINE
- WATER VALVE
- FIRE HYDRANT
- GAS LINE
- GAS VALVE
- DECIDUOUS TREE/BUSH
- EVERGREEN TREE/BUSH
- TREE/SHRUB LINE
- FARM FIELD TYPE FENCE
- PRIVACY FENCE
- SPLIT RAIL/BOARD FENCE
- MAILBOX

PROPOSED

- 899.08 SPOT ELEVATION
- 1.00% GRADE
- SANITARY SEWER
- MANHOLE
- STORM SEWER
- INLET
- PIPE END SECTION
- SUBSURFACE DRAIN
- SUBSURFACE LATERAL
- (51) STRUCTURE NUMBER
- WATER MAIN
- FIRE HYDRANT
- WATER VALVE
- 850.5 MINIMUM PAD ELEV.

NOTES:

1. BEARING, DIMENSIONS, AND EASEMENTS ARE SHOWN FOR REFERENCE ONLY AND DO NOT NECESSARILY DEPICT ACTUAL RECORDED INFORMATION. SEE RECORDED PLAT FOR EXACT INFORMATION.
2. WATER SERVICE TO BE DESIGNED AND INSTALLED BY INDIANAPOLIS WATER COMPANY.
3. ALL DISTURBED GROUND SHALL BE PROVIDED WITH EROSION CONTROL METHODS IMMEDIATELY SUBSEQUENT TO DISTURBANCE, SUBJECT TO WEATHER (SEE SHEET NO. C202 FOR EROSION CONTROL SPECIFICATIONS).
4. THE FOLLOWING UTILITY COMPANIES WILL PROVIDE DESIGN AND LAYOUT OF THEIR RESPECTIVE UTILITIES.

   ELECTRIC – PUBLIC SERVICE OF INDIANA

   TELEPHONE – AMERITECH

   GAS – CITIZENS GAS AND COKE
5. SERVICE WALKS TO BE INSTALLED ON BOTH SIDES OF STREET (BY OTHERS) AND SHALL BE NON-REINFORCED CONCRETE 4" THICK (6" THICK UNDER DRIVEWAYS) AND 4' IN WIDTH (SEE TYPICAL SECTION SHEET NO. C801).
6. EXPANSION JOINTS ARE TO BE PLACED AT ALL WALK INTERSECTIONS AND BETWEEN WALKS AND PLATFORMS. SIDEWALK SCORES ARE TO BE EQUALLY SPACED BETWEEN EXPANSION JOINTS, CONTRACTION JOINTS AND PERPENDICULAR SIDEWALKS AT 5' INTERVALS OR LESS WITH A CONTRACTION JOINT EVERY 20' OR LESS.
7. THE CONTRACTOR SHALL CONTACT ALL UTILITY COMPANIES TO LOCATE MAINS, CONDUITS, SERVICE LINES, ETC., IN THE AFFECTED CONSTRUCTION AREA. EXISTING UTILITY STRUCTURES ARE SHOWN HERE IN ACCORDANCE WITH AVAILABLE INFORMATION. THE LOCATION AND PROTECTION OF UTILITY STRUCTURES, THEIR SUPPORT AND MAINTENANCE DURING CONSTRUCTION (IN COOPERATION WITH APPLICABLE UTILITY COMPANY) IS THE EXPRESSED RESPONSIBILITY OF THE CONTRACTOR.
8. RCP = REINFORCED CONCRETE PIPE CLASS III
   PVC = POLYVINYL CHLORIDE
   – SANITARY SEWER – ASTM D-3034, SDR-35
   HCSP = HELICALLY CORRUGATED STEEL PIPE – 16 GAUGE ALUMINIZED
9. TC = TOP OF CURB = TOP OF CASTING.
10. 6" SUBSURFACE DRAIN TO BE INSTALLED UNDER CURB (SEE DETAIL).
11. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH CURRENT HAMILTON COUNTY AND CITY OF CARMEL STANDARD SPECIFICATIONS.
12. REINFORCED CONCRETE STORM SEWER SHALL HAVE "O" RING GASKETS UNLESS OTHERWISE NOTED ON PLANS.
13. EXISTING TOPOGRAPHY PROVIDED BY ACCU-AIR SURVEYS, INC. OF SEYMOUR, INDIANA.

REFER TO THE FOLLOWING SHEETS FOR APPROPRIATE INFORMATION . . .

SITE DEVELOPMENT	C201
SOIL EROSION CONTROL METHODS	C202
STREET CONSTRUCTION	C301 thru C402
SANITARY SEWER CONSTRUCTION	C501
STORM SEWER CONSTRUCTION	C701 thru C702
SITE DETAILS	C801 thru C802
SITE SPECIFICATIONS	C901

D.,S&U.E.	DRAINAGE, SANITARY SEWER AND UTILITY EASEMENT
BL	BUILDING LINE

NOTE

THE SUBSURFACE LATERALS WERE NOT FOUND FOR LOTS 24,25,26,28,29

RECORD DRAWING
12/14/95

FILED
MAY 13 1996
OFFICE OF HAMILTON COUNTY SURVEYOR

PLOTTED BY: TES
PLOT DATE: 12/14/95
PLOT TIME: 08:41

MPA
MELTON–PACKARD & ASSOCIATES
Civil Engineers • Land Surveyors
6910 N. Shadeland Avenue • Indianapolis, Indiana 46220 • (317) 577-0069

SHEET TITLE: SITE DEVELOPMENT PLAN

PROJECT NAME: APPLEWOOD ESTATES
SECTION ONE
CARMEL, INDIANA

REVISIONS

06/08/94 ~ PER H.C.H.D. dwp
06/08/94 ~ REV. LOT WIDTHS dwp
06/10/94 ~ ADDED MISC. INFO dwp
07/01/94 ~ ADDED APPLEWOOD LANE, C.A.'s ALONG COLLEGE AVE., 2' N.A. ESM'T. dwp
10/11/94 ~ REV. LOT WIDTHS dwp
02/06/95 ~ ADD S.S. DRAINS PER CARMEL TAC JMP
03/13/95 ~ ADD WALK & STORM INLETS/STORM SEWER PER HAM. CNTY. JMP
03/21/95 ~ REV. S.S.D. PER CITY JMP
05/02/95 ~ REV. PROPERTY LINE PER SURVEYOR dwp
09/26/95 ~ REVISED APPLE DRIVE & CONNECTOR STREET PER HAM. COUNTY TES
12/14/95 ~ ADDED AS-BUILTS & CONNECTOR STREET

PRINTED
APR 01 1996
MELTON-PACKARD

WILLIAM ROSS HUNT, JR.
REGISTERED
No. 17186
STATE OF INDIANA
PROFESSIONAL ENGINEER

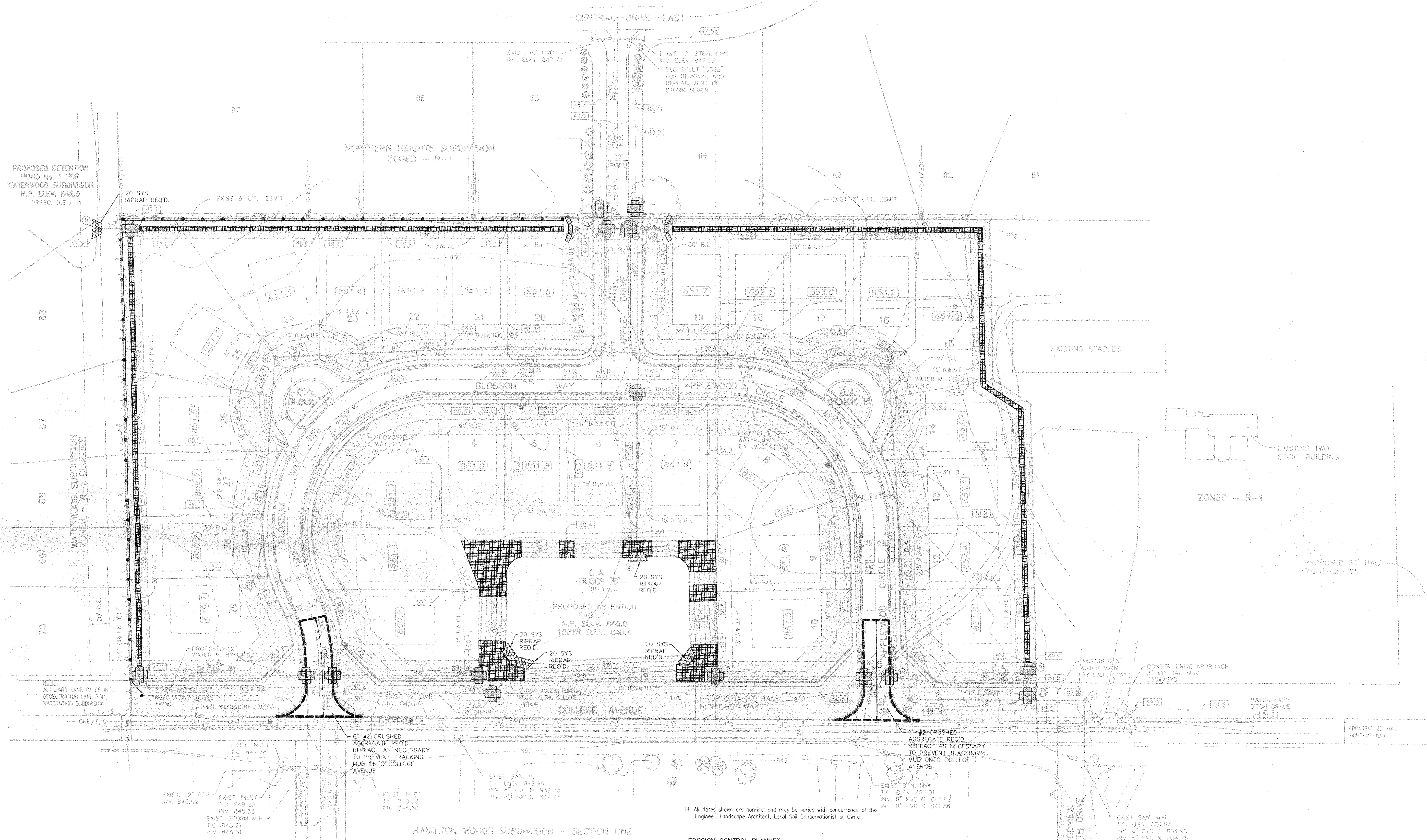
NORTH

SCALE: 1"= 50'

DRAWING: 9425DP.DWG
DATE: 06/07/94
PROJ. NO.: 9425
DRAWN BY: dwp

SHEET NO.: C201

TUBE FILE #



SOIL EROSION CONTROL SCHEDULE

1. Install silt fencing along south and west property line prior to site clearing.
2. Install stone mud tracking road and construct silt basin(s) prior to earthmoving.
3. Install silt fences and/or straw bales around storm inlets no later than one day after installation of casting. Install all silt fencing in swales immediately after rough grading and completion of sanitary sewer and storm sewer.
4. Hydroseed and mulch swale areas and ten feet in front of building pads immediately after finish grading with permanent seeding mixture.
5. Hydroseed and mulch unseeded areas between curb and pads after utility construction is completed.
6. Fertilize as needed every six to eight weeks.
7. Silt traps and silt basins to be inspected within two days after a 1/2" or greater rainfall event. Clean, repair and/or replace silt traps as needed.
8. Remove silt fence behind curbs only after stand of grass has been established.
9. Remove mud from streets with a rubber-tired front end loader after mud is tracked onto street.
10. Lot construction: See typical builder's erosion control requirements. Builder erosion control sequence:
    a. Install silt fence along back of curb prior to any lot activity and maintain silt fence until front yard sod is installed.
    b. Install stone drive immediately after slab has been poured.
    c. Limit vehicular traffic and parking to stone drive and street except for material deliveries.
    d. Remove mud from streets as needed with a rubber-tired front end loader after mud is tracked onto street.
    e. Finish grade and seed or sod prior to removal of silt fence.

PLOTTED BY: JMP
PLOT DATE: 03/21/95
PLOT TIME: 13:27

SEEDING

1. Scope of work – to reestablish vegetative cover by seeding, either permanent/temporary or erosion control types, as shown on the Plan.
2. Sodding (Alternate): Locally grown Bluegrass blend uniform in color, type, density and thickness. Whenever possible, rolls of sod shall be used – not slabs of sod.
3. Permanent Seeding: March 1 to May 15 and August 10 to October 15 (dates may vary at discretion of Landscape Architect depending on weather conditions).
    A. Swales/Slopes: Blended mixture of seed shall be applied at the rate of 110 pounds per acre. The mixture shall consist of 40# Mustang turf-type Tall Fescue, 30# Banff or Wabash Kentucky Bluegrass, 30# Fiesta Perennial Ryegrass and 10# Redtop Bentgrass.
    B. Graded Area Adjacent to Pavement: Blended mixture of seed shall be applied at the rate of 90 pounds per acre. The mixture shall consist of 35# Mustang turf-type Tall Fescue, 30# Fiesta Perennial Ryegrass and 25# Banff or Wabash Kentucky Bluegrass.
4. Temporary Seeding:
    A. May 15 to August 15 – 40# per acre Annual Ryegrass.
    B. August 15 to November 15 – 2 bushels per acre rye (grain) or wheat. (May be dormant seeded between December 10 and February 28. Add 50% to seed quantity.)
    C. March 1 to May 15 – 3 bushels per acre oats.
5. Erosion Control Seeding: An interim seeding to be applied to all disturbed areas (as designated on plan) as soon as final grade is established. Mix and apply as shown on detail sheet. (Note: if this seeding is applied immediately on finish grading, it can save some further seeding and lengthen the duration between maintenance of silt traps and barriers and street cleanings.)
6. Fertilizer: Commercial analysis 12-12-12 applied at a rate of 600# per acre. Apply lime to raise pH of soil to level needed for species being seeded. Work fertilizer and lime into the soil to a depth of 2 to 3 inches. (pH factor should be checked prior to seeding. Lime should not be required if topsoil is replaced.)
7. All Hydroseeding shall be in accordance with the preceding requirements.
8. Mulch: Wood cellulose fiber may be used where application is made by hydraulic mulching at the rate of one ton per acre. Straw mulch may be used and applied uniformly in a continuous blanket at the rate of 2 tons per acre within 24 hours after seeding in accordance with Section 621 of IDHSS.
9. Sediment Control Fabric: Fabric shall be non-woven construction composed of polypropylene and shall be ultraviolet stabilized.
10. If temporary seeding and/or erosion control seeding is established prior to permanent seeding, the mulch may be eliminated except in "bare" areas.
11. If grading occurs during December, January or February, dormant seeding procedures shall be used: It is imperative that all sediment filters and traps are in place prior to bulk earthmoving or clearing operations commencing.
12. All areas along street shall be seeded with permanent seed mixture as soon as grade is established. Reseeding may be required after utility companies have installed their mains. If erosion control seeding is established, the permanent seeding can be delayed until lot is improved.
13. Reseed any areas damaged or not germinating at intervals as may be required according to seasonal conditions. Water grass and execute necessary weeding until acceptable and full stand of grass has been obtained. Upon acceptance by the Owner, the Owner shall assume maintenance of the lawn areas.
14. All dates shown are nominal and may be varied with concurrence of the Engineer, Landscape Architect, Local Soil Conservationist or Owner.

