

# SITE PLAN APPROVAL

07-11-07 REVISIONS

# Faith Evangelical Presbyterian Church

Rochester Hills, MI

City File Number #05-039

MERRITT  
McPHERSON  
CIESLAK, PC

ARCHITECTURE PLANNING

SOB C.D.	12-15-06	REVISIONS	06-08-07
SITE PLAN APPROVAL	01-11-07	REVISIONS	07-10-07
REVISIONS	04-12-07		

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- L-2 LANDSCAPE PLAN
- L-3 IRRIGATION

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- SPA-2 CONCEPTUAL SITE PLAN - PHASE II

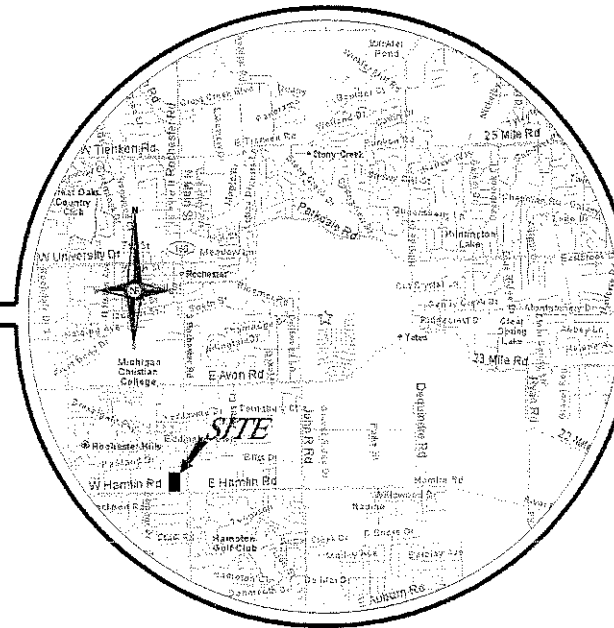
- PP-1 PHOTOMETRICS PLAN

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PLANNING SHEET  
SEE THE ARCHITECT  
PRELIMINARY ASB TITLE

City of Rochester Hills,  
Oakland County, Michigan  
**PRELIMINARY SITE PLAN PACKAGE**  
Prepared For  
**MERRITT, McPHERSON & CIESLAK, P.C.**

PART OF THE S.E. 1/4 OF SECTION 22,  
T. 3 NORTH, R. 11 EAST,



LOCATION MAP

**LEGAL DESCRIPTION** (SUPPLIED BY: JERABSON & ASSOCIATES)

**PARCEL A (15-22-451-010):**

A PARCEL OF LAND LOCATED IN THE SOUTHEAST 1/4 OF SECTION 22, TOWN 3 NORTH, RANGE 11 EAST, ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS: BEGINNING AT THE SOUTHWEST CORNER OF LOT 8 OF "HAMLIN PLACE FARMS" AS RECORDED IN LIBER 15, PAGE 34, OAKLAND COUNTY RECORDS; THENCE, ALONG WEST LINE OF LOT 8 OF SAID PLAT, N 01°12'37" E 1007.34 FEET TO THE NORTH LINE OF SAID LOT 8; THENCE, ALONG SAID NORTH LINE OF LOT 8, S 89°06'00" E 216.70 FEET; THENCE, S 01°12'36" WEST 1008.18 FEET TO THE NORTH RIGHT-OF-WAY LINE OF HAMLIN ROAD (SO-CALLED); THENCE, ALONG SAID RIGHT-OF-WAY LINE, N 88°52'38" W (PREVIOUSLY RECORDED AS N 88°54'00" W) 216.70 FEET TO THE POINT OF BEGINNING. SAID PARCEL CONTAINS 5.01 ACRES OF LAND MORE OR LESS.

