Engineer's Construction Estimate - Hamilton County Crooked Creek Regulated Drain Extension

Goddard School
Civil Designs Project Number: 02-123
Date: 01-09-2004

Item	Quantity	Unit	Unit Price (Labor + Material)	Total Cost ($)
Utilities - Public Storm Sewer				
27" RCP Storm Sewer	19	LF	$45.00	$855.00
Concrete Storm Inlet	1	Each	$1,500.00	$1,500.00
Regular Backfill	18	Tons	$8.00	$140.00
			Subtotal =	$2,495.00
			Total =	$2,495.00
			Contingencies at 10% =	$250.00
			Total Estimated Public Improvements =	$2,745.00
			Total Estimated Performance Bond Amount =	$2,800.00

Notes:
1. Estimate does not include land and construction permit costs
2. Estimate does not include construction staking.
3. Estimate does not include design fees.
4. Estimate does not include miscellaneous utility fees.

CERTIFICATE OF COMPLETION AND COMPLIANCE

To: Hamilton County Surveyor

Re: Goddard School

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: _James M. Peck_ Date: 4/27/05

Type or Print Name: James M. Peck, Civil Designs, LLP

Business Address: 2415 Directors Row, Suite E

Indianapolis, IN 46241

Telephone Number: (317) 244-1968

INDIANA REGISTRATION NUMBER

910337

(Seal: JAMES M. PECK, REGISTERED No. PE910337, STATE OF INDIANA, PROFESSIONAL ENGINEER)

<div style="border: 2px solid black; text-align: center;">

Drainage
Report

</div>

Project:
The Goddard School
10445 Commerce Drive
Carmel, Indiana

Prepared For:
Aspengold, LLC
5310 East Main Street, Suite 207
Columbus, Ohio 43213
Phone: (614) 860-1470

Date: December 20, 2002
Revised : January 6, 2004

Designers:
James M. Peck, P.E.
Darci Pellom

Job Number: 02-123

Civil Designs, LLP
2415 Directors Row, Suite E
Indianapolis, Indiana 46241
Phone: 317-244-1968
Fax: 317-244-1969

FILED

FEB 24 2004

Stormwater Drainage Summary:

► DESIGN CRITERIA:

Site Location:

The project is located near the intersection of U.S. 421 and 106th Street in Carmel, Indiana. The address of the proposed site is 10445 Commerce Drive.

Site Narrative:

The proposed design calls for an approximately 8,197 square foot building with accompanying asphalt parking area, playground, and masonry trash enclosure. The total drainage area is approximately 2.25 acres.

Adjoining Property Conditions:

North................Future Commercial
South................Residential
East................Residential
West................Commercial

Existing Soil Type:

Crosby Silt Loam, 0 – 3% Slopes (CrA) ....Type B
Brookston Silty Clay Loam (Br)..............................Type B

Stormwater Design:

The proposed stormwater design utilizes PVC roof drains to convey runoff from the building to a proposed curb inlet located in the parking lot. The remaining impervious area is sheet drained to the proposed curb inlet located in the southwest corner of the parking lot. An existing 27" storm sewer has been stubbed to the property to handle runoff from the site and the area north of the site. The off-site area north of the site has since been designed to divert the drainage to the easement northeast of the Goddard School Property. The proposed design extends the 27" storm sewer to connect to the proposed parking lot curb inlet. Using the attached *Storm Drain Flow Tabulation Form – Rational Method* spreadsheet, the proposed storm sewer system should convey the fully developed 10 year rainfall event without inlet overtopping. Flow velocities exceeding 3.0 feet per second and adequate capacity, Q, were achieved for each pipe run.

The lawn area to the rear of the proposed building is designed to sheet drain to a grass-lined swale or depression located along the east property line. The area draining to this swale will be reduced by approximately 0.56 acres, as this area will be connecting to the proposed storm sewer network. As a result, the existing drainage characteristics of this area will be greatly enhanced.