EROSION CONTROL BLANKET

Erosion control blanket shall be a machine-produced mat of 100% agricultural straw.

The blanket shall be of consistent thickness with the straw evenly distributed over the entire area of the mat. The blanket shall be covered on the top side with polypropylene netting having an approximate 5/8" X 5/8" mesh and on the bottom with a polypropylene netting with an approximate 1/4" X 1/4" mesh. The blanket shall be sewn together with cotton thread.

Straw erosion control blanket (or low velocity channel lining) shall be S75 as manufactured by North American Green or equivalent. Erosion control blanket or channel lining shall have the following properties:

A. Material Content:

Straw	100% (0.5 lb per square yard)(0.27 kilogram per square meter)
Netting	One side lightweight photodegradable (1 lb per 1000 square feet approximate weight)
	One side heavyweight photodegradable (3 lb per 1000 square feet approximate weight)
Thread	Cotton

B. Physical Specifications (Roll):

Width	6.5 feet (2 meters)
Length	83.5 feet (25.4 meters)
Weight	30 lbs ± 10% (13.6 kilograms)
Area	60 square yards (50 square meters)

Site Preparation

1. Smooth grade and compact all areas to be covered with mat.
2. Remove all rocks, dirt clods, grass clumps, trash and other obstructions that will lift mat from ground surface.

ANCHOR TRENCHES

1. The mat must be anchored at the upstream and downstream ends of the protected area and intermittently in between.
2. Excavate end trenches to a minimum of 12 inches deep and 6 inches wide before placing mat.
3. Dig intermittent check slots 6 inches deep by 6 inches wide transverse to mat at approximately 25 foot intervals.

Seeding – Seed and fertilizer shall be spread uniformly before mat installation. Seed type, fertilizer type and rate of applications shall comply with seeding specifications.

MAT PLACEMENT

1. Unroll mat flat side against the ground. Unroll mat in direction parallel with direction of water flow.
2. Mat should lat flat. DO NOT PULL MAT TAUT over ground. Pulling mat taut may cause mat to bridge depressions in the surface and allow erosion underneath.
3. Beginning at up or downstream end, bury transverse terminal end of the mat to secure and prevent erosion flow underneath.
4. Fold and secure mat snugly into all transverse check slots.
5. Backfill and compact trenches and check slots after staking the mat in bottom of trench (see Ground Fastening below).
6. Bury final terminal end as prescribed above.
7. Overlap roll ends by 3 feet (minimum) with upslope mat on top to prevent uplift of mat end by water flow.
8. Overlap adjacent edges of mat by 3 inches (Minimum) and stake (see Ground Fastening below).

GROUND FASTENING

Metal pins or wood stakes are recommended for anchoring mat to the ground surface. Metal pins should be about 3/16 inch diameter steel with 1.5 inch diameter steel washer secured at head of pin. Wood stakes should be 1" X 3" nominal stock cut in a triangular shape. Stakes should be about 9 inches to 18 inches long, depending on soil density. Longer anchors are required for loose soils.

Note that ground fasteners different from those mentioned here may function adequately. Care must be taken to assure that fasteners hold mat securely at the surface and have sufficient ground penetration to resist pullout.

1. Stake mat to ground on 3 to 5 foot centers. Add extra stakes at depressions in ground surface where mat bridges over to assure ground conformity.
2. Drive wood stakes to within 3 inches of ground surface. Do not drive flush to surface. Steel or plastic pins should be driven flush to surface.
3. In all transverse terminal trenches and check slots, stake each mat at its center and at overlapped edges before backfilling and compacting.
4. Stake overlaps longitudinally at 3 foot intervals.

SOIL GUARD

1. "Soil Guard" is a bonded fiber matrix erosion control system produced by Weyerhaeuser.

9126

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EXISTING

- SPOT ELEVATION
- CONTOUR
- MANHOLE/INLET
- INLET
- PIPE END SECTION
- AREA/STREET LIGHT
- UTILITY POLE
- UTILITY POLE WITH GUY LINE
- OVERHEAD ELECTRIC
- OVERHEAD TELEPHONE
- OVERHEAD CABLE TELEVISION
- TELEPHONE RISER
- TRANSFORMER
- UNDERGROUND TELEPHONE
- UNDERGROUND ELECTRIC
- UNDERGROUND CABLE TELEVISION
- WATER LINE
- WATER VALVE
- FIRE HYDRANT
- GAS LINE
- GAS VALVE
- DECIDUOUS TREE/BUSH
- EVERGREEN TREE/BUSH
- TREE/SHRUB LINE
- FARM FIELD TYPE FENCE
- PRIVACY FENCE
- SPLIT RAIL/BOARD FENCE
- MAILBOX

PROPOSED

- SPOT ELEVATION (TOP OF CURB ELEV. / GUTTER ELEV.)
- GRADE
- SANITARY SEWER
- MANHOLE
- CLEANOUT
- STORM SEWER
- INLET
- PIPE END SECTION
- SUBSURFACE DRAIN
- SEEDING & MULCH REQ'D.
- EROSION BLANKET REQ'D. NORTH AMERICAN GREEN S-075 OR CURLEX BY AMXCO
- STRAW BALE DROP INLET PROTECTION
- STRAW BALE
- SILT FENCE

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Civil Engineers • Land Surveyors
6910 N. Shadeland Avenue • Indianapolis, Indiana 46220 • (317) 577-0069

SHEET TITLE: EROSION CONTROL PLAN
PROJECT NAME: APPLEWOOD ESTATES
SECTION ONE
CARMEL, INDIANA

REVISIONS
06/08/94 ~ PER H.C.H.D. dwp
06/08/94 ~ REV. LOT WIDTHS dwp
06/10/94 ~ ADDED MISC. INFO dwp
07/01/94 ~ ADDED APPLEWOOD LANE, C.A.'s ALONG COLLEGE AVE, 2' N.A. ESM'T. dwp
10/11/94 ~ REV. LOT WIDTHS dwp
02/06/95 ~ ADD SSD DRAINS PER CARMEL TAC JMP
03/15/95 ~ ADD WALK & STORM INLETS/STORM SEWER PER HAM. CNTY. JMP
03/21/95 ~ REV. S.S.D. PER CITY JMP

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WILLIAM ROSS HUNT, JR. REGISTERED No. 17186 STATE OF INDIANA PROFESSIONAL ENGINEER

NORTH
SCALE: 1"= 50'

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DRAWN BY: dwp
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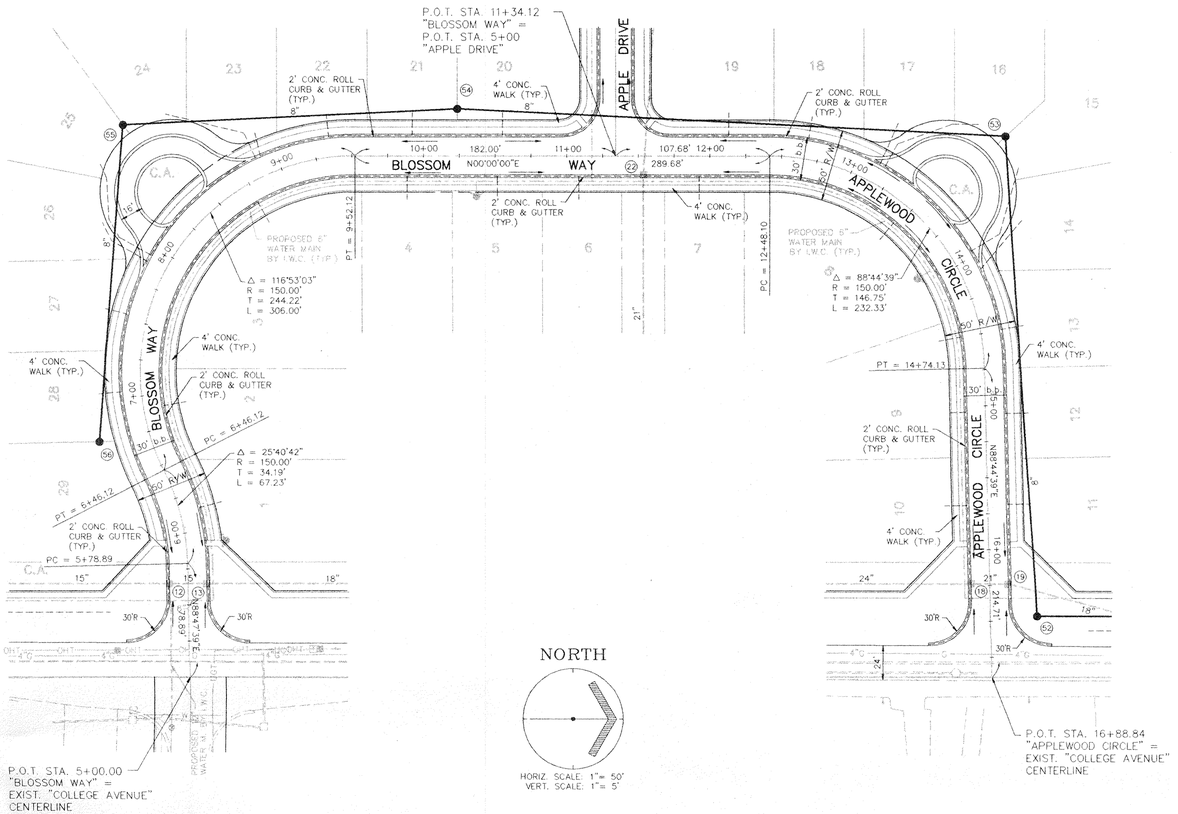

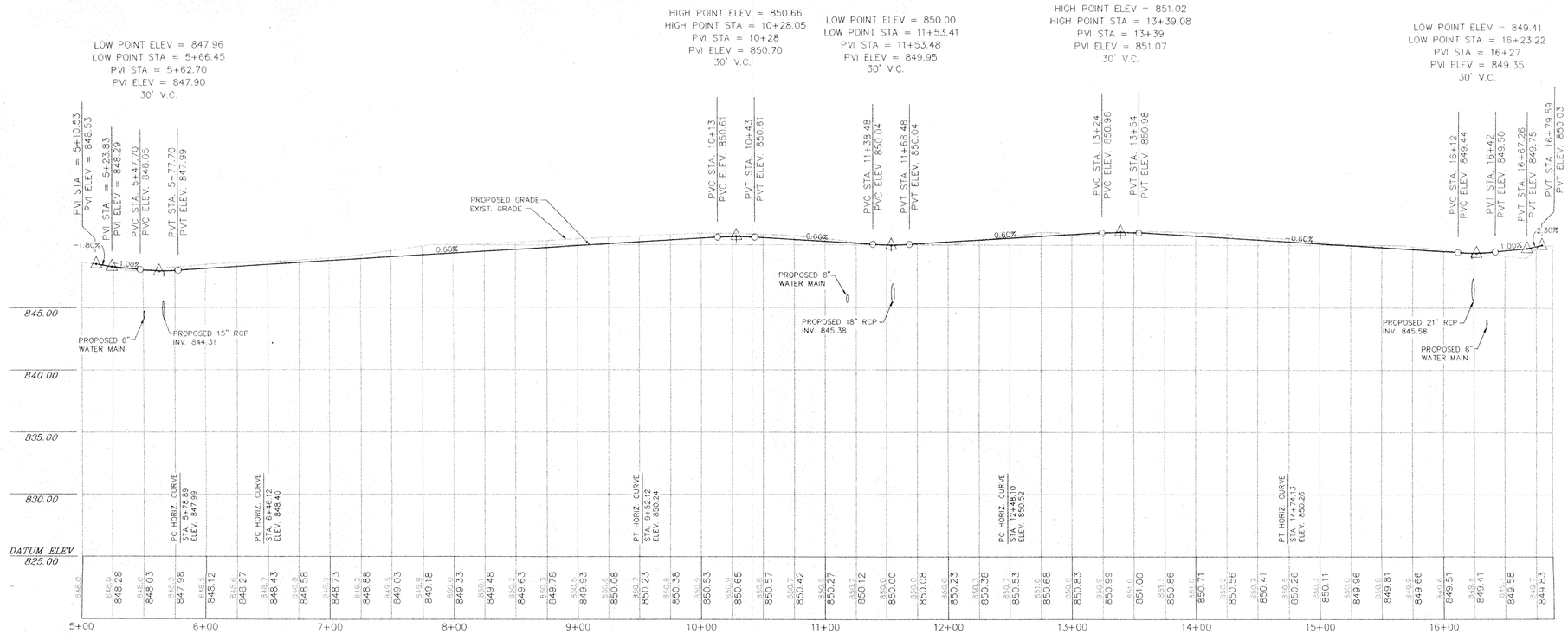

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PLOT DATE: 03/21/95
PLOT TIME: 13:50

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MAY 13 1996
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6910 N. Shadeland Avenue • Indianapolis, Indiana 46220 • (317) 577-0069

SHEET TITLE: STREET PLAN & PROFILE
PROJECT NAME: APPLEWOOD ESTATES
SECTION ONE
CARMEL, INDIANA

REVISIONS
02/06/95 ~ AS PER CARMEL TAC JMP
03/15/95 ~ ADD WALK & STORM INLETS/STORM S. PER HAM JMP
03/20/95 ~ ADD S.A.D. PER CITY JMP

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WILLIAM ROSS HUNT, JR.
REGISTERED
No. 17186
STATE OF INDIANA
PROFESSIONAL ENGINEER

DRAWING: 9425C301
DATE: 06/07/94
PROJ. NO.: 9425
DRAWN BY: JMP

SHEET NO.: C301

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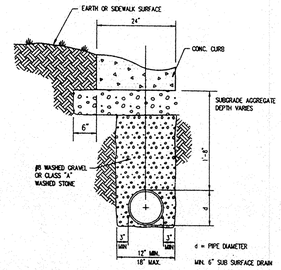


NOTES:

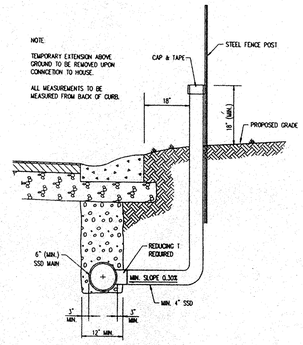
Installation of underdrain shall conform to section 718 of the Indiana Department Of Transportation Standard Specifications.