**PARCEL B (15-22-451-009):**

A PARCEL OF LAND LOCATED IN THE SOUTHEAST 1/4 OF SECTION 22, TOWN 3 NORTH, RANGE 11 EAST, ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS: COMMENCING AT THE SOUTHWEST CORNER OF LOT 8 OF "HAMLIN PLACE FARMS" AS RECORDED IN LIBER 15, PAGE 34, OAKLAND COUNTY RECORDS; THENCE S 88°52'38" E (PREVIOUSLY RECORDED AS S 88°54'00" E) 216.70 FEET TO THE BEGINNING; THENCE N 01°12'36" E 1008.18 FEET TO THE NORTH LINE OF LOT 7 OF SAID PLAT; THENCE S 89°06'00" E 100.05 FEET; THENCE S 01°12'36" W 1008.57 FEET TO NORTH RIGHT-OF-WAY LINE OF HAMLIN ROAD (SO CALLED); THENCE N 88°52'38" W (PREVIOUSLY RECORDED AS N 88°54'00" W) 100.05 FEET TO THE POINT OF BEGINNING. SAID PARCEL CONTAINS 2.32 ACRES OF LAND MORE OR LESS.

**COMBINED DESCRIPTION:**

THE WEST HALF OF LOT 7 AND ALL OF LOT 8, "HAMLIN PLACE FARMS", AS RECORDED IN LIBER 15 OF PLATS, PAGE 34, OAKLAND COUNTY RECORDS, BEING A PART OF THE SOUTHEAST QUARTER OF SECTION 22, TOWN 3 NORTH, RANGE 11 EAST, CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN, MORE PARTICULARLY DESCRIBED AS: COMMENCING AT THE SOUTHEAST CORNER OF SECTION 22, AS REMONUMENTED (RECORDED IN LIBER 14992, PAGE 94, OAKLAND COUNTY RECORDS); THENCE ALONG THE SOUTH LINE OF SECTION 22, AS REMONUMENTED, NORTH 88°40'13" WEST 1147.32 FEET TO A POINT, SAID POINT BEING SOUTH 88°40'13" EAST 1471.42 FEET FROM THE SOUTH QUARTER CORNER OF SECTION 22, AS REMONUMENTED (RECORDED IN LIBER 14992, PAGE 88, OAKLAND COUNTY RECORDS); THENCE NORTH 01°12'37" EAST 26.34 FEET TO THE SOUTHWEST CORNER OF LOT 8 AND TO THE POINT OF BEGINNING; THENCE ALONG THE WEST LINE OF LOT 8, NORTH 01°12'37" EAST 1007.34 FEET; THENCE ALONG THE NORTH LINE OF LOTS 7 AND 8, SOUTH 89°06'00" EAST 316.75 FEET; THENCE SOUTH 01°12'36" WEST 1008.57 FEET; THENCE ALONG THE NORTH LINE OF HAMLIN ROAD, AS PLATTED, NORTH 88°52'38" WEST 316.75 FEET TO THE POINT OF BEGINNING. CONTAINS 7.33 ACRES. SUBJECT TO EASEMENTS AND RESTRICTIONS OF RECORD.

**SHEET INDEX**

- SP1.....Cover Sheet
- SP2.....Boundary and Topographic Survey
- SP3.....General Site Plan
- SP4.....Engineering Site Plan
- SP5.....Storm Water Management Plan
- SP6.....Profiles
- SP7.....Tax Parcel, Drainage & Wetland Map
- SP8.....Hamlin Road Improvement Plan
- .....City of Rochester Hills Detail Sheet

Project Name  
**FAITH EVANGELICAL  
PRESBYTERIAN CHURCH**

**Architect**

Merritt McPherson Cieslak, PC  
33750 Freedom Road  
Farmington, MI 48335  
Contact: Ron Cieslak  
Phone: (248) 476-3614  
Fax: (248) 476-1374

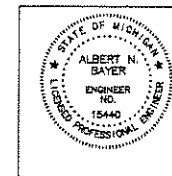
**Property Owner**

Fatih Evangelical  
Presbyterian Church  
180 Hamlin Road  
Rochester Hills, MI

**Landscape Architect**

E.J. Kleckner & Associates, Inc.  
7031 Orchard Lake Road  
Suite 304  
West Bloomfield, MI 48322  
Contact: Eron Kleckner  
Phone: (248) 932-5788  
Fax: (248) 737-3048

Prepared By:



**NF NOWAK & FRAUS**

Consulting Engineers • Land Surveyors • Land Planners

46777 Woodward Avenue  
Pontiac, Michigan 48342

Tel. (248) 332-7931  
Fax. (248) 332-8257

Issue Date: JANUARY 11th, 2007  
Revision Date: JULY 11th, 2007

City File No. 05-039

N/F JOB # E559

**LEGAL DESCRIPTION (SUPPLIED BY JEKABSON & ASSOCIATES)**

**PARCEL A:**  
 A PARCEL OF LAND LOCATED IN THE SOUTHEAST 1/4 OF SECTION 22, TOWN 3 NORTH, RANGE 11 EAST, AVON TOWNSHIP, OAKLAND COUNTY, MICHIGAN, DESCRIBED AS: BEGINNING AT THE SOUTHWEST CORNER OF LOT 8 OF "HAMLIN PLACE FARMS" AS RECORDED IN LIBER 15, PAGE 34, OAKLAND COUNTY RECORDS; THENCE, ALONG WEST LINE OF LOT 8 OF SAID PLAT, N 01°12'37" E 1007.34 FEET TO THE NORTH LINE OF SAID LOT 8; THENCE, ALONG SAID NORTH LINE OF LOT 8, S 89°08'00" E 216.70 FEET; THENCE, S 01°12'36" WEST 1008.18 FEET TO THE NORTH RIGHT-OF-WAY LINE OF HAMLIN ROAD (SO-CALLED); THENCE, ALONG SAID RIGHT-OF-WAY LINE, N 88°32'38" W (PREVIOUSLY RECORDED AS N 88°34'00" W) 216.70 FEET TO THE POINT OF BEGINNING. SAID PARCEL CONTAINS 5.01 ACRES OF LAND MORE OR LESS.

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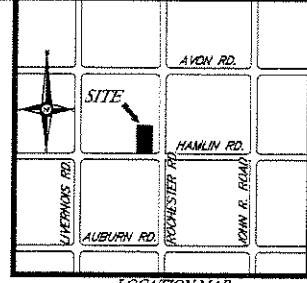
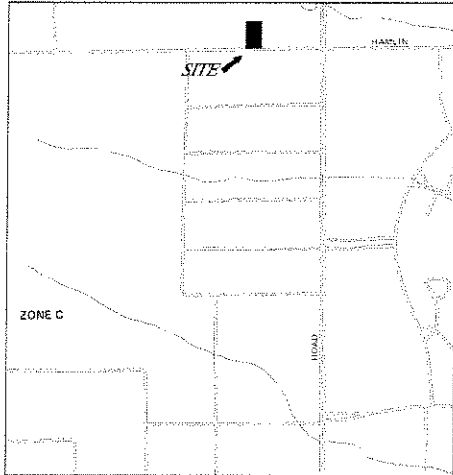
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**FLOOD PLAIN DATA**

- FIRM - FLOOD INSURANCE RATE MAP
- COMMUNITY-PANEL NUMBER 260471 0020 B.
- MAP REVISED: SEPTEMBER 12, 1994
- PANEL 20 OF 20
- ZONE C: AREA OF MINOR FLOODING

**TOPO NOTES**

- ALL ELEVATIONS ARE EXISTING ELEVATIONS.
- UTILITY LOCATIONS WERE OBTAINED FROM MUNICIPAL OFFICIALS AND RECORDS OF UTILITY COMPANIES, AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, OR EXACTNESS OF LOCATION.
- THIS SURVEY MAY NOT SHOW ALL EASEMENTS OF RECORD, UNLESS AN UPDATED TITLE POLICY IS FURNISHED TO THE SURVEYOR BY THE OWNER.
- BOUNDARY AND TOPOGRAPHIC INFORMATION PROVIDED BY JEKABSON & ASSOCIATES, P.C., JOB # 05-03-013, DATED MARCH 27, 2008.



**NOWAK & FRAUS**

Consulting Engineers  
 Land Surveyors  
 Land Planners

46777 Woodward Avenue  
 Pontiac, Michigan 48342  
 Tel. (248) 332-7931  
 Fax. (248) 332-8257

**PROJECT:**  
 Faith Evangelical  
 Presbyterian Church

**CLIENT:**  
 Merritt, McPherson &  
 Cieslak, P.C.

Contact: Ron Cieslak  
 248-476-3614

**PROJECT LOCATION:**  
 Part of the SE 1/4 of  
 Section 22, T. 3 North,  
 R. 11 E., Rochester Hills,  
 Oakland County, Michigan