Summary:

By piping the proposed impervious areas offsite and reducing the existing drainage area draining to the south, the drainage characteristics of the site will be greatly improved. It is expected that the proposed design will safely manage stormwater runoff from the site without burdening adjacent or downstream property owners.

STORM DRAIN FLOW TABULATION FORM - RATIONAL METHOD

01/06/04

PROJECT NAME   The Goddard School - Carmel, Indiana   PROJECT No.   02-123   COMPUTED BY: ACH

STORM FREQUENCY DESIGN YEAR   10   CHECKED BY: JMP

MANNING n =   0.013 RCP
              0   PVC

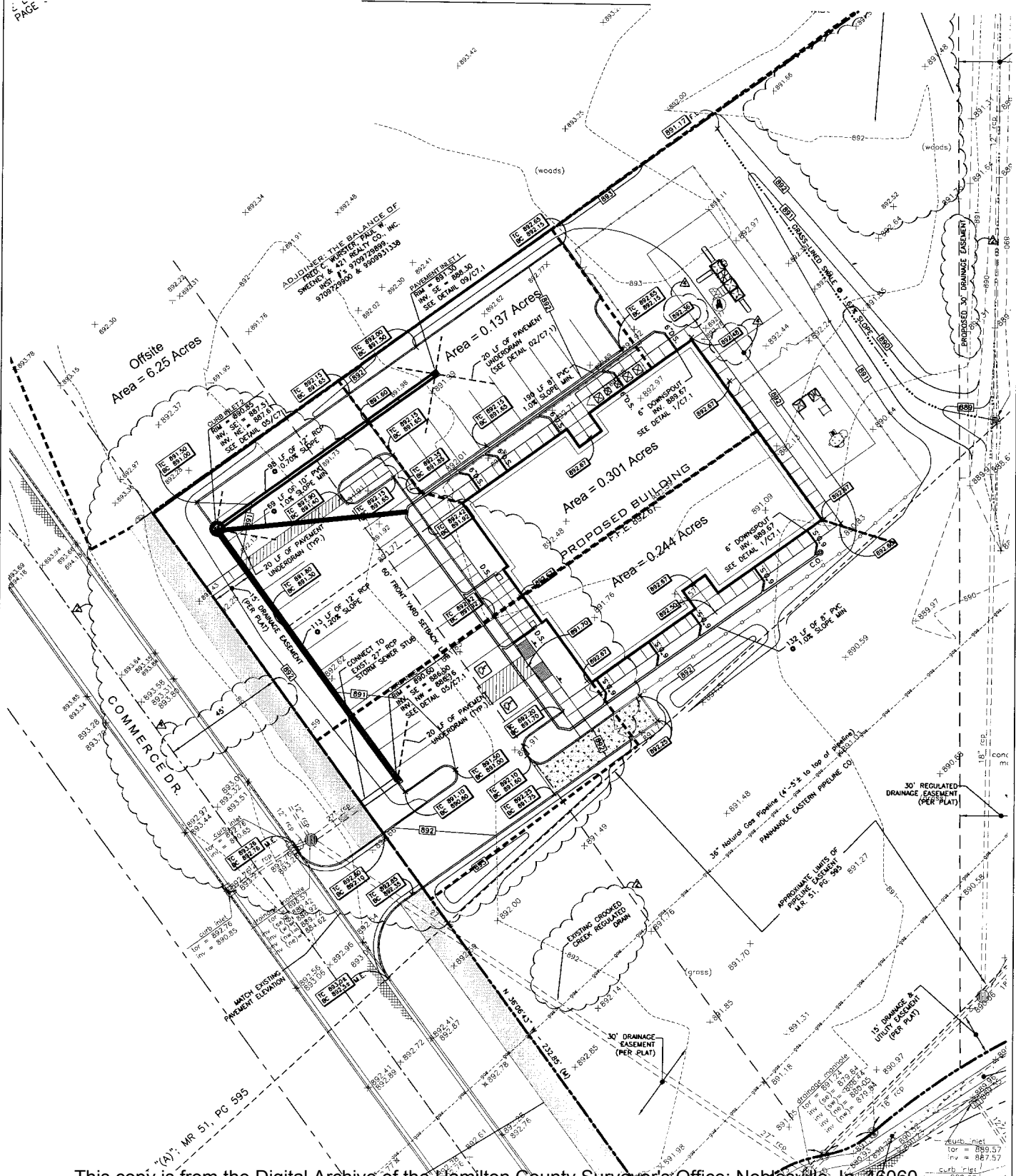| STR.	TO STR.	LENGTH (FT)	c	AREA INCREM. (acres)	AREA CUM (acres)	cA INCREM	cA cum cA	t_c (min)	t_{cum} (min)	i (in/hr)	Q (CFS)	PIPE DIAMETER (inches)	PIPE SLOPE (%)	PIPE CAPACITY (CFS)	VELOCITY (ft/sec)	TRAVEL TIME (MIN)	RIM ELEV. UPSTRM	RIM ELEV. DWNSTRM	INVERT ELEV. UPSTRM	INVERT ELEV. DWNSTRM	UPSTRM COVER (ft)	DWNSTRM COVER (ft)
1	2	98	0.85	0.14	0.14	0.12	0.12	5.00	5.00	6.98	0.81	12	0.70	2.98	3.80	0.43	891.30	890.85	888.30	887.61	1.83	2.07
2	3	113	0.85	0.30	0.44	0.26	0.37	5.00	5.43	6.82	2.54	12	1.20	3.90	4.97	0.38	890.85	890.60	887.51	886.16	2.17	3.28
3	EXIST	39	0.85	0.24	0.68	0.21	0.58	5.00	5.81	6.68	3.87	27	0.35	18.32	4.61		890.60	893.57	886.16	884.62	1.92	