Underdrains shall not be installed until final grading and compaction is completed on subgrade.

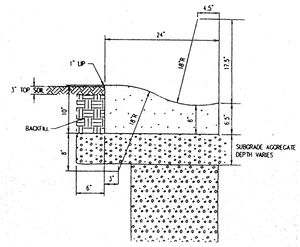
Any contamination of underdrain backfill shall be removed prior to installation of aggregate base.

Underdrains shall not be installed until utilities located beneath the underdrains are in place. (i.e. watermains, storm sewers, sanitary sewers, ect.)

PIPE UNDERDRAIN
NO SCALE



TYPICAL SSD LATERAL TO INDIVIDUAL LOTS ALONG STREETS
NO SCALE



NOTES:

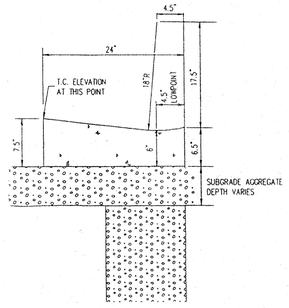
Expansion joints are required at Storm Inlets.

Contraction joints should be installed at 10' spacings.

Spacing shall be 5' on curve radii.

Contraction joints shall be tooled or sawn in continuously poured curbs to a depth of 1/3" max.

CONCRETE ROLL CURB & GUTTER
NO SCALE



NOTES:

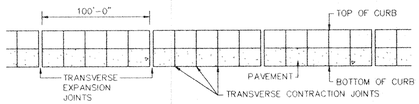
Expansion joints are required at Storm Inlets.

Contraction joints should be installed at 10' spacings.

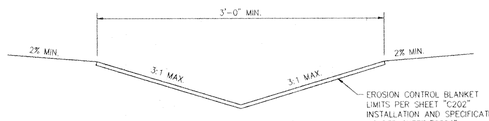
Spacing shall be 5' on curve radii.

Contraction joints shall be tooled or sawn in continuously poured curbs to a depth of 1/2" min.

VALLEY GUTTER DETAIL
NO SCALE



CURB JOINT DETAIL



TYPICAL SWALE SECTION
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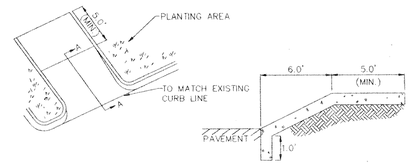
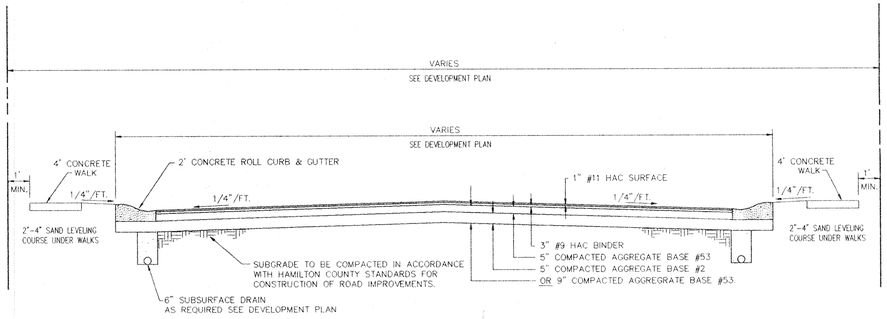


NOTE: 1) SUBGRADE TO BE A FREE DRAINING MATERIAL COMPACTED TO 95% OF MAXIMUM AS DETERMINED BY ASTM D-698.
2) CONCRETE TO BE 4000 PSI @ 28 DAYS WITH 5 TO 7% AIR ENTRAINMENT.

RETURNED CURB HANDICAP RAMP
N.T.S.



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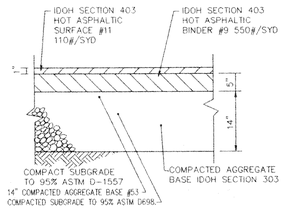

PAVEMENT SECTION
COLLEGE AVE.

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MAY 13 1996
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PLOTTED BY: JMP
PLOT DATE: 02/07/95
PLOT TIME: 08:55

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Civil Engineers • Land Surveyors
6910 N. Shadeland Avenue • Indianapolis, Indiana 46220 • (317) 577-0069

SHEET TITLE: SITE DETAILS

PROJECT NAME: APPLEWOOD ESTATES
SECTION ONE
CARMEL, INDIANA

REVISIONS
02/06/95 - AS PER CARMEL TAC JMP

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APR 01 1996
MELTON-PACKARD

WILLIAM ROSS HUNT JR. REGISTERED No. 17186 STATE OF INDIANA PROFESSIONAL ENGINEER

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DATE: 06/07/94
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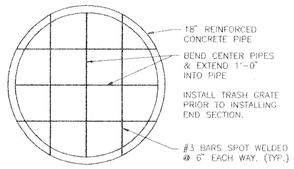
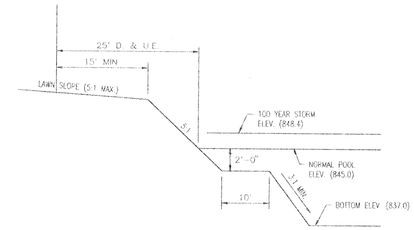


TRASH GRATE

DETENTION POND OUTLET STRUCTURE



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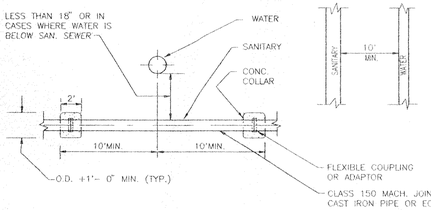
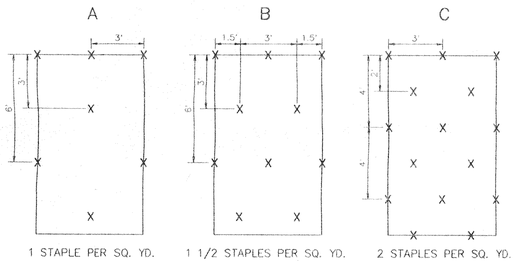
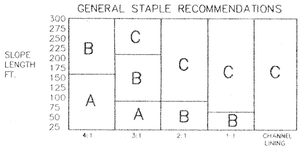


MIN. CROSSOVER & SEPARATION REQUIREMENTS FOR WATER MAINS & SANITARY SEWERS





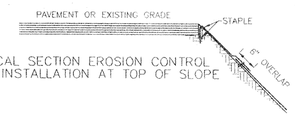
SLOPE GRADIENT

EROSION CONTROL MAT INSTALLATION

NOTE: INSTALL NORTH AMERICAN S150 EROSION CONTROL BLANKET OR APPROVED EQUAL.

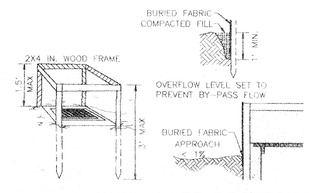
NOTES:

1. BEGINNING AT THE TOP OF THE SLOPE BY ANCHORING THE BLANKET IN A 6" DEEP X 6" WIDE TRENCH, BACKFILL AND COMPACT TRENCH AFTER STAPLING.
2. THE EDGES OF PARALLEL BLANKETS MUST BE STAPLED WITH APPROX. 2" OVERLAP.
3. WHEN BLANKETS MUST BE SPLICED DOWN THE SLOPE, PLACE BLANKETS END OVER END (SHINGLE STYLE) WITH APPROX. 6" OVERLAP. STAPLE THROUGH OVERLAPPED AREA APPROX. 12" APART.

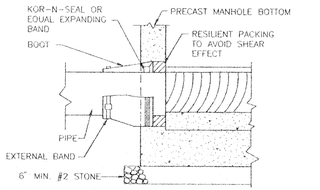


TYPICAL SECTION EROSION CONTROL MAT INSTALLATION AT TOP OF SLOPE

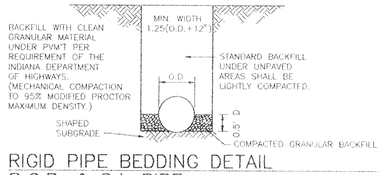
EROSION CONTROL MAT INSTALLATION DETAIL



FABRIC DROP INLET PROTECTION

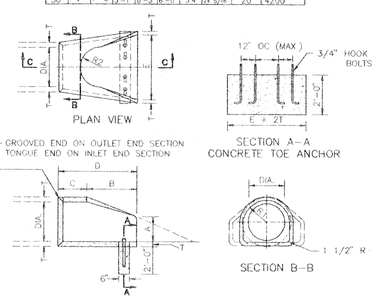


PIPE CONNECTION TO MANHOLE

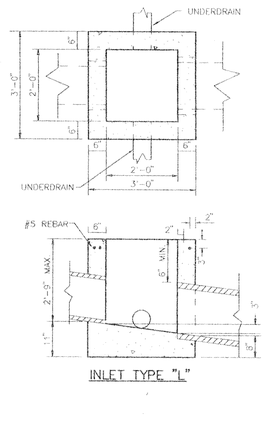


RIGID PIPE BEDDING DETAIL
R.C.P. & D.I. PIPE (STORM SEWER ONLY)

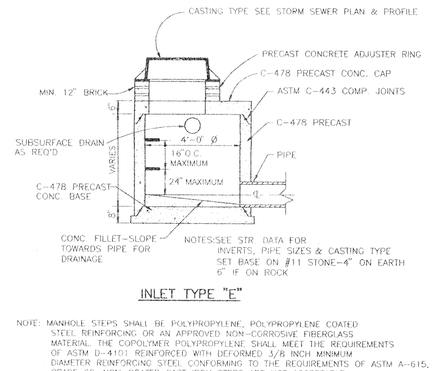
DIMENSIONS									
DIA	T MIN.	A	C	D	E	K	R1	R2	APPROX WEIGHT
12"	2"	5"	4'-3"	6'-2"	2'-0"	1.3"	10 1/8"	9"	800
15"	2 1/4"	7"	4'-6"	6'-3"	2'-6"	1.5"	12 1/2"	11"	1100
18"	2 1/2"	11"	4'-11"	6'-2"	3'-0"	1.8"	15 1/2"	12"	1300
21"	2 3/4"	11"	5'-6"	6'-3"	3'-6"	2.1"	18 1/8"	13"	1500
24"	3"	1'-0"	6'-8"	6'-3"	4'-0"	2.5"	18 3/16"	14"	1800
27"	3 1/4"	1'-2"	7'-5"	6'-3"	4'-6"	2.6"	19 3/16"	14 1/2"	2100
30"	3 1/2"	2'-1"	10'6"-3"	5'-0"	2.9"	18 1/2"	15"	2400
33"	3 3/4"	3"	8'-3"	5'-6"	3.1"	23 3/4"	17 1/2"	4100
36"	4"	1'-5"	9'-1"	8'-3"	16'-0"	3.4"	24 5/16"	20"	4200



CONCRETE END SECTION
1901/V=1

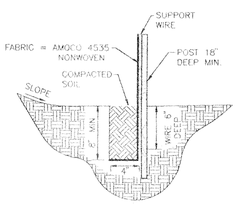


INLET TYPE "L"

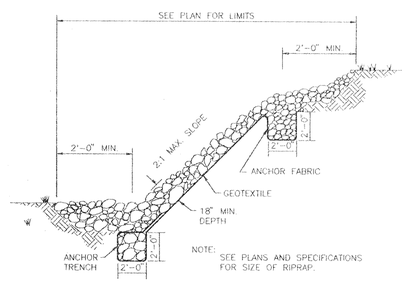


INLET TYPE "E"

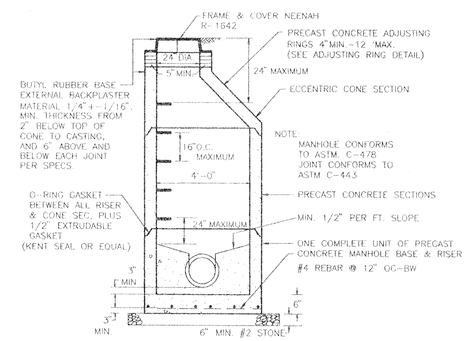
NOTE: MANHOLE STEPS SHALL BE POLYPROPYLENE, POLYPROPYLENE COATED STEEL REINFORCING OR AN APPROVED NON-CORROSIVE FIBERGLASS MATERIAL. THE COPOLYMER POLYPROPYLENE SHALL MEET THE REQUIREMENTS OF ASTM D-4101 REINFORCED WITH DEFORMED 3/8 INCH MINIMUM DIAMETER REINFORCING STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A-615, GRADE 60. NON-COATED CAST IRON STEPS ARE NOT ACCEPTABLE.



SEDIMENT CONTROL FENCE

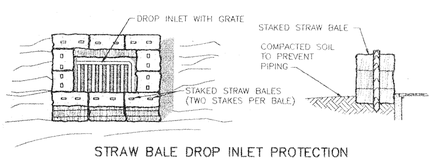


RIPRAP DETAIL

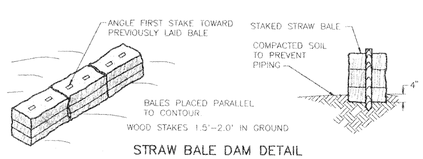


NOTE: MANHOLE STEPS SHALL BE POLYPROPYLENE, POLYPROPYLENE COATED STEEL REINFORCING OR AN APPROVED NON-CORROSIVE FIBERGLASS MATERIAL. THE COPOLYMER POLYPROPYLENE SHALL MEET THE REQUIREMENTS OF ASTM D-4101 REINFORCED WITH DEFORMED 3/8 INCH MINIMUM DIAMETER REINFORCING STEEL CONFORMING TO THE REQUIREMENTS OF ASTM A-615, GRADE 60. NON-COATED CAST IRON STEPS ARE NOT ACCEPTABLE.