SEAL

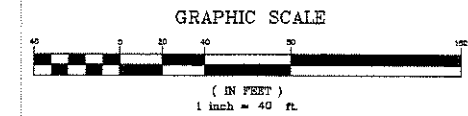
**DATE/REVISION:**  
 04/12/07 SPA REV. #1  
 05/01/07 ISSUE FOR PERMIT  
 06/08/07 SPA REVISIONS

**SHEET:**  
 Topographic/  
 Boundary Survey

**DRAWN BY:**  
 S. Salter  
**DESIGNED BY:**  
**APPROVED BY:**

**DATE:**  
 01-11-07  
**SCALE:**  
 1" = 40'  
**N/F-JOB NO.:**

**SHEET NO.:**  
 E559  
 SP-2

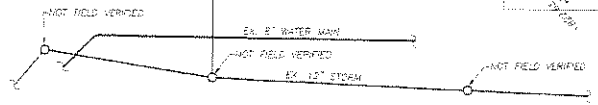


WOOD ROAD TER HILLS, MI 476-013  
 WOOD ROAD TER HILLS, MI 476-012  
 WOOD ROAD TER HILLS, MI 476-011  
 WOOD ROAD TER HILLS, MI 476-010  
 WOOD ROAD TER HILLS, MI 476-009  
 WOOD ROAD TER HILLS, MI 476-008  
 WOOD ROAD TER HILLS, MI 476-007  
 WOOD ROAD TER HILLS, MI 476-006  
 WOOD ROAD TER HILLS, MI 476-005

HAMLIN ELEMENTARY SCHOOL  
 R-3  
 270 HAMLIN ROAD  
 ROCHESTER HILLS, MI  
 15-22-451-020

R-3  
 222 HAMLIN ROAD  
 ROCHESTER HILLS, MI  
 15-22-451-021

18" WATER MAIN (FURNISH) (R-150.81)  
 12" SANITARY SEWER (R-150.81)  
 12" WATER MAIN (FURNISH) (R-150.81)  
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 12" WATER MAIN (FURNISH) (R-150.81)  
 12" SANITARY SEWER (R-150.81)



**STORM SEWER NOTES**

All workmanship and materials shall be in accordance with the current standards and specifications of the City of Rochester Hills. The Township standard notes, details and specifications shall be incorporated as part of these plans.

All storm sewer trenches under or within three (3) feet of existing or proposed pavement shall be backfilled with ADOT Class II material (sand) and be machine compacted to a minimum of 95% of the material's maximum density. Pavement shall include parking lots, drive approaches, curb & gutter and adjacent sidewalks.

All storm sewer pipe shall be installed on class "B" bedding or better unless otherwise indicated on the plans.

Storm sewer shall be of the type, size & class designation indicated on the plans and shall be installed at the proposed line and grade indicated.

All storm sewer pipe shall be reinforced concrete pipe conforming to ASTM specification C-76, CL IV.

All manholes, catch basins, inlet, rear yard drain frames and covers shall be as indicated on the plans in accordance with city standards.

The Contractor shall notify MISS DIG (1-800-482-7171) a minimum of three (3) working days prior to the start of construction.

Exact grades and inverts of proposed storm sewer are to be checked with the field engineer prior and during installation. The Contractor shall immediately notify the Design Engineer of any plan inconsistency and/or utility conflicts.

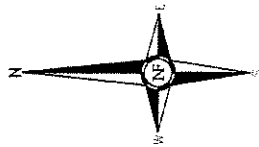
All storm sewer pipe joints shall be "premium joint" modified grooved tongue, (M.G.T.) with synthetic rubber gaskets conforming to ASTM specification C-443 & C-361 unless otherwise indicated on the plans. Alternate joint connection may be standard grooved tongue with cold mastic (DeWitt #10 joint compound or equal).

Factory manufactured precast tee sections shall be used for roof drains and/or sump pump leads and laterals where indicated on the plans. Blind tee connections into storm sewer will not be permitted by breaking pipe wall.

The underground site Contractor shall install all storm sewer building tees to within five (5) feet of proposed building.

Grouted rip rap shall be installed at the ends of all culverts and end sections. Grouted rip rap shall likewise be installed at outlet points to detention and sedimentation facilities. The minimum width of the rip rap shall be twice the outside diameter of the pipe. The rip rap shall extend from the bottom of the slope to the pipe invert.

The Contractor shall pay for and secure all necessary permits and likewise arrange for all site inspection.