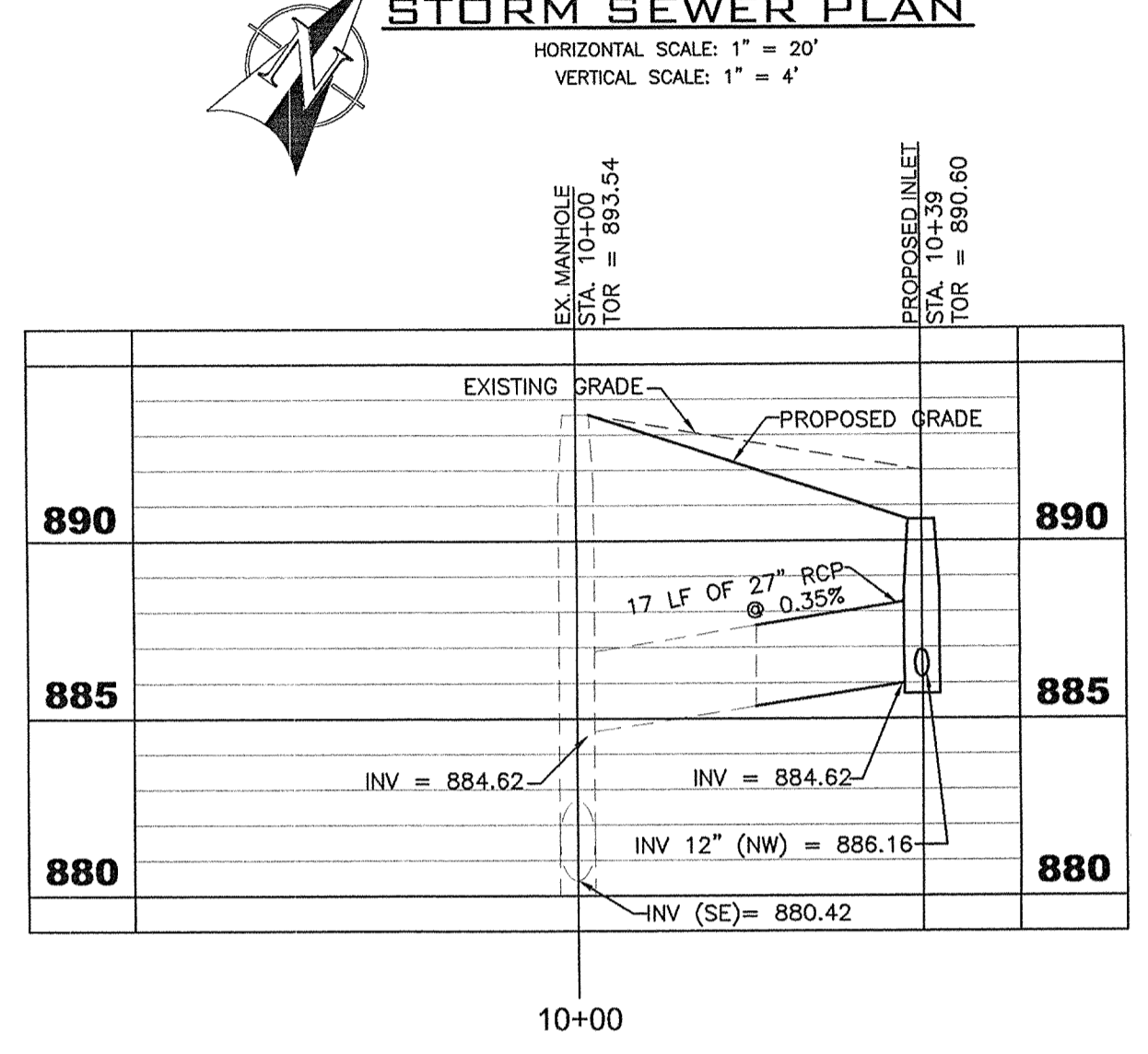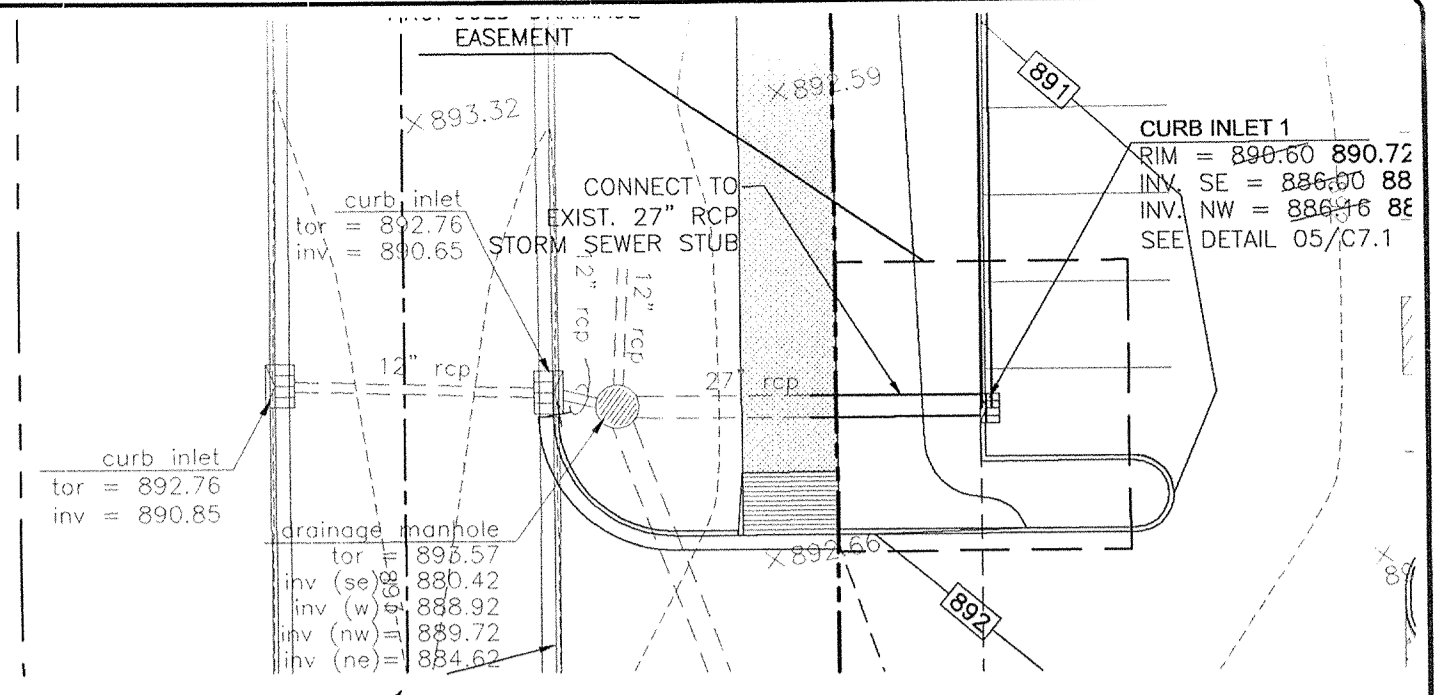