MANHOLE TYPE "A"



STRAW BALE DROP INLET PROTECTION



STRAW BALE DAM DETAIL

PLOTTED BY: MEC
PLOT DATE: 1/ /96
PLOT TIME: 17:07

MPA
MELTON-PACKARD & ASSOCIATES
Civil Engineers • Land Surveyors
6910 N. Shadeland Avenue • Indianapolis, Indiana 46220 • (317) 577-0169

SHEET TITLE: SITE DETAILS

PROJECT NAME: APPLEWOOD ESTATES
SECTION ONE
CARMEL, INDIANA

REVISIONS
02/06/95 -- REV. MH DETAIL PER CLAY REGIONAL WASTE DISTRICT JMP
02/15/95 -- REV. FLEXIBLE PIPE JMP
06/01/95 -- ADDED PIPE DEBRIS MEC

PRINTED
APR 01 1996

MELTON-PACKARD

WILLIAM ROSS KENT JR. REGISTERED No. 17186 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWING: 9425C802
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GENERAL NOTES

1. REFER TO THE INDIANA DEPARTMENT OF TRANSPORTATION (INDOT) STANDARD SPECIFICATIONS, 1993 EDITION, FOR BASIC MATERIALS AND CONSTRUCTION METHODS. THE SECTIONS BELOW FOR VARIOUS ITEMS ARE TO CLARIFY THE INTENT OF THE REQUIREMENTS FOR THIS PROJECT. PLEASE NOTE THAT OTHER SECTIONS OF THE INDOT STANDARD SPECIFICATIONS MAY ALSO BE APPLICABLE.

2. CONTRACTORS SHALL CHECK WITH ENGINEER PRIOR TO START OF CONSTRUCTION TO VERIFY DATE OF PLANS. MINOR CHANGES MAY BE MADE IF ALL REVIEWING AGENCY APPROVALS ARE NOT GRANTED BEFORE BIDDING. CHANGES IN COST SHALL BE NEGOTIATED PRIOR TO PHYSICAL CONSTRUCTION AND BASED ON UNIT PRICES SUBMITTED ON THE CONTRACT.

3. CONTRACTORS SHALL CONTACT ALL UTILITY COMPANIES TO LOCATE ALL MAINS, CONDUITS, SERVICE LINES, ETC. IN THE AFFECTED CONSTRUCTION AREA. EXISTING UTILITY STRUCTURES ARE SHOWN HERE IN ACCORDANCE WITH AVAILABLE INFORMATION. THE LOCATION AND PROTECTION OF UTILITY STRUCTURES AND FACILITIES, THEIR SUPPORT AND MAINTENANCE DURING CONSTRUCTION (IN COOPERATION WITH APPLICABLE UTILITY), IS THE EXPRESSED RESPONSIBILITY OF THE CONTRACTOR IN THE PERFORMANCE OF THE CONTRACT AND IN PREPARATION OF THE BID.

4. BACKFILL AROUND ALL STRUCTURES AND IN ALL TRENCHES BENEATH PAVED AREAS SHALL BE COMPACTED GRANULAR MATERIAL IN ACCORDANCE WITH INDOT SECTION 211.

5. FILL MATERIAL SHALL CONSIST OF EARTH OBTAINED FROM CUT AREAS, BORROW PITS OR OTHER APPROVED SOURCES. EARTH SHALL BE FREE FROM ORGANIC MATTER AND OTHER DELETERIOUS SUBSTANCES AND LARGE ROCKS. THE FILL MATERIAL SHALL BE PLACED IN LAYERS NOT TO EXCEED SIX INCHES FOLLOWING COMPACTION, PROPER MOISTURE CONTENT OF FILL MATERIAL WILL BE SUCH TO ACHIEVE SPECIFIED COMPACTION DENSITY. ALL FILL BENEATH PAVED AREAS, FLOOR SLABS AND FUTURE BUILDINGS SHALL BE COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY PER ASTM D-1557.
FIELD COMPACTION TEST SHALL BE RUN ON EACH LIFT, IN FILL SECTIONS, AND THE REQUIRED COMPACTION ON EACH LIFT SHALL BE ATTAINED PRIOR TO PLACING THE NEXT LIFT. COMPACTION TESTS SHALL BE IN ACCORDANCE WITH INDOT SECTION 211.

CLEARING AND GRUBBING

1. CLEARING AND GRUBBING SHALL CONSIST OF CUTTING, REMOVING AND SATISFACTORY DISPOSING OF ALL TREES, DOWNED TIMBER, BRUSH, PROJECTING ROOTS, STUMPS, RUBBISH, BOULDERS, BROKEN CONCRETE, FENCING (AS DESIGNATED), AND OTHER MATERIAL ON THE PROJECT SITE AND WITHIN THE BOUNDARY AS SHOWN ON THE CONSTRUCTION DOCUMENTS AND/OR AS DESIGNATED BY "CONSTRUCTION LIMITS".

2. ALL "UNSUITABLE MATERIAL" FROM CLEARING OPERATIONS SHALL BE REMOVED TO DISPOSAL AREA(S) OFF OF THE PROJECT SITE; UNLESS A "BURY PIT" SHALL BE LOCATED WHERE IMPOUNDMENT OF SURFACE WATER MAY OCCUR.

3. MATERIALS SHALL NOT BE DISPOSED OF BY BURNING UNLESS APPROVED BY THE LOCAL FIRE MARSHAL.

TREE REMOVAL AND PROTECTION

1. TREES SHALL BE REMOVED FROM THE PROJECT ONLY WHERE THE AREA IS TO BE OCCUPIED BY ROAD AND SURFACED AREAS.

2. TREES SHALL BE REMOVED FROM THE PROJECT SITE AS DIRECTED BY THE DEVELOPER.

3. TREES SHALL BE REMOVED FROM THE PROJECT SITE WHERE THEY INTERFERE DIRECTLY WITH THE PLACEMENT OF STORM OR SANITARY SEWERS, AND THAT SUCH EXCAVATION IS OR WILL BE FATAL TO SUCH ADJACENT TREES.

4. THE CONTRACTOR SHALL ENDEAVOR TO SAVE AND PROTECT TREES OF VALUE AND WORTH WHICH DO NOT IMPAIR CONSTRUCTION OF IMPROVEMENTS AS DESIGNATED. IN THE EVENT CUT OR FILL EXCEEDS 0.5 FEET OVER THE ROOT AREA, THE DEVELOPER SHALL BE CONSULTED WITH RESPECT TO PROTECTIVE MEASURES TO BE TAKEN, IF ANY, TO PRESERVE SUCH TREES.

5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE METHOD FOR PROTECTION OF TOPS, TRUNKS AND ROOTS OF EXISTING TREES ON THE PROJECT SITE THAT ARE TO REMAIN. EXISTING TREES SUBJECT TO CONSTRUCTION DAMAGE SHALL BE BOXED, FENCED OR OTHER MATERIAL AND EQUIPMENT SHALL NOT BE STOCKPILED OR STORED WITHIN THE SPREAD OF BRANCHES. BRANCHES WHICH NEED TO BE REMOVED OR ARE BROKEN SHALL BE NEATLY TRIMMED AND SCARS SHALL BE COVERED WITH TREE PAINT.

STRIPPING OF TOPSOIL

1. THE CONTRACTOR SHALL VERIFY THAT ALL TOPSOIL HAS BEEN REMOVED IN THE AREAS TO BE OCCUPIED BY ROAD, WALKS AND DESIGNATED BUILDING AREAS. TOPSOIL SHALL BE REMOVED TO A DEPTH OF SIX (6) INCHES OR DEEPER, IF NECESSARY, TO REMOVE ORGANIC MATTER WHERE REQUIRED.

2. TOPSOIL SHALL BE KEPT SEPARATED FROM SUITABLE FILL MATERIALS AND SHALL NOT BE USED AS FILL UNDER PAVEMENT, BUILDING AREAS AND/OR FUTURE STRUCTURAL AREAS.

3. TOPSOIL SHALL BE STORED AT A LOCATION WHERE IT DOES NOT INTERFERE WITH CONSTRUCTION OPERATIONS. EXCESS TOPSOIL SHALL BE REMOVED FROM THE SITE.

4. TOPSOIL SHALL BE REASONABLY FREE FROM SUBSOIL DEBRIS AND STONES.

PAVEMENT CONSTRUCTION

1. THE HAMILTON COUNTY STANDARDS FOR CONSTRUCTION OF ROAD IMPROVEMENTS (4/5/93) WITHIN THE PUBLIC RIGHT-OF-WAY SHALL APPLY TO WORKMANSHIP AND MATERIALS IN CONSTRUCTION OF SUBGRADE, PAVEMENT, CURBS AND WALKS.

   a. PREPARE THE SUBGRADE IN ACCORDANCE WITH INDOT SECTION 207. NO TRAFFIC WILL BE PERMITTED ON THE PREPARED SUBGRADE PRIOR TO PAVING.

   b. BITUMINOUS PAVEMENT IN ACCORDANCE WITH INDOT SECTION 403.

   c. CONCRETE PAVEMENT IN ACCORDANCE WITH INDOT SECTION 500.

   d. FINISHING EARTH GRADED SHOULDERS, DITCHES AND SLOPES IN ACCORDANCE WITH INDOT SECTION 208.

CONCRETE CURB AND WALKS

1. SEE DETAIL SHEET FOR TYPE AND DETAILS.

2. CONCRETE SHALL BE READY MIXED PORTLAND CEMENT AND WATER CONFORMING TO A.S.T.M. C-150. AGGREGATES SHALL CONFORM TO A.S.T.M. C-33. COMPRESSIVE STRENGTH OF CONCRETE AT 28 DAYS SHALL BE 4000 P.S.I. WHERE REQUIRED, REINFORCEMENT SHALL BE WELDED STEEL WIRE FABRIC CONFORMING TO A.S.T.M. A-185.

4. ALL EXTERIOR CONCRETE SHALL CONTAIN 5% TO 8% AIR ENTRAINMENT.

3. APPLICATION

   a. PLACE CONCRETE ONLY ON A MOIST, COMPACT SUBGRADE OR BASE FREE FROM LOOSE MATERIAL. PLACE NO CONCRETE ON MUDDY OR FROZEN SUBGRADE IN ACCORDANCE WITH INDOT SECTION 604 AND 605.

   b. CONCRETE SHALL BE DEPOSITED SO AS TO REQUIRE AS LITTLE REHANDLING AS PRACTICAL. WHEN CONCRETE IS TO BE PLACED AT AN ATMOSPHERIC TEMPERATURE OF 35 DEGREES F OR LESS, PARAGRAPH 702.10 OF THE INDOT SPECIFICATIONS SHALL APPLY.

   c. EXCEPT AS OTHERWISE SPECIFIED, CURE ALL CONCRETE BY ONE OF THE METHODS DESCRIBED IN INDOT SECTION 501.17.

4. TOP OF CASTING ELEVATIONS REFER TO THE CASTING'S RIM OR TOP OF CURB. THE CURB CONTRACTOR SHALL INSURE THAT CURB INLET CASTINGS ARE SET A PROPER ELEVATION PRIOR TO CONSTRUCTION OF ADJACENT CURB.

DEMOLITION

1. THE CONTRACTOR SHALL EXCAVATE, DEMOLISH, REMOVE AND DISPOSE OF THE DEBRIS FROM THE AREAS SHOWN ON THE SITE DEVELOPMENT PLAN.

   a. BUILDING WALLS.
   b. FOUNDATIONS.
   c. PAVEMENT (CONCRETE, ASPHALT AND BRICK).
   d. CONCRETE SLABS.

2. ALL MATERIAL AS A RESULT OF THE GENERAL DEMOLITION SHALL BE THE PROPERTY OF THE CONTRACTOR. THE CONTRACTOR'S LUMP SUM BID PRICE FOR THE DEMOLITION SHALL TAKE INTO ACCOUNT THE SALVAGEABLE VALUE OF MATERIALS AND SAID BID PRICE SHALL REFLECT SAID SAVINGS.

3. THE CONTRACTOR SHALL BE REQUIRED TO DEMOLISH AND REMOVE DESIGNATED FOUNDATION WALLS, RETAINING WALLS, CURBING, CONCRETE SLABS, PAVING, TANKS, STRUCTURES, PIPES, MANHOLES AS SHOWN ON THE CONTRACT DOCUMENTS. ALL EXISTING BASEMENT FLOOR SLABS THAT ARE NOT REMOVED SHALL BE BROKEN UP SUFFICIENTLY TO PERMIT DRAINAGE THROUGH THE SLAB. ALL EXISTING BASEMENT WALLS, FOUNDATIONS, FLOOR SLABS, AND ETC. SHALL BE REMOVED TO AN ELEVATION SUCH THAT THEY WILL NOT SUPPORT PROPOSED FLOOR SLABS OR PAVEMENTS.

4. THE CONTRACTOR SHALL OBTAIN FROM THE CITY OF CARMEL, AND ALL OTHER APPLICABLE GOVERNMENTAL AUTHORITIES, NECESSARY PERMITS REQUIRED, A COPY OF SUCH PERMITS TO BE FURNISHED TO THE OWNER PRIOR TO COMMENCEMENT OF ANY WORK REQUIRED HEREIN. THE CONTRACTOR SHALL FURTHER FURNISH TO THE OWNER PROOF THAT HE HAS COMPLIED WITH THE PROVISIONS OF THE MUNICIPAL CODE OF CARMEL, INDIANA.

UTILITIES

1. ALL WATER LINES FROM CLAY REGIONAL SEWER AND WATER UTILITY MAIN TO ANY BUILDING SHALL BE INSTALLED OF MATERIAL AND WORKMANSHIP AS APPROVED BY THE CLAY REGIONAL SEWER AND WATER UTILITY.

2. CONDUIT SHALL BE REQUIRED FOR ALL ELECTRICAL AND TELEPHONE LINES UNDER PAVED AREAS.

3. COMPACTED GRANULAR BACKFILL SHALL BE REQUIRED FOR ALL CROSSINGS OF PAVED AREAS PER CITY OF CARMEL AND HAMILTON COUNTY HIGHWAY DEPARTMENT.

SANITARY SEWER SPECIFICATIONS

1. STANDARD SPECIFICATIONS OF CLAY REGIONAL SEWER AND WATER UTILITY AND INDIANA DEPARTMENT OF HIGHWAYS SHALL APPLY FOR ALL WORK AND MATERIALS. PIPE SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 715.