**GENERAL NOTES**

- 1.) ALL CONSTRUCTION WITHIN THE STREET RIGHT-OF-WAY SHALL BE ACCOMPLISHED UNDER THE INSPECTION OF THE CITY OF ROCHESTER HILLS.
- 2.) THE CONTRACTOR SHALL NOTIFY THE ENGINEER, THE CITY, AND ALL PUBLIC UTILITIES AT LEAST 48 HOURS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL NOT BEGIN WORK UNTIL ALL NECESSARY PERMITS ARE SECURED.
- 3.) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY AND ALL DAMAGES TO EXISTING UTILITIES CAUSED BY HIS OPERATIONS WHETHER OR NOT SHOWN ON THE PLANS. CONTRACTOR SHALL VERIFY LOCATIONS WITH ALL UTILITY COMPANIES BEFORE STARTING HIS OPERATION. ALL EXISTING UTILITIES AS SHOWN INDICATE APPROXIMATE LOCATIONS ONLY. AS DISCLOSED BY RECORDS AND NO GUARANTEE IS MADE EITHER AS TO COMPLETENESS OR ACCURACY.
- 4.) WHERE TWO UTILITIES CROSS, THE DEEPER UTILITY SHALL BE BACKFILLED WITH APPROVED POROUS MATERIAL TAMPED IN 12" LAYERS TO THE UNDERSIDE OF THE HIGHER UTILITY. AN 18" MINIMUM SAND CUSHION SHALL BE REQUIRED BETWEEN UTILITIES. STRUCTURES, OR CONNECTING TO NEW SEWERS SHALL BE ADEQUATELY BRACED AND SUPPORTED BY POURING 2,500 PSI CONCRETE FROM PIPE TO UNDISTURBED GROUND.
- 5.) ALL STREET SIGNS, MAILBOXES, DRIVEWAYS, CATCH BASINS, ETC. REMOVED, SHALL BE REPLACED AS FOUND. ALL PAVEMENTS, ROADWAYS, WALKWAYS, DRIVES, STRUCTURES, LAWN, ETC. DAMAGED DURING CONSTRUCTION MUST BE REPLACED OR REPAIRED BY THE CONTRACTOR.
- 6.) WHERE UNSTABLE GROUND CONDITIONS ARE ENCOUNTERED, SLAG OR STONE BEDDING SHALL BE USED AS DIRECTED BY THE ENGINEER IN ORDER TO PROVIDE A STABLE FOUNDATION FOR PIPE AND MANHOLES. ALL PIPES ENTERING OR LEAVING MANHOLES, STRUCTURES, OR CONNECTING TO NEW SEWERS SHALL BE ADEQUATELY BRACED AND SUPPORTED BY POURING 2,500 PSI CONCRETE FROM PIPE TO UNDISTURBED GROUND.
- 7.) ALL SURFACE STRUCTURES SUCH AS MANHOLES, CATCH BASINS, GATE WELLS, AND FIRE HYDRANTS SHALL BE SET TO GRADE AS FURNISHED BY THE PROPRIETORS ENGINEER.
- 8.) PROVISIONS FOR CONSTRUCTING TEMPORARY DETOURS DURING CONSTRUCTION IS SUBJECT TO APPROVAL BY THE CITY. ALL TRAFFIC HAZARDS CREATED BY THE CONSTRUCTION WITHIN THE RIGHT-OF-WAY SHALL BE PROPERLY BARRICADED, SIGNED AND LIGHTED IN ACCORDANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES AND AS APPROVED BY THE CITY OF ROCHESTER HILLS.
- 9.) CLEANUP SHALL CLOSELY FOLLOW CONSTRUCTION.
- 10.) ALL UTILITY TRENCHES LOCATED BENEATH OR WITHIN A 1 HORIZONTAL TO 1 VERTICAL INFLUENCE OF EXISTING OR FUTURE PAVEMENTS, INCLUDING ROADS, DRIVES, SIDEWALKS, PATHWAYS, OR PARKING AREAS SHALL BE BACKFILLED WITH COMPACTED SAND BACKFILL.
- 11.) PROPOSED GRINDER PUMP AND FORCE MAIN WILL BE PRIVATELY MAINTAINED.