NORTH
Scale: 1" = 50'
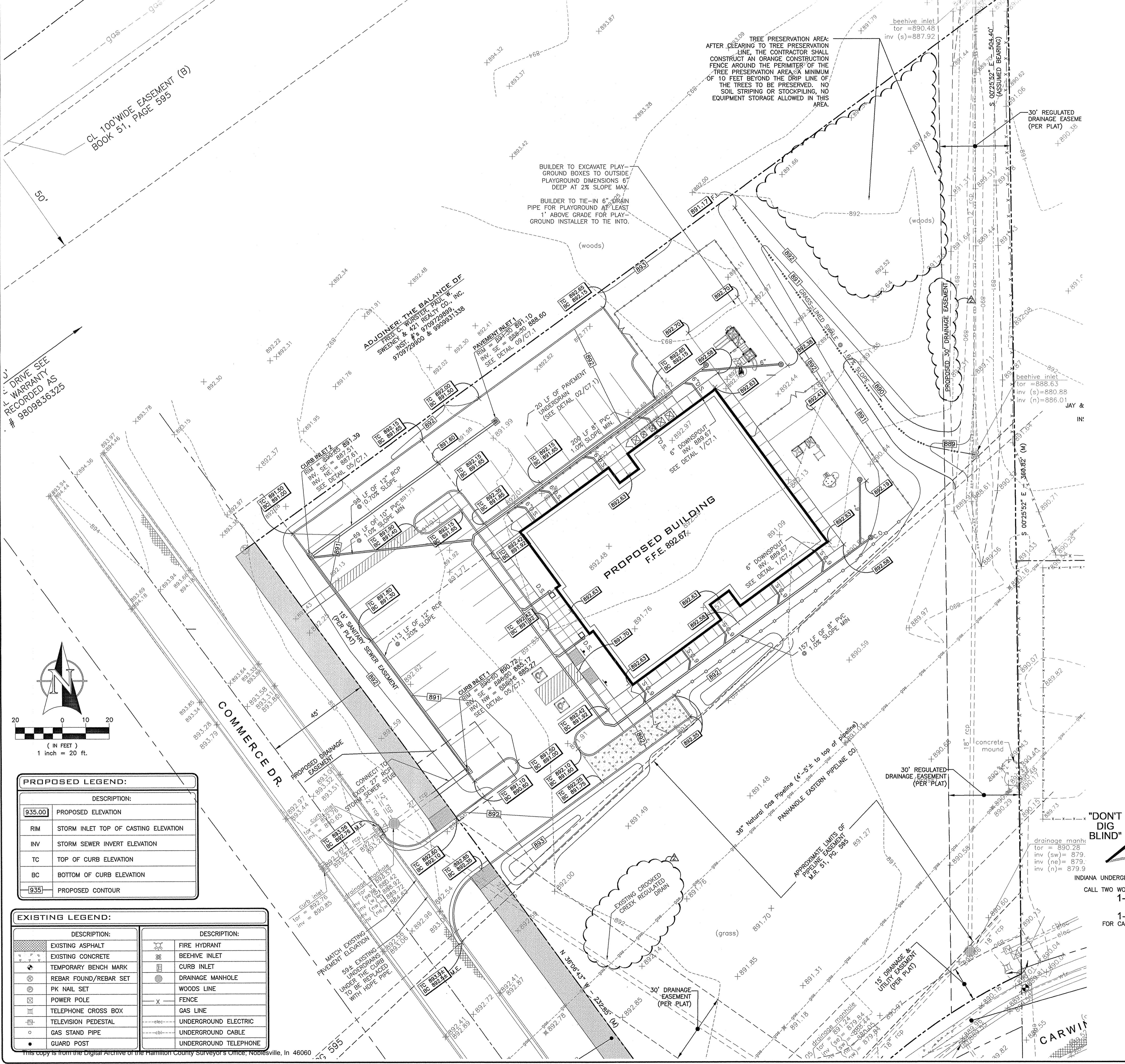
The Goddard School
10445 Commerce Drive
Carmel, Indiana