2. SANITARY SEWER PIPE SHALL BE PVC IN ACCORDANCE WITH ASTM D-3034 (S.D.R. 35) AND ASTM 2321. PVC PIPE SHALL HAVE GROOVED BELL AND GASKET. THE PIPE SHALL BE MADE OF PVC PLASTIC HAVING A CELL CLASSIFICATION OF 12454B.

3. PVC SEWER FITTINGS SHALL CONFORM TO THE REQUIREMENTS OF ASTM D-3034-89 SPECIFICATION. FITTINGS IN SIZES THROUGH 8" SHALL BE MOLDED IN ONE PIECE WITH ELASTOMERIC JOINTS AND MINIMUM SOCKET DEPTHS AS SPECIFIED IN SECTIONS 6.2 AND 7.3.2. FITTINGS 10" AND LARGER SHALL BE MOLDED OR FABRICATED IN ACCORDANCE WITH SECTION 7.11 WITH MANUFACTURERS STANDARD PIPE BELLS AND GASKETS. WALL THICKNESS OF FITTINGS SHALL BE SDR 26 AS DEFINED IN SECTION 7.4.1 OF THE SPECIFICATIONS. GASKETS FOR ELASTOMERIC JOINTS SHALL BE MOLDED WITH A MINIMUM CROSS-SECTIONAL AREA OF 0.20 SQUARE INCHES AND CONFORM TO ASTM F-477 SPECIFICATION. FITTINGS SHALL BE MANUFACTURED BY HARCO OR EQUAL.

4. ALL SANITARY MANHOLES BE "PRECAST CONCRETE" MANHOLES IN ACCORDANCE WITH ASTM C-478 AND SECTION 720. O-RINGS SHALL CONFORM TO C-443. KENT SEAL OR EQUIVALENT SHALL ALSO BE APPLIED TO ALL JOINTS AND BETWEEN RISER RINGS AND CASTINGS. MANHOLE STEP SPACING SHALL BE NO MORE THAN 16 INCHES.

5. BUTYL RUBBER COATING SHALL BE APPLIED AROUND EACH MANHOLE JOINT FROM 6 INCHES ABOVE TO 6 INCHES BELOW EACH JOINT. THE APPROPRIATE PRIMER SHALL BE APPLIED PRIOR TO APPLYING THE RUBBER COATING. INSIDE JOINTS TO BE FILLED WITH PRECOAT PLUG MATERIAL.

6. THE CASTING ELEVATIONS ARE SET BY PLAN. HOWEVER, THE CASTINGS ARE TO BE ADJUSTED IN THE FIELD BY THE ENGINEER'S REPRESENTATIVE, SHOULD A DISCREPANCY OCCUR BETWEEN PLAN GRADE AND EXISTING GRADE. NEW MANHOLE RING AND COVER SHALL BE INSTALLED TO ESTABLISH GRADE. MAXIMUM HEIGHT OF ADJUSTING RINGS SHALL BE 12 INCHES.

7. BACKFILL AROUND ALL STRUCTURES AND ALL CUTS UNDER PAVED AREAS WITH GRANULAR MATERIAL. TRENCHES OPENING WITHIN FIVE FEET OF PAVED ROADWAYS SHALL BE BACKFILLED WITH GRANULAR MATERIAL IN ACCORDANCE WITH SECTION 211. BACKFILL UNDER SIDEWALKS SHALL BE GRANULAR, UNLESS THE WALKS ARE CONSTRUCTED A MINIMUM OF 6 MONTHS AFTER BACKFILL HAS BEEN IN-PLACE.

8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT ALL STATE HIGHWAYS, CITY AND COUNTY PERMITS HAVE BEEN OBTAINED BY THE DEVELOPER PRIOR TO START OF CONSTRUCTION.

9. THE CONTRACTOR SHALL BE REQUIRED TO FURNISH THE DEVELOPER'S ENGINEER WITH A SET OF PRINTS, MARKED IN RED PENCIL, SHOWING ACTUAL SEWER LOCATION AND INVERT, TO INCLUDE LATERAL LOCATION, DEPTH AND LENGTH. SUCH "AS-BUILT" PRINTS MUST BE RECEIVED BY THE ENGINEER BEFORE THE FINAL CONTRACT PAYMENT CAN BE AUTHORIZED. THE SANITARY SEWER LATERALS AND STUBS TERMINATION SHALL BE INDICATED ON THE SURFACE WITH A METAL FENCE POST SET IMMEDIATELY ABOVE SAID TERMINATION POINT.

10. ALL SANITARY SEWER LINES UPON COMPLETION WILL BE REQUIRED TO PASS AN INFILTRATION WEIR TEST AND A LOW PRESSURE AIR TEST, UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SAID TEST SHALL BE CONDUCTED ACCORDING TO NCPI STANDARD METHOD, AND SHALL BE WITNESSED BY AN ENGINEER AND A REPRESENTATIVE OF THE CLAY WASTE DISTRICT.

11. DEFLECTION TESTS SHALL BE PERFORMED ON ALL FLEXIBLE* PIPE AFTER THE FINAL BACKFILL HAS BEEN IN-PLACE AT LEAST 30 DAYS. NO PIPE SHALL EXCEED A VERTICAL DEFLECTION OF 5 PERCENT DEFLECTION TEST RESULTS. (*THE FOLLOWING ARE CONSIDERED NON-FLEXIBLE PIPES: CONCRETE PIPE, DUCTILE IRON PIPE AND CAST IRON PIPE.) THE DEFLECTION TEST SHALL BE PERFORMED WITH A NINE-POINT MANDREL. PROVING RINGS SHALL BE AVAILABLE.

12. ALL MANDREL TESTING SHALL BE OBSERVED BY A PROFESSIONAL ENGINEER FOR CERTIFICATION AND A REPRESENTATIVE OF CLAY REGIONAL SEWER AND WATER UTILITY.

13. THE ENDS OF LATERALS ARE TO BE PLUGGED TIGHT WITH A BRACED PLASTIC DISC OR CAP CAPABLE OF WITHSTANDING A LOW PRESSURE AIR TEST WITHOUT LEAKAGE.

14. BEDDING FOR FLEXIBLE PIPE SHALL BE NO. 8 CRUSHED STONE FROM 6 INCHES BELOW THE PIPE TO 12 INCHES ABOVE THE PIPE. BEDDING FOR RIGID PIPE SHALL BE NO 8 CRUSHED STONE FROM 6 INCHES BELOW THE PIPE TO THE SPRING LINE OF THE PIPE AND FROM THIS POINT TO 12 INCHES ABOVE SHALL BE FILL SAND OR EQUIVALENT. MANHOLES SHALL BE PLACED ON NO LESS THAN 6 INCHES OF NO. 8 CRUSHED STONE BEDDING.

15. WATER AND SEWER LINE CROSSINGS AND SEPARATIONS SHALL BE IN ACCORDANCE WITH TEN STATES' STANDARDS.

16. TRENCH SHALL BE OPENED SUFFICIENTLY AHEAD OF PIPE LAYING TO REVEAL OBSTRUCTIONS, AND SHALL BE PROPERLY PROTECTED AND/OR BARRICADED WHEN LEFT UNATTENDED.

17. NO WATER SHALL BE PERMITTED TO FLOW INTO THE SANITARY SEWER SYSTEM DURING CONSTRUCTION. CONTRACTOR SHALL UTILIZE A PUMP TO KEEP THE WATER LEVEL BELOW THE PIPE. PUMP DISCHARGE SHALL BE DIRECTED TO A STORM OUTLET. ANY PIPE ENTERING EXISTING SEWERS SHALL BE PLUGGED WITH AN MECHANICAL SCREW TYPE PLUG, UNTIL SUCH TIME AS ALL TEST ON THE SEWERS HAVE BEEN COMPLETED AND THE LINES HAVE PASSED ALL PUNCH LISTS.

18. ALL SEWER LATERALS INSTALLED BY THE MAINLINE CONTRACTOR SHALL BE BEDDED THE SAME AS THE MAIN LINE SEWER.

19. FORTY-EIGHT (48) HOURS NOTICE SHALL BE GIVEN TO THE START OF SEWER CONSTRUCTION. ALSO, 48 HOURS NOTICE SHALL BE GIVEN PRIOR TO ANY TESTING DONE ON THE SEWER.

20. MANHOLE CASTINGS SHALL BE STAMPED "SANITARY SEWER" (NEENAH CASTING R 1642 OR EQUAL) AND BE SELF-SEALING TYPE. WATERPROOF CASTINGS SHALL BE NEENAH R-1916 -F1 AND STAMPED "SANITARY SEWER".

21. THE CONTRACTOR SHALL PROVIDE MEASUREMENTS OF THE SLOPE OF THE SEWER FOR EACH MANHOLE SECTION AS CONSTRUCTION PROGRESSES. SUCH MEASUREMENTS SHALL BE CERTIFIED BY A REGISTERED LAND SURVEYOR OR ENGINEER AND BE AVAILABLE ONSITE FOR OBSERVATION BY THE DISTRICT'S INSPECTOR. NO MORE THAN THREE MANHOLES SECTIONS CAN BE CONSTRUCTED IN ADVANCE OF SUCH MEASUREMENTS.

22. IN THE EVENT THE CONTRACTOR DOES NOT MEET THE MINIMUM SLOPES, THE SEWER SECTION AND ANY OTHER AFFECTED SEWER SECTIONS SHALL BE RECONSTRUCTED TO MEET SUCH MINIMUM SLOPES.

23. THE MINIMUM SLOPE FOR SEWER ACCEPTANCE BY THE CLAY TOWNSHIP REGIONAL WASTE DISTRICT ARE:

SIZE OF PIPE	MINIMUM CONSTRUCTION SLOPE
8 - INCH	0.40%
10 - INCH	0.28%
12 - INCH	0.22%
15 - INCH	0.15%
18 - INCH	0.12%

STORM SEWER SPECIFICATIONS

1. STANDARD SPECIFICATIONS OF THE CITY OF CARMEL AND HAMILTON COUNTY HIGHWAY DEPARTMENT SHALL APPLY FOR ALL WORK AND MATERIALS. PIPE SHALL BE INSTALLED IN ACCORDANCE WITH INDOT SECTION 715.

2. ALL REINFORCED CONCRETE STORM SEWER PIPE (RCP) SHALL CONFORM TO ASTM DESIGNATION C-76 CLASS III. ALL HELICALLY CORRUGATED STEEL PIPE (HCSP) SHALL BE ALUMINIZED AND SHALL CONFORM AASHO M36, 16 GAUGE IN ACCORDANCE WITH INDOT SECTION 907.

3. BACKFILL AROUND ALL STRUCTURES AND CUTS UNDER PAVED AREAS WITH COMPACTED GRANULAR MATERIAL IN ACCORDANCE WITH INDOT SECTION 21.1 AND 715.

4. SEE STANDARD DETAIL SHEET FOR CONSTRUCTION DIMENSIONS OF STORM STRUCTURES. MANHOLE, INLETS AND CATCH BASINS SHALL BE IN ACCORDANCE WITH INDOT SECTION 720. PRECAST CONCRETE AND STEEL FOR MANHOLES AND INLETS SHALL BE IN ACCORDANCE WITH ASTM C-478.

5. STORM SEWER DISCHARGE AREAS AND INVERTS ARE TENTATIVE AND ARE SUBJECT TO FIELD MODIFICATIONS BY THE ENGINEER OR HIS REPRESENTATIVE. THE CONTRACTOR WILL BE REIMBURSED FOR ANY ADDITIONAL LABOR AND MATERIALS NECESSARY TO COMPLETE ANY MODIFICATIONS ACCORDING TO THE UNIT PRICES SUBMITTED BY THE CONTRACTOR OR THE CONTRACT AMOUNT.

6. THE CONTRACTOR SHALL PROVIDE AT LEAST 2' OF COVER OVER ALL STORM SEWERS, UNLESS OTHERWISE INDICATED BY PLANS.

7. RIP RAP SHALL BE A MINIMUM OF 1/3 CUBIC FOOT IN SIZE AND A MINIMUM 18" IN DEPTH. DIMENSIONS FOR RIP RAP IN THESE PLANS ARE FOR ESTIMATING PURPOSES ONLY. ACTUAL BEST PLACEMENT OF RIP RAP SHALL BE DETERMINED BY FIELD CONDITIONS AND SHALL BE IN ACCORDANCE WITH INDOT SECTION 616.

8. ALL DRAINAGE PIPE AND DITCH OUTFALLS TO RECEIVING STREAMS SHALL BE CONSTRUCTED IN ACCORDANCE WITH DRAWINGS, SUBJECT HOWEVER, TO ANY MODIFICATION REQUIRED BY THE ENGINEER AT THE TIME INSTALLATION IS COMPLETED AND TO ANY ADJUSTMENTS NEEDED FOR FIELD CONDITIONS NOT ADEQUATELY ANTICIPATED BY THE DESIGN DRAWING.

9. CASTINGS SHALL BE AS SHOWN ON DETAIL SHEET FOR MANUFACTURER, TYPE AND NUMBER. ALL CASTINGS SHALL BE NEENAH OR EAST JORDAN APPROVED EQUAL.

SOIL EROSION CONTROL SUMMARY

1. CONTRACTOR SHALL INSTALL SEDIMENT TRAPS AND STRAW BALE FILTERS AS SHOWN.

2. MASS GRADE THE SITE (SIDES OF SWALES, MOUNDS AND PONDS TO BE SODDED OR SEEDED AND MULCHED IMMEDIATELY UPON COMPLETION). TEMPORARY SEEDING SHALL BE RECOMMENDED FOR ALL SWALES AND DISTURBED AREAS THAT CANNOT BE FINAL SEEDED WITHIN A TIME PERIOD THAT WILL PREVENT SOIL EROSION, FOR TEMPORARY SEEDING THE CONTRACTOR SHALL UTILIZE A FAST GROWING SEED OF EITHER OATS, ANNUAL RYEGRASS, WHEAT OR RYE DEPENDING UPON TIME OF YEAR. DISTURBED AREAS SHOULD BE KEPT TO A MINIMUM AT ALL TIMES.

3. CONTRACTOR SHALL CONTROL MUD ACCUMULATION ON ALL STREETS SURROUNDING THE PROJECT BY INSTALLING STONE SURFACE AT ALL LOCATIONS WHERE CONSTRUCTION TRAFFIC LEAVES THE SITE. DUST SHALL BE KEPT TO A MINIMUM BY UTILIZING SPRINKLING, CALCIUM CHLORIDE, VEGETATIVE COVER, SPRAY ON ADDITIVES OR OTHER APPROVED METHODS.