**WATER MAIN NOTES**

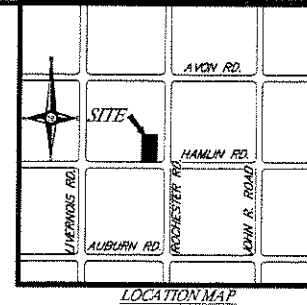
1. All workmanship and materials shall be in accordance with the current standards of City of Rochester Hills.
  2. The contractor shall notify the inspection department of the city at least 48 hours prior to the start of any water main construction.
  3. When it is necessary to shutdown existing water mains, the contractor shall contact the City Department of Public Works 24 hours prior to the shutdown and he shall cooperate with the City forces in closing the necessary gate valves and in notifying affected properties.
  4. Hydrant elevations and gate well top elevations shall be set to existing ground elevations unless otherwise directed by the engineer.
  5. All water mains shall be constructed with a minimum cover of six (6) feet below finish grade, unless otherwise indicated on the plans.
  6. Connections to existing water mains shall not be made until after successful completion of bacteriological and pressure tests.
  7. All bends, tees, miscellaneous fittings, thrust blocks and sand backfill to be incidental.
  8. The contractor will be paid for horizontal distances only.
  9. All valves are to be left-hand open.
  10. There shall be 3/4" inch corporation stops installed on both sides of each gate valve.
  11. Two brass wedges shall be installed at each joint on cast iron and ductile iron pipes.
  12. Goggles wrap, or an approved equal, shall be used around the water main at gateway walls.
  13. Where water mains must dip to pass under a storm sewer or sanitary sewer, the sections which are deeper than normal shall be kept to a minimum length by the use of 45°, 22 1/2°, or 11 1/4° vertical bends properly anchored.
  14. Hydrants shall be painted "SUNRISE" red (Rustoleum 7726 or approved equal).
  15. Size of iron pipe shall be of a class conforming to the following table:
- | Nominal Diameter (Inches) | Ductile Class | Cast Iron Class |
|---------------------------|---------------|-----------------|
| 8                         | 54            | 24              |
| 10                        | 54            | 28              |
| 12                        | 54            | 36              |
| 16                        | 54            | 48              |
16. Water mains shall be sterilized and bacteria tested in accordance with the Michigan Department of Public Health standards.
  17. Water mains shall be pressure tested at 150 psi test pressure in accordance with township requirements.
  18. All plugs, tees, bends, fire hydrants and dead ends shall be restrained by concrete thrust blocks.
  19. All City of Rochester Hills Water Main Notes shall supersede any of the above notes.

**NOTES**

1. THIS SITE IS ZONED R-3 SINGLE FAMILY RESIDENTIAL DISTRICT AND THIS CHURCH DEVELOPMENT IS COMPATIBLE WITH THIS ZONING.
2. THE DEVELOPER SHALL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES OF THE CITY OF ROCHESTER HILLS, OAKLAND COUNTY AND THE STATE OF MICHIGAN.
3. ALL UNITS WILL BE SERVED FROM EXISTING PUBLIC SANITARY SEWER AND WATER MAIN LOCATED ALONG WEST HAMLIN ROAD.
4. SOIL EROSION CONTROL WILL BE PROVIDED PER CITY OF ROCHESTER HILLS AND OAKLAND COUNTY DRAIN COMMISSION REQUIREMENTS.
5. PUBLIC UTILITIES (TELEPHONE, ELECTRIC, GAS AND OTHERS) WILL BE BURIED UNDERGROUND.
6. STORM DRAINS WILL BE PROVIDED PER CITY AND OAKLAND COUNTY DRAIN COMMISSION REQUIREMENTS. A DETENTION BASIN / SEDIMENT BASINS WILL BE INSTALLED TO CONTROL STORM WATER DISCHARGE TO AGRICULTURAL RUN-OFF AND PROVIDE SEDIMENT CONTROL.
7. TREES THROUGHOUT THE SITE WILL BE REMOVED AT THE OF DEVELOPMENT ONLY THOSE IN AREAS WHERE NECESSARY TO INSTALL UTILITIES. TREES TO REMAIN WILL BE PROTECTED BY SNOW FENCING, INSTALLED PRIOR TO START OF CONSTRUCTION (SEE TREE PRESERVATION PLAN).
8. ALL SIGNAGE WILL MEET CITY REQUIREMENTS AND WILL REQUIRE A SEPARATE PERMIT FROM THE BUILDING DEPARTMENT.