CIVIL DESIGNS, LLP
2415 Directors Row, Suite E
Indianapolis, Indiana 46241
Phone: 317-244-1968

BASIN SUMMARY MAP

Offsite
Area = 6.25 Acres

Area = 0.137 Acres

Area = 0.301 Acres

PROPOSED BUILDING

Area = 0.244 Acres

COMMERCE DR.

STORM SEWER PLAN

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 4'

STORM SEWER PROFILE

HORIZONTAL SCALE: 1" = 20'
VERTICAL SCALE: 1" = 4'

17 LF OF 27" RCP @ 0.35%

INV = 884.62
INV = 884.62
INV 12" (NW) = 886.16
INV (SE) = 880.42

10+00

GRADING NOTES:

1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS IN THE FIELD PRIOR TO COMMENCEMENT OF CONSTRUCTION. ANY DISCREPANCIES FOUND SHALL BE REPORTED TO THE OWNER OR THE OWNERS REPRESENTATIVE.

2. CONTRACTOR SHALL NOTIFY ALL UTILITY COMPANIES 72 HOURS PRIOR TO COMMENCEMENT OF CONSTRUCTION TO VERIFY WHETHER UTILITIES ARE PRESENT ON-SITE. CONTRACTOR SHALL NOTIFY UTILITY COMPANY WHEN EXCAVATING OVER OR AROUND EXISTING UTILITIES SO A UTILITY REPRESENTATIVE CAN BE PRESENT TO OBSERVE AND INSTRUCT DURING CONSTRUCTION.

3. ALL WORK PERFORMED BY THE CONTRACTOR SHALL CONFORM TO LOCAL, STATE AND FEDERAL REGULATIONS.

4. DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED TO THE SPECIFICATIONS OF THE UTILITY COMPANY AT NO ADDITIONAL EXPENSE TO THE OWNER.

5. FLOW LINE ELEVATIONS SHOWN ARE AT THE ENDS OF THE PIPES.

6. ALL PROPOSED SPOT ELEVATIONS SHOWN AT THE ELEVATIONS FOR FINAL PAVEMENT AND FINAL GRADE ELEVATIONS.

7. AFTER STRIPPING TOPSOIL, PROOFROLL SUBGRADE WITH A MEDIUM WEIGHT ROLLER TO DETERMINE LOCATIONS OF UNSUITABLE MATERIAL. GEOTECHNICAL ENGINEERING FIRM PROVIDING TESTING SERVICES SHALL MAKE DETERMINATION FOR THE REMOVAL OF ANY UNSUITABLE MATERIAL AND/OR THE NEED FOR UNDERDRAINS WITHIN THE PROPOSED PARKING AREAS ARE THE TIME OF CONSTRUCTION.