4. MAINTAIN ALL FILTERS AND TRAPS DURING CONSTRUCTION TO PREVENT ANY BLOCKAGES FROM ACCUMULATED SEDIMENT. ADDITIONAL SEEDING AND STRAW BALES MAY BE REQUIRED DURING CONSTRUCTION AS SPECIFIED BY ENGINEER OR SOIL CONSERVATION SERVICE. RIP RAP SHALL BE PLACED IN AREAS OF HIGH VELOCITY STREAM FLOW (MINIMUM SIZE 1/3 CU.FT.). PAYMENT FOR ADDITIONAL STRAW BALES AND RIP RAP NOT SHOWN ON PLANS AND SEEDING SHALL BE ON A UNIT BASIS.

5. CONTRACTOR SHALL INSTALL ALL STORM SEWER INLET FILTERS AS STORM SEWER SYSTEM IS INSTALLED.

6. ALL PROPOSED STREET AREAS TO PAVED AS SOON AS POSSIBLE AFTER SUBGRADE IS PREPARED.

7. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROLS ONLY WHEN THERE IS A SUFFICIENT GROWTH OF GROUND COVER TO PREVENT FURTHER EROSION.

8. ALL SWALES SHALL BE SEEDED IMMEDIATELY AFTER FINAL GRADING.

9. ALL DISTURBED AREAS SHALL BE SEEDED IMMEDIATELY AFTER FINAL GRADING.

10. DURING BUILDING CONSTRUCTION, ALL CONTRACTORS AND SUBCONTRACTORS SHALL KEEP ALL VEHICLES CONFINED TO THE STREET AREAS. TRAFFIC FROM STREET TO BUILDING SITES TO BE A MINIMUM. ANY MUD TRACKED ONTO STREETS TO BE REMOVED AT RESPONSIBLE CONTRACTORS EXPENSE.

SEEDING SPECIFICATIONS

1. SWALES/GRASSED WATERWAYS: PERMANENT SEEDING SHALL TAKE PLACE BETWEEN MARCH 1 AND MAY 15 OR FROM AUGUST 10 TO OCTOBER 15 WITH THE FOLLOWING PER ACRE:

   25 LBS. KENTUCKY 31 FESQUE
   15 LBS. KENTUCKY BLUE GRASS
   1000 LBS. 12-12-12 FERTILIZER
   3000 LBS. MULCH (STRAW)

2. IF GRADES ARE ESTABLISHED BETWEEN MAY 15 AND AUGUST 10, A TEMPORARY SEEDING CONSISTING OF 40 LBS. OF ANNUAL RYEGRASS SHALL BE PLANTED PER ACRE.

3. IF GRADES ARE ESTABLISHED BETWEEN OCTOBER 15 AND DECEMBER 30, EITHER RYE (GRAIN) OR WHEAT MAY BE USED AT THE RATE OF 2 BUSHELS/AC. OATS MAY BE USED FOR EARLY SPRING PLANTING AT THE RATE OF 3 BUSHELS/AC. ALL GRAINS SHOULD BE CUT AT TIME OF PERMANENT SEEDING. ALL GRAINS SHOULD BE CUT PRIOR SEED MATURING.

4. IF TEMPORARY SEEDING IS ESTABLISHED PRIOR TO PERMANENT SEEDING, THE MULCH MAY BE ELIMINATED EXCEPT IN "BARE" AREAS.

5. IF GRADING OCCURS DURING DECEMBER, JANUARY OR FEBRUARY, NO SEEDING TO TAKE PLACE TILL SPRING PLANTING; HOWEVER, IT IS IMPERATIVE THAT ALL SEDIMENT FILTERS AND TRAPS ARE IN PLACE PRIOR TO BULK EARTHMOVING OR CLEARING

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SHEET TITLE: SITE SPECIFICATIONS
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SECTION ONE
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REVISIONS
02/06/95 - AS PER CLAY REGIONAL WASTE DISTRICT JMP

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APR 01 1996
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WILLIAM ROSS HUNT, JR. REGISTERED No. 17186 STATE OF INDIANA PROFESSIONAL ENGINEER

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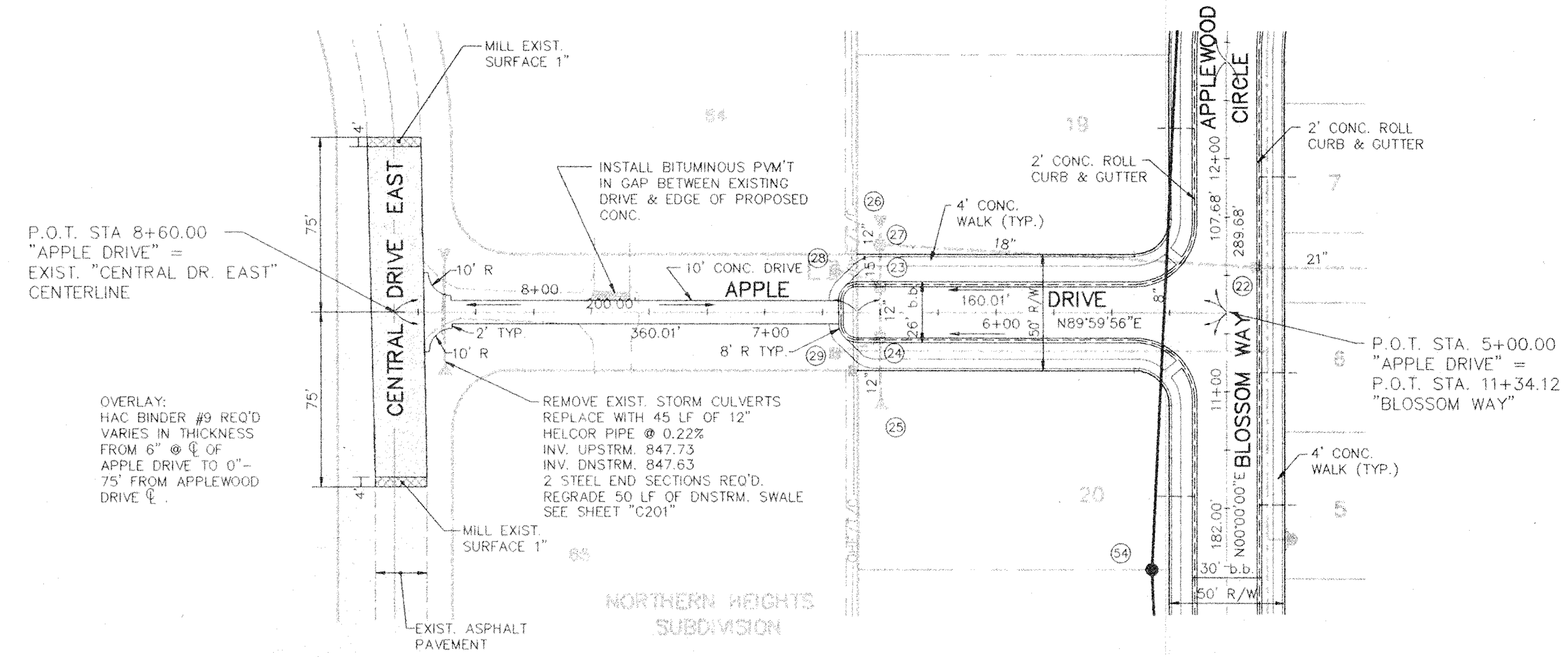
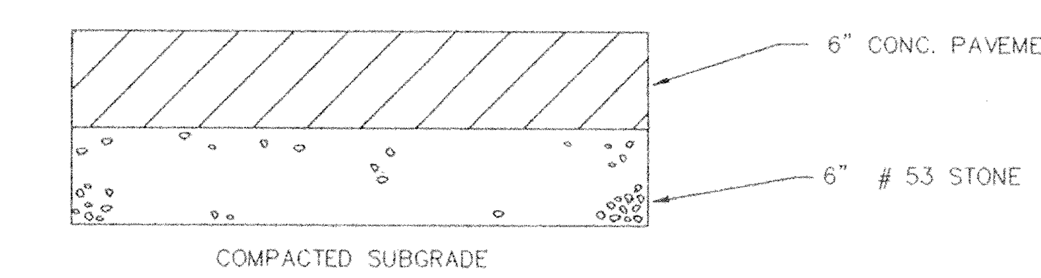
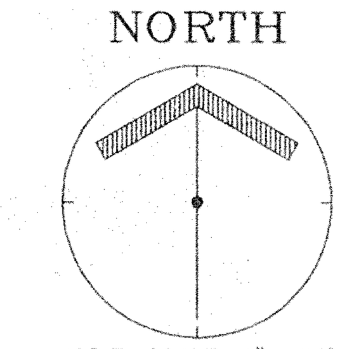


10' CONC. DRIVE SECTION



1. The concrete "connector" should be INDOT Type C (7-bag) plain cement concrete pavement.
2. The existing stub street off of Central Drive East should be removed and saw cut at the existing drives.
3. The traverse contraction joints should be saw cut every 10 feet, except near Central Drive East where two longitudinal joints should be saw cut.
4. Expansion material should be placed between the concrete "connector" and Central Drive East, between the valley curb and between the concrete "connector" and sidewalks.

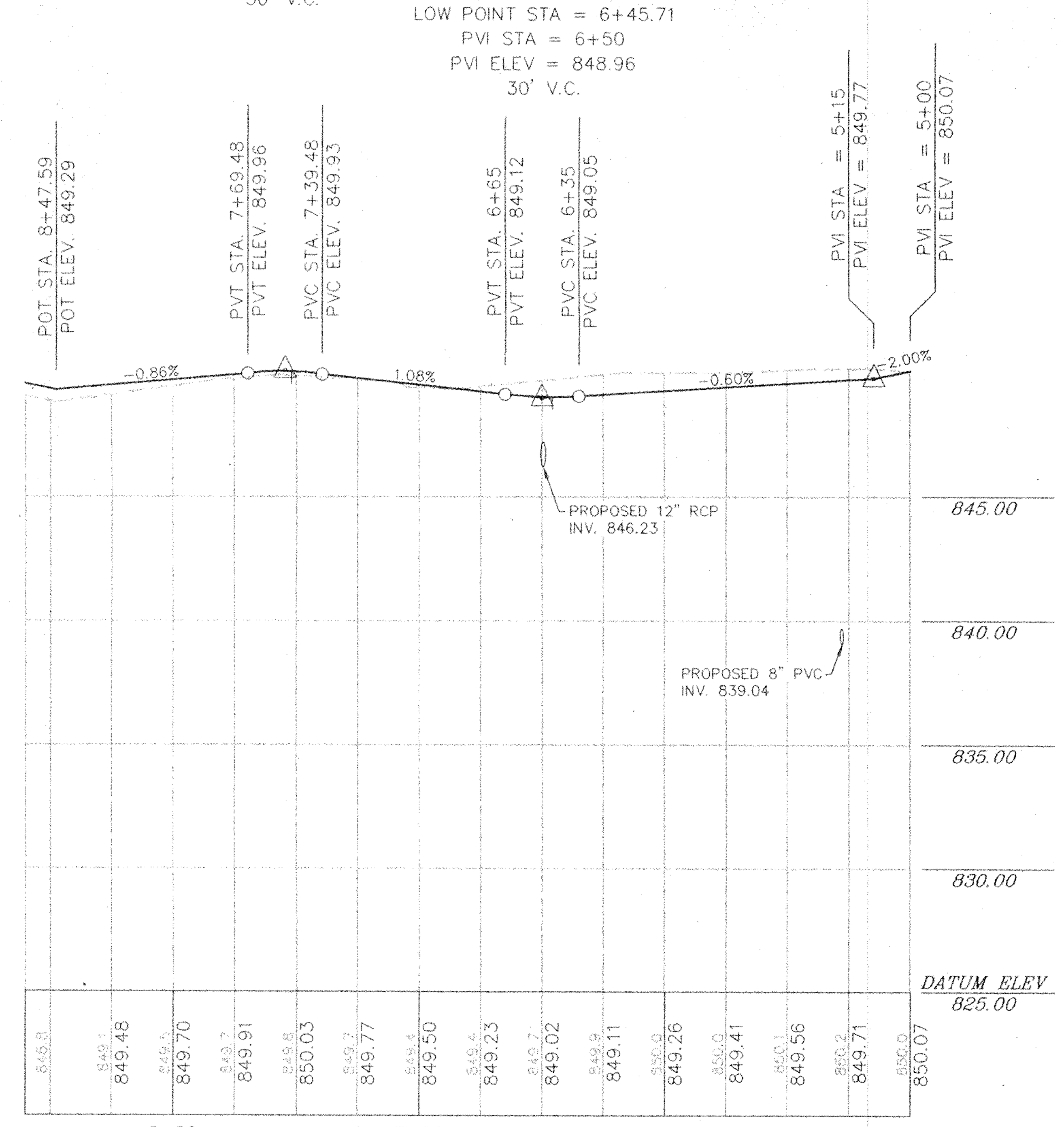
NORTH



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

HIGH POINT ELEV = 850.04
HIGH POINT STA = 7+51.85
PVI STA = 7+54.48
PVI ELEV = 850.09
30' V.C.

LOW POINT ELEV = 849.02
LOW POINT STA = 6+45.71
PVI STA = 6+50
PVI ELEV = 848.96
30' V.C.