**WETLAND USE PERMIT NOTES**

1. A PRIOR WRITTEN NOTICE IS GIVEN TO THE CITY ENGINEER AND WRITTEN CONSENT IS OBTAINED FROM THE CITY MAYOR PRIOR TO WORK COMMENCING.
2. THE WORK IS TO BE CONDUCTED USING BEST MANAGEMENT PRACTICES (BMPs) TO ENSURE FLOW AND CIRCULATION PATTERNS AND CHEMICAL AND BIOLOGICAL CHARACTERISTICS OF WETLANDS ARE NOT IMPACTED.
3. ALL IMPACTS TO THE AQUATIC ENVIRONMENT ARE MINIMIZED.



**NOWAK & FRAUS**

Consulting Engineers  
Land Surveyors  
Land Planners

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Tel. (248) 332-7931  
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**FIRE DEPARTMENT NOTES**

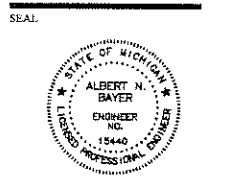
1. OPEN BURNING IS NOT PERMITTED INCLUDING THE BURNING OF TRASH, DEBRIS, OR LAND CLEARING MATERIALS. OPEN BURNING FOR WARMING OF SAND AND/OR WATER FOR THE PREPARATION OF MORTAR SHALL BE WITHIN CITY OF ROCHESTER HILLS BURN PERMIT GUIDELINES. CONTACT ROCHESTER HILLS FIRE DEPARTMENT FOR PERMIT INFORMATION. FIRE PREVENTION ORDINANCE CHAPTER 58, SEC. 307.6.2 AND 307.6.2.3.
2. FIRE LINES SHALL BE DESIGNATED BY THE FIRE CODE OFFICIAL, AND SHALL BE CONSPICUOUSLY POSTED ON BOTH SIDES OF THE FIRE LANE, WITH FIRE LANE SIGNS, SPACED NOT MORE THAN 100 FEET APART, AND STOPPING, STANDING, PARKING, FIRE LANE, AND IN CONFORMANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
3. CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH IFC 2006 CHAPTER 14.
4. A "NOX" KEY SYSTEM SHALL BE INSTALLED, IN A LOCATION APPROVED BY THE FIRE CODE OFFICIAL. ORDERING INFORMATION IS AVAILABLE FROM THE FIRE DEPARTMENT.

PROJECT  
Faith Evangelical  
Presbyterian Church

CLIENT  
Merritt, McPherson &  
Cieslak, P.C.

Contact: Ron Cieslak  
248-476-3614

PROJECT LOCATION  
Part of the SE 1/4 of  
Section 22, T. 3 North,  
R. 11 E., Rochester Hills,  
Oakland County, Michigan