8. PROVIDE POSITIVE DRAINAGE WITHOUT PONDING OR "BIRD BATHS" IN ALL AREAS. CONTRACTOR SHALL TEST FOR LOW SPOTS AND CORRECT DEFICIENCIES AT NO ADDITIONAL COST TO OWNER.

9. PROVIDE 6" SUMP IN ALL INLETS.

BENCHMARKS:

U.S.G.S. BM
BRONZE DISK IN A CONCRETE POST, 1000'± NORTH OF 106th STREET AND 50'± EAST OF THE CENTERLINE OF MICHIGAN ROAD. STAMPED S 78 1946.
ELEV. = 900.78

CIVIL DESIGNS TBM-S-78-1
CUT "□" ON SOUTHWEST CORNER OF TRAFFIC STRAIN POST ON THE SOUTHWEST CORNER OF 106th STREET & U.S. 421
ELEV. = 896.33

CIVIL DESIGNS TBM #500
RAILROAD SPIKE FOUND IN THE WEST SIDE OF A POWERPOLE ON SOUTH SIDE OF 106th STREET, FIRST POLE WEST OF COMMERCE DRIVE.
ELEV. = 897.26

STORM SEWER STRUCTURE DATA TABLE:

CURB INLET 1	CURB INLET 2	PAVEMENT INLET 1
RIM = 890.60	RIM = 890.85	RIM = 891.30
INV. SE = 886.00	INV. SE = 887.51	INV. SE = 888.30
INV. NW = 886.16		INV. NE = 887.61
SEE DETAIL 05/C7.1	SEE DETAIL 05/C7.1	SEE DETAIL 09/C7.1

CAUTION

THE LOCATIONS OF ALL EXISTING UNDERGROUND UTILITIES SHOWN ON THIS DRAWING ARE BASED ON ABOVE GROUND EVIDENCE OR INFORMATION GATHERED DURING THE FIELD SURVEY PORTION OF THIS PROJECT. AS SUCH, THIS INFORMATION IS SPECULATIVE IN NATURE ONLY AND SHOULD NOT BE CONSTRUED AS FACT. THERE MAY ALSO BE OTHER EXISTING UNDERGROUND UTILITIES FOR WHICH NO ABOVE GROUND EVIDENCE WAS OBSERVED. THE EXACT LOCATIONS OF THE UNDERGROUND UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO THE START OF ANY AND ALL CONSTRUCTION.

"DON'T DIG BLIND"   "IT'S THE LAW"   "HOLEY MOLEY SEZ:"

INDIANA UNDERGROUND PROTECTION SERVICE INC.
CALL TWO WORKING DAYS BEFORE YOU DIG.
1-800-382-5544 CALL TOLL FREE
1-800-428-5200 FOR CALLS OUTSIDE OF INDIANA

UTILITY STATEMENT:

The underground utilities shown have been located from field survey information and existing drawings. The surveyor makes no guarantees that the underground utilities comprise all such utilities in the area, either in-service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although the surveyor does certify that they are located as accurately as possible from information available. The surveyor has not physically located the underground utilities.
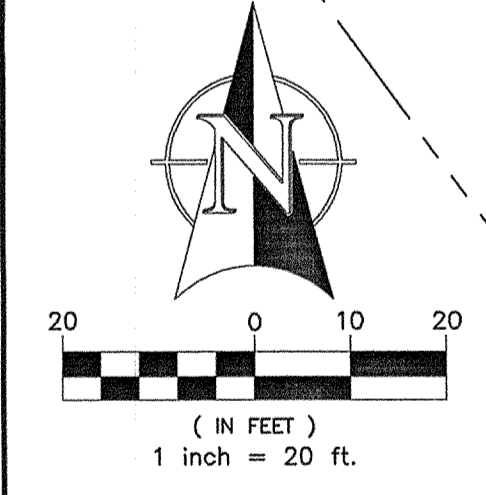
PROPOSED LEGEND:

	DESCRIPTION
935.00	PROPOSED ELEVATION
RIM	STORM INLET TOP OF CASTING ELEVATION
INV	STORM SEWER INVERT ELEVATION
TC	TOP OF CURB ELEVATION
BC	BOTTOM OF CURB ELEVATION
935	PROPOSED CONTOUR

EXISTING LEGEND:

DESCRIPTION		DESCRIPTION	
EXISTING ASPHALT		FIRE HYDRANT	
EXISTING CONCRETE		BEEHIVE INLET	
TEMPORARY BENCH MARK		CURB INLET	
REBAR FOUND/REBAR SET		DRAINAGE MANHOLE	
PK NAIL SET		WOODS LINE	
POWER POLE		FENCE	
TELEPHONE CROSS BOX		GAS LINE	
TELEVISION PEDESTAL		UNDERGROUND ELECTRIC	
GAS STAND PIPE		UNDERGROUND CABLE	
GUARD POST		UNDERGROUND TELEPHONE	

PROPOSED BUILDING
F.F.E. 892.67±

TREE PRESERVATION AREA: AFTER CLEARING TO TREE PRESERVATION LINE, THE CONTRACTOR SHALL CONSTRUCT AN ORANGE CONSTRUCTION FENCE AROUND THE PERIMETER OF THE TREE PRESERVATION AREA A MINIMUM OF 10 FEET BEYOND THE DRIP LINE OF THE TREES TO BE PRESERVED. NO SOIL STRIPING OR STOCKPILING, NO EQUIPMENT STORAGE ALLOWED IN THIS AREA.

BUILDER TO EXCAVATE PLAY-GROUND BOXES TO OUTSIDE PLAYGROUND DIMENSIONS 6" DEEP AT 2% SLOPE MAX.

BUILDER TO TIE-IN 6" DRAIN PIPE FOR PLAYGROUND AT LEAST 1' ABOVE GRADE FOR PLAYGROUND INSTALLER TO TIE INTO.

(IN FEET)
1 inch = 20 ft.

ASPENGOLD, LLC
5310 EAST MAIN STREET, SUITE 207
COLUMBUS, OHIO 43213

CIVIL DESIGNS, LLP
2415 DIRECTORS ROW, SUITE E   PHONE: 317-244-1968
INDIANAPOLIS, INDIANA 46241   FAX: 317-244-1969

JAMES M. PECK
No PE910337
REGISTERED
PROFESSIONAL ENGINEER
STATE OF INDIANA

DATE: 03/31/03

GODDARD SCHOOL
10445 COMMERCE DRIVE
CARMEL, INDIANA

GRADING PLAN

DWN BY:	ACH
CHKD. BY:	JMP
SCALE:	1"=20'
DATE:	02-23-2004

PROJECT NUMBER
02-123

DESIGN PHASE
CONSTRUCTION

PLAN NUMBER
C3.0
SHEET   OF

REV. 2 – 04/29/03 – REVISIONS PER HAMILTON COUNTY SURVEYORS OFFICE
REV. 4 – 12/29/03 – REVISIONS FOR R/W CHANGE & DRAINAGE EASEMENTS
REV. 5 – 02/23/04 – REVISIONS PER HAMILTON COUNTY SURVEYORS OFFICE
REV. 7 – 04/27/04 – REVISIONS PER OWNER'S REVIEW
REV. 9 – 06/03/04 – REVISIONS PER HAMILTON COUNTY HIGHWAY DEPARTMENT