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SHEET TITLE: STREET PLAN & PROFILE
PROJECT NAME: APPLEWOOD ESTATES
SECTION ONE
CARMEL, INDIANA

REVISIONS
02/06/95 ~ AS PER CARMEL TAC JMP
03/15/95 ~ ADD WALKS & STORM INLETS/STORM S. AS PER HAM. CNTY. JMP
05/17/95 ~ ADD PVM'T OVERLAY ON CENTRAL DR. EAST, REV. 12" HELCOR PIPE AS PER HAM. CO. HWY. ~ RwB
09/26/95 ~ REVISED APPLE DRIVE PER HAM. COUNTY ~ TES

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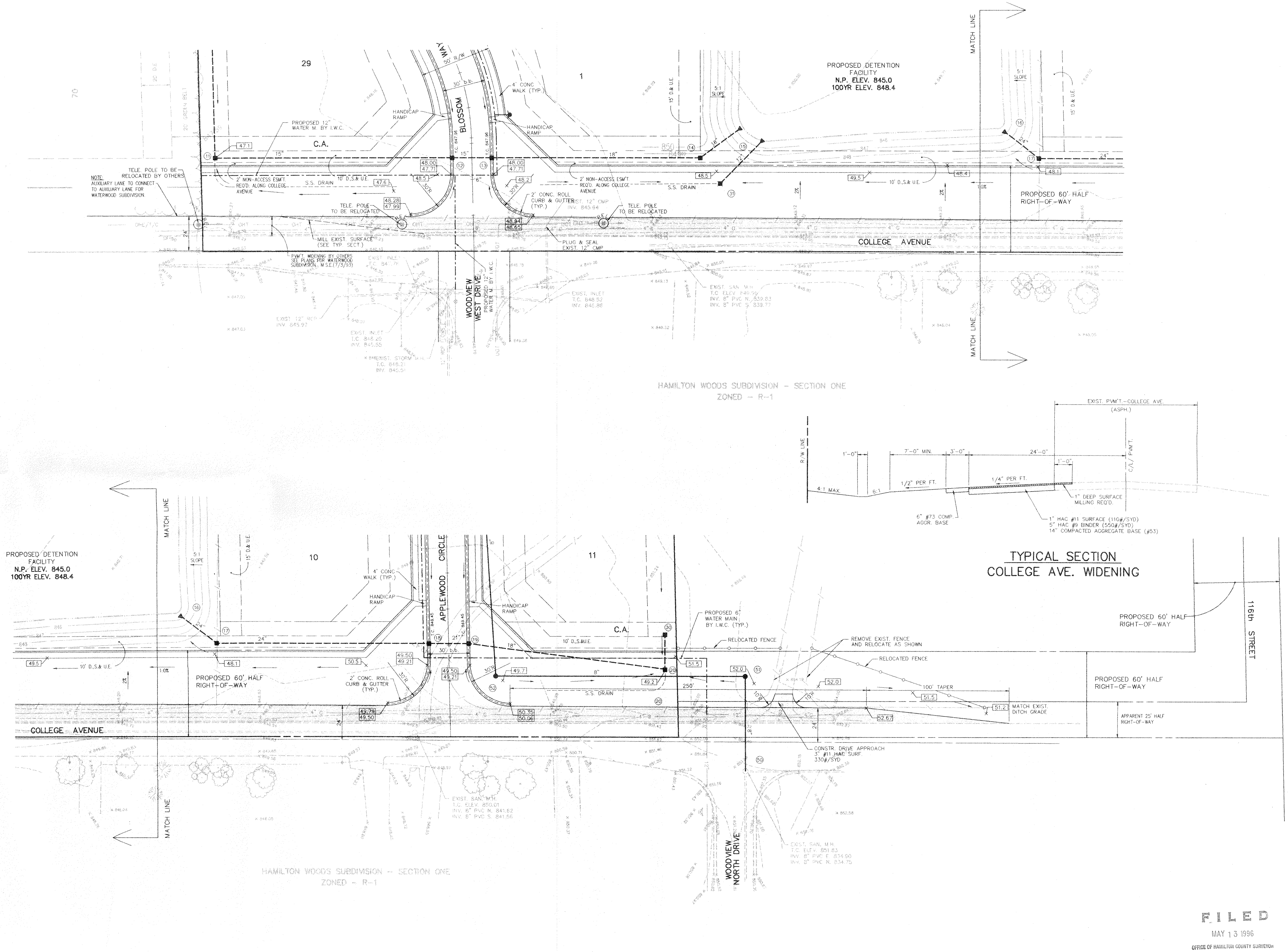
WILLIAM ROSS HUNT, JR. REGISTERED No. 17186 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWING: 9425C302
DATE: 06/07/94
PROJ. NO.: 9425
DRAWN BY: JMP
SHEET NO.: C302
TUBE FILE #

FILED MAY 13 1996 OFFICE OF HAMILTON COUNTY SURVEYOR

PLOTTED BY: TES PLOT DATE: 09/26/95 PLOT TIME: 13:41



MPA

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SHEET TITLE: ENTRY DETAIL

PROJECT NAME: APPLEWOOD ESTATES
SECTION ONE
CARMEL, INDIANA

REVISIONS
02/06/95 -- RELOCATE TELE. POLES ADD S.S. DRAIN PLUG EXIST. STORM S. JMP
03/15/95 -- ADD WALK & STORM INLETS/STORM S. PER HAM. CNTY. JMP

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WILLIAM ROSS HUNT, JR. REGISTERED No. 17186 STATE OF INDIANA PROFESSIONAL ENGINEER

NORTH

SCALE: 1" = 30'

DRAWING:	9425C401
DATE:	06/07/94
PROJ. NO.:	9425
DRAWN BY:	NH

SHEET NO.: C401

TUBE FILE #

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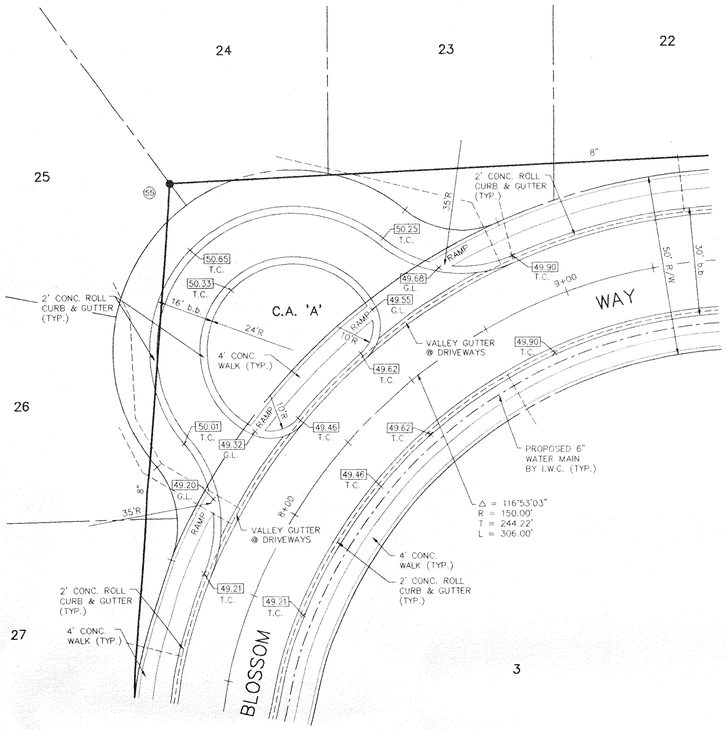

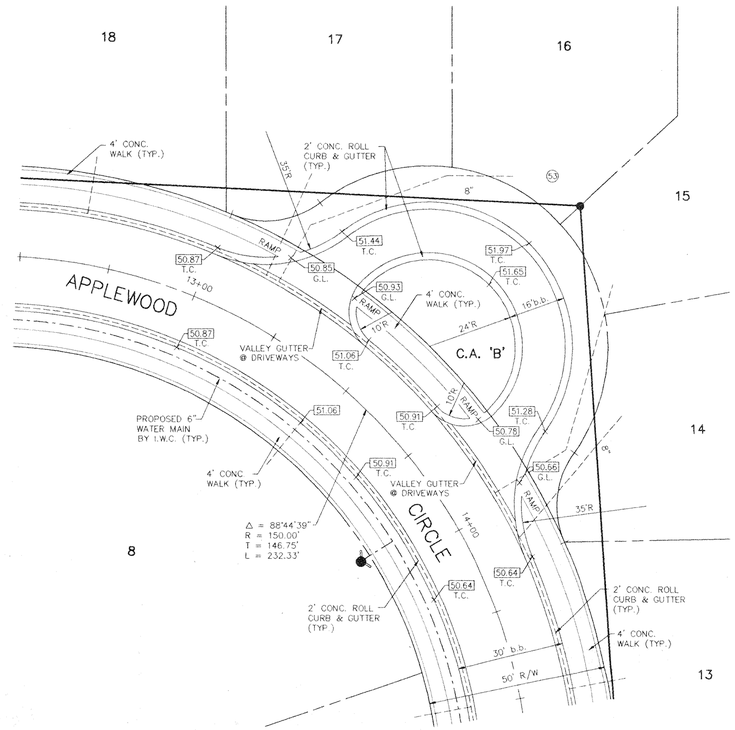

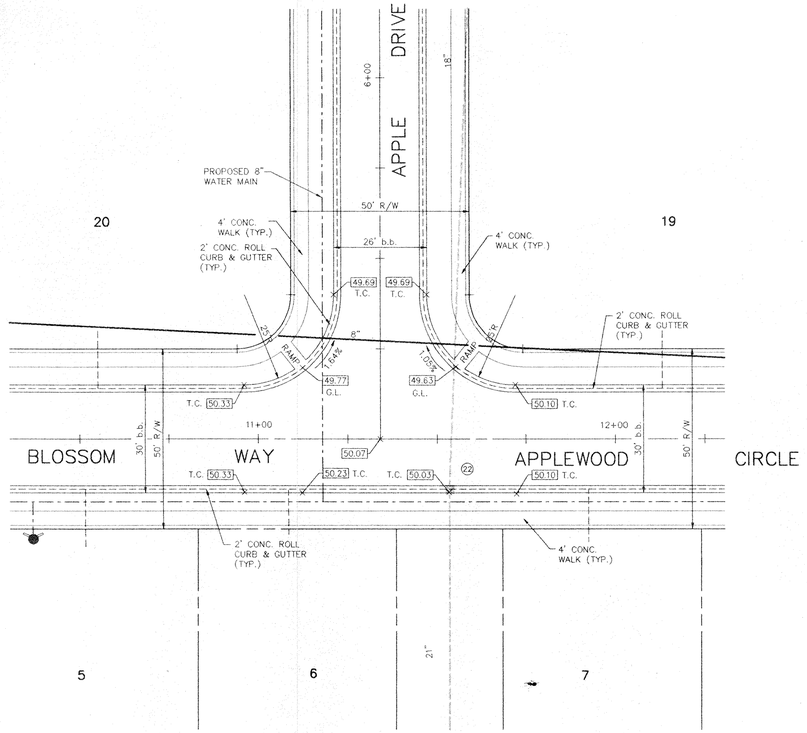

T.C. = TOP OF CURB/TOP OF CASTING
G.L. = GUTTER LINE

PLOTTED BY: JMP
PLOTTED ON: 07/7/96
PLOT TIME: 13:52

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MAY 13 1996
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SHEET TITLE: INTERSECTION DETAILS
PROJECT NAME: APPLEWOOD ESTATES
SECTION ONE
CARMEL, INDIANA

REVISIONS
02/06/95 ~ AS PER CARMEL TAC JMP
03/15/95 ~ WATER MAIN REVS. JMP
03/21/95 ~ REV. S.S.D. PER CITY JMP

PRINTED
APR 01 1996
MELTON-PACKARD

WILLIAM ROSS HUNT
REGISTERED
No. 17186
STATE OF INDIANA
PROFESSIONAL ENGINEER

NORTH
SCALE: 1"= 20'

DRAWING: 9425C402
DATE: 06/07/94
PROJ. NO.: 9425
DRAWN BY: JMP

SHEET NO.: C402

TUBE FILE #


SANITARY PLAN & PROFILE
APPLEWOOD ESTATES
SECTION ONE
CARMEL, INDIANA
MPA
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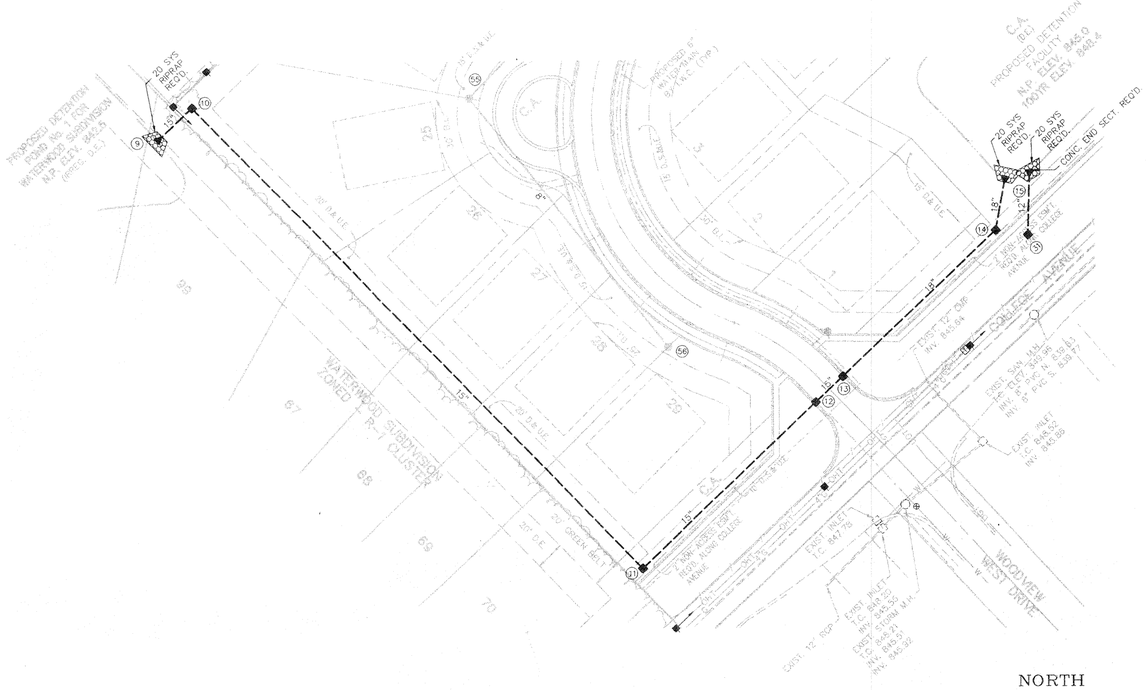
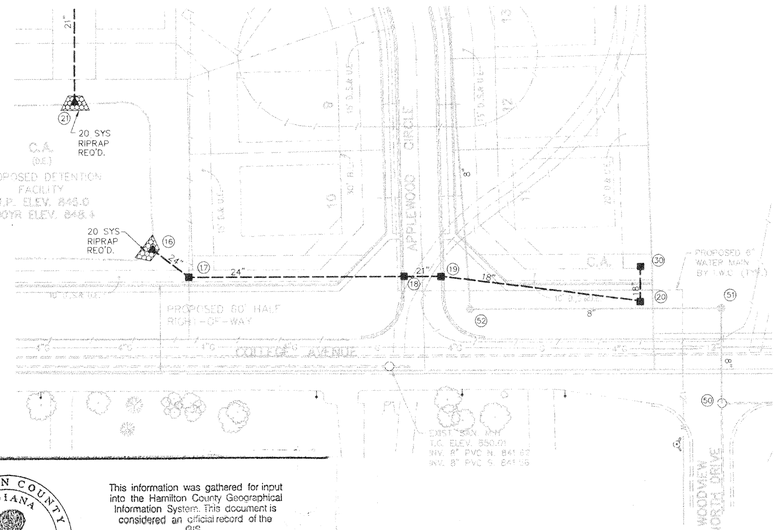
Civil Engineers • Land Surveyors
6910 N. Shadeland Avenue • Indianapolis, Indiana 46220 • (317) 577-0069
BLOSSOM WAY
APPLEWOOD CIRCLE
COLLEGE AVENUE
EXISTING STABLES
PROPOSED DETENTION FACILITY
PROPOSED 60' HALF RIGHT-OF-WAY
HAMILTON WOODS SUBDIVISION - SECTION ONE
ZONED - R-1
WOODVIEW WEST DRIVE
WOODVIEW NORTH DRIVE
House UNDER CONST. NO LATERAL FOUND
NORTH
HORIZ. SCALE: 1"= 50'
VERT. SCALE: 1"= 5'
PROPOSED GRADE
EXIST. GRADE
COMPACTED GRANULAR BACKFILL REQ'D.
PROPOSED 8" WATER MAIN
PROPOSED 18" RCP INV. 845.5
PROPOSED 6" WATER MAIN
EXIST. 4" GAS MAIN VERIFY EXACT LOCATION PRIOR TO CONSTR.
EXIST. 12" WATER MAIN VERIFY EXACT LOCATION PRIOR TO CONSTR.
VERIFY INV. OF EXIST. SEWER PRIOR TO CONSTRUCTION.
EXIST. 8" E. INV. 834.90
EXIST. 8" N. INV. 834.75
220 LF OF 8" PVC @ 0.45% 0.52%
234 LF OF 8" PVC @ 0.45% 0.46%
382 LF OF 8" PVC @ 0.45% 0.47%
335.7 LF OF 8" PVC @ 0.45% 0.46%
175 LF OF 8" PVC @ 0.45% 0.53%
65.2 LF OF 8" PVC @ 0.50% 0.37%
850.00
845.00
840.00
835.00
830.00
DATUM ELEV. 825.00
19+00 18+00 17+00 16+00 15+00 14+00 13+00 12+00 11+00 10+00 9+00 8+00 7+00 6+00 5+00
REVISIONS
PRINTED APR 01 1996
MELTON-PACKARD
WILLIAM ROSS HUNT JR. REGISTERED No. 17186 STATE OF INDIANA PROFESSIONAL ENGINEER
DRAWING: 9425C501
DATE: 06/07/94
PROJ. NO.: 9425
DRAWN BY: JMP
SHEET NO.: C501
TUBE FILE #
FILED MAY 13 1996 OFFICE OF HAMILTON COUNTY SURVEYOR
▲ = END OF SANITARY SEWER LATERAL LOCATED 8-20-95
AS-BUILT 8-10-95

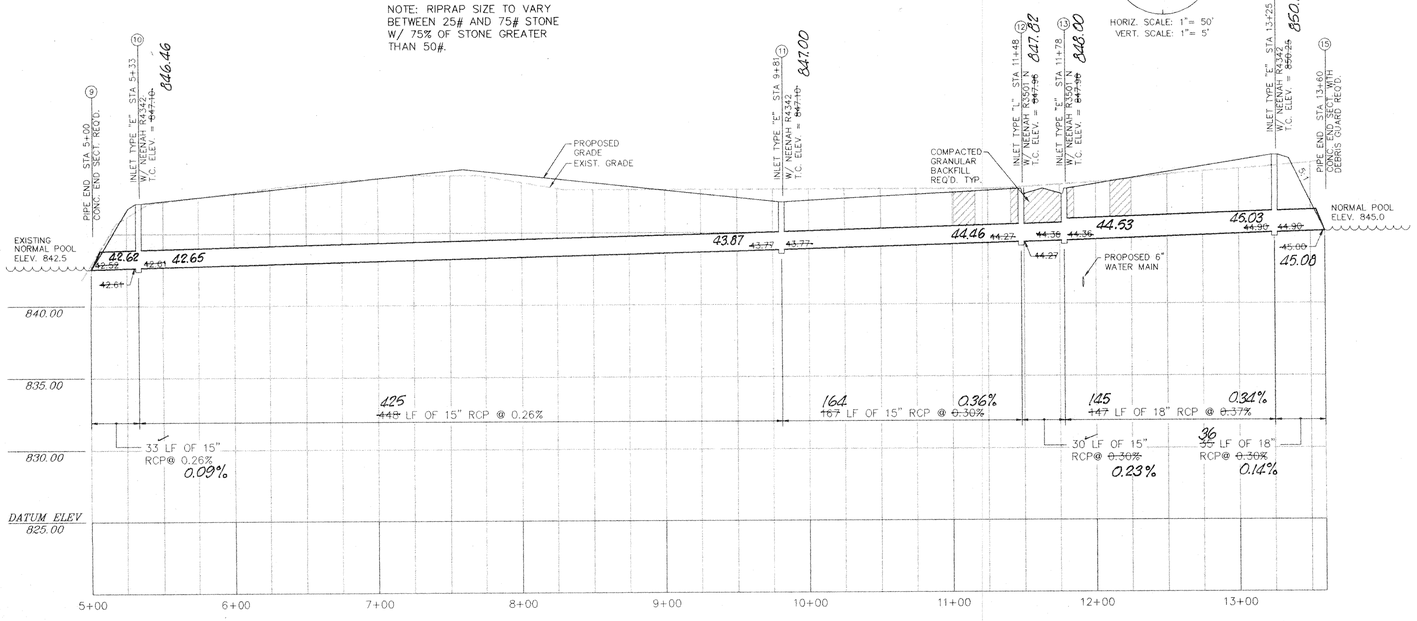




NOTE: RIPRAP SIZE TO VARY BETWEEN 25# AND 75# STONE W/ 75% OF STONE GREATER THAN 50#.

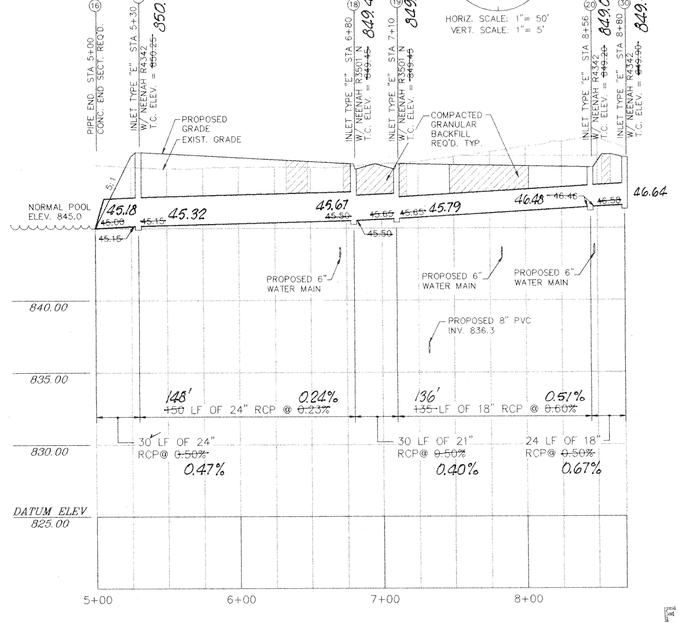
NORTH

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



NORTH

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



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SHEET TITLE: STORM SEWER PLAN & PROFILES

PROJECT NAME: APPLEWOOD ESTATES
SECTION ONE
CARMEL, INDIANA

REVISIONS
02/06/95 ~ AS PER CARMEL TAC JMP
03/15/95 ~ ADD WALKS & STORM SEWER INLETS/S. SEWER PER HAM. CNTY. JMP
03/21/95 ~ REV. S.S.D. PER CITY JMP

PRINTED
APR 01 1996
MELTON-PACKARD

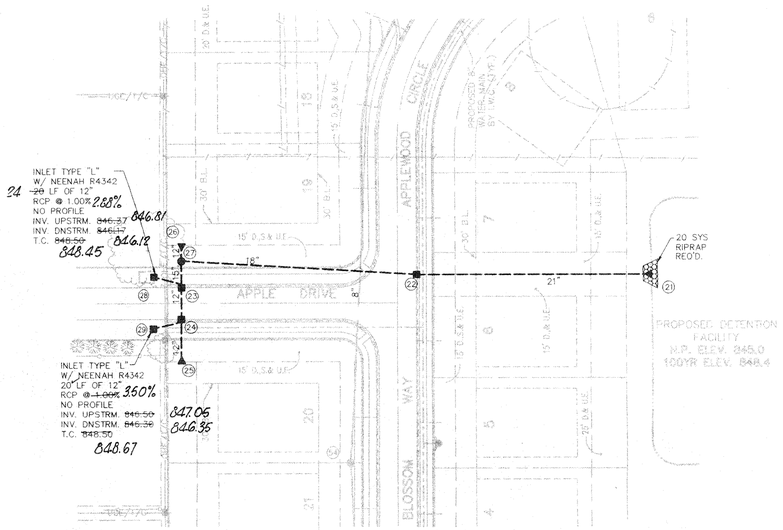
DRAWING: 9425C701
DATE: 06/07/94
PROJ. NO.: 9425
DRAWN BY: JMP

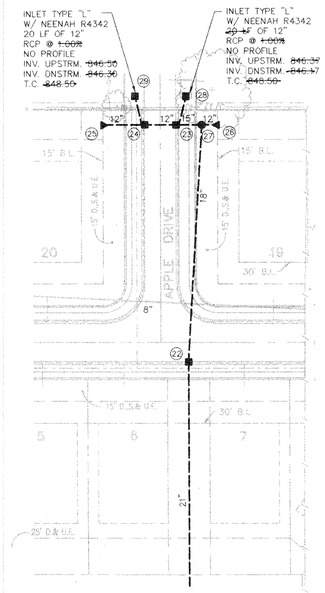
SHEET NO.: C701
TUBE FILE #

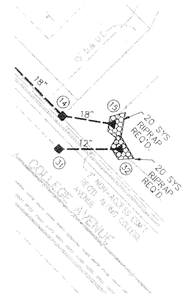
FILED
MAY 13 1996
OFFICE OF COUNTY SURVEYOR

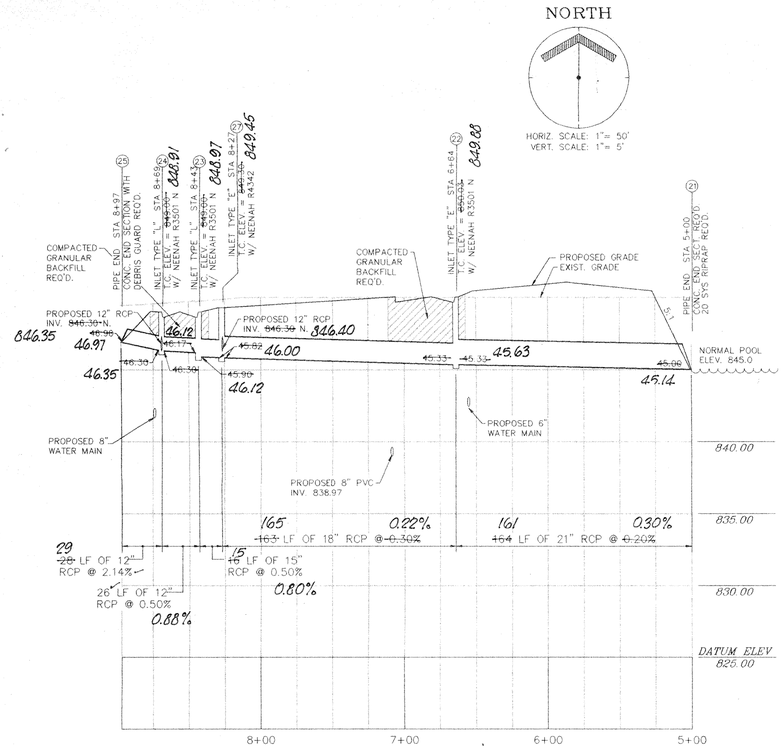
AS BUILT 12/12/95

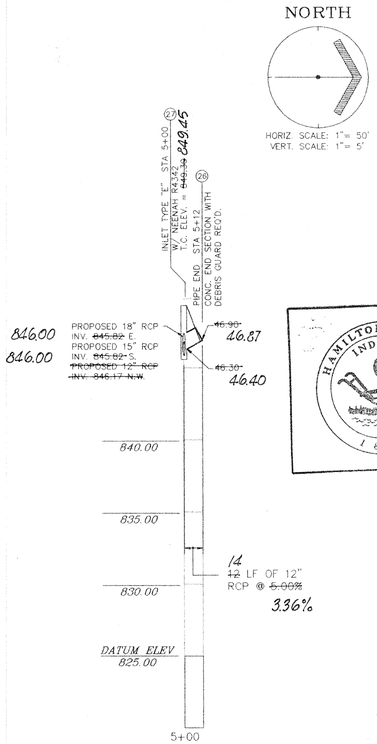
PLOTTED BY: MEC
PLOT DATE: 05/01/96
PLOT TIME: 15:51











PLOTTED BY: MEC
PLOT DATE: 05/02/96
PLOT TIME: 08:06

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AS BUILT 12/12/95 MAY 3 1996
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SHEET TITLE: STORM SEWER PLAN & PROFILES
PROJECT NAME: APPLEWOOD ESTATES
SECTION ONE
CARMEL, INDIANA

REVISIONS
02/08/95 ~ AS PER CARMEL TAC JMP
03/15/95 ~ ADD WALK & STORM INLETS/STORM S. PER HAM. COUNTY JMP
PRINTED PROFILE FOR STRUCTURE #31 & #32 MEC
APR 01 1996
MELTON-PACKARD

WILLIAM ROSS MINTON REGISTERED No. 17186 STATE OF INDIANA PROFESSIONAL ENGINEER

DRAWING: 9425C702
DATE: 06/07/94
PROJ. NO.: 9425
DRAWN BY: JMP
SHEET NO.: C702
TUBE FILE #