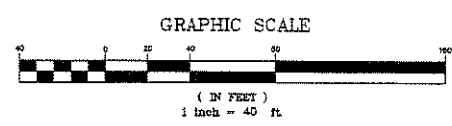
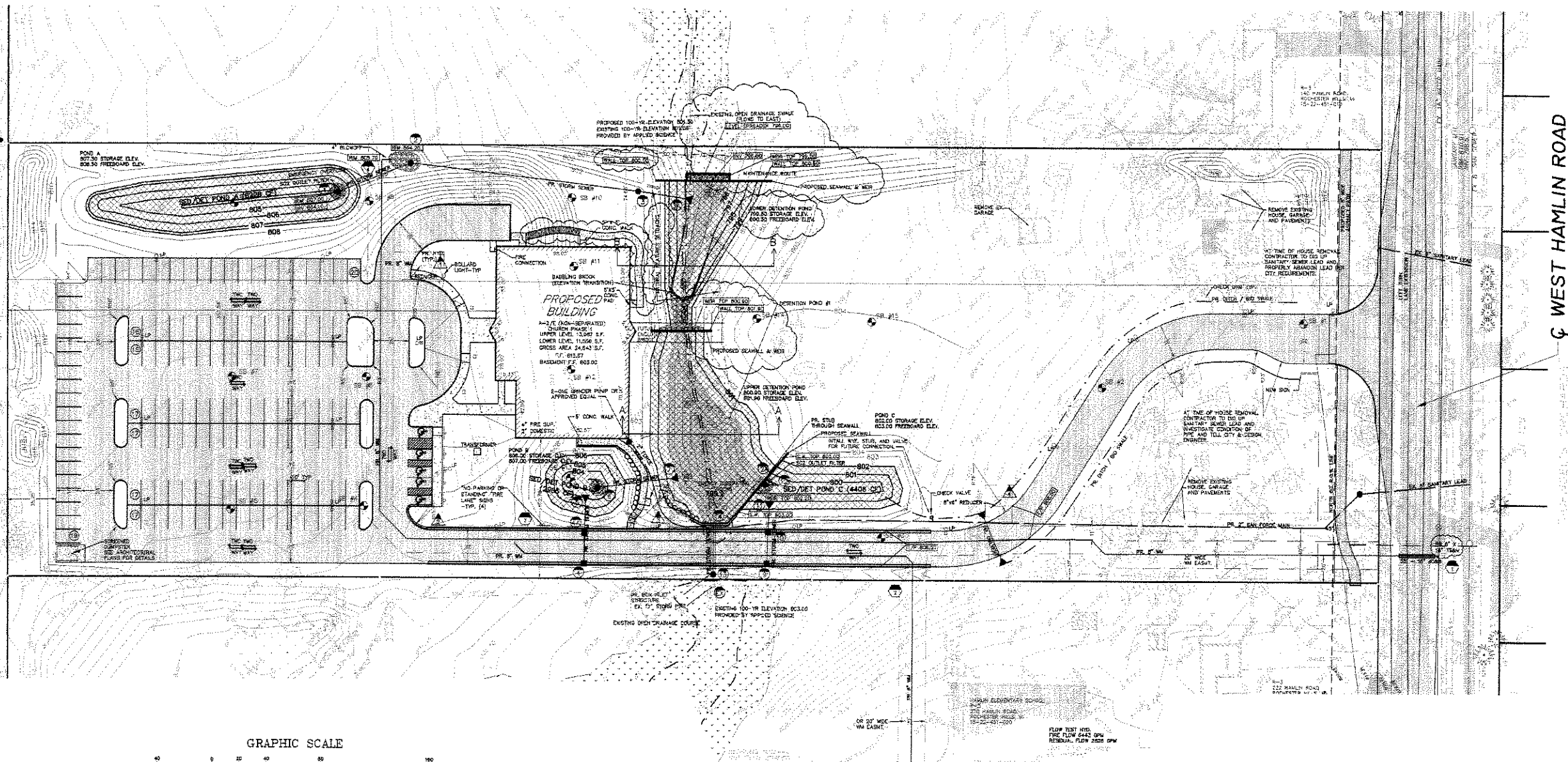


DATE: REVISION  
04/12/07 SPA REV. #1  
05/01/07 ISSUE FOR PERMIT  
06/08/07 SPA REVISIONS  
07/11/07 SPA REVISIONS

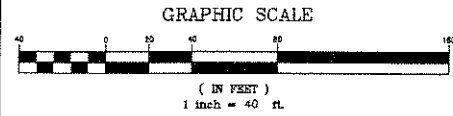
SHEET  
General Site Plan

DRAWN BY:  
S. Salter  
DESIGNED BY:  
S. Salter  
APPROVED BY:  
A. Bayer  
DATE:  
01-11-07  
SCALE:  
1" = 40'  
N/F JOB NO.

SHEET NO.  
E559  
SP-3







Faith Church  
Detention Pond  
10 YEAR DETENTION BASIN CALCULATION (I.E. WITH OUTLET)

Q Allowable	Q Actual
7.33	7.33
3.00	3.00
7.33	7.33
0.70	0.27
1.47 C.F.S.	1.97 C.F.S.
0.29	0.39
126.56 MINUTES	106.82
7.322 C.F./ACRE	6.670 C.F./ACRE
37.567 C.F./REDD	35.252 C.F./REDD
1.67 C.F.S.	
0.20 S.F.	
5.29 INCHES	
796.00	796.00
NA	NA
801.00	801.00
800.31	800.31
8 INCHES	8 INCHES
796.25	796.25
4.06 FEET	4.06 FEET
37.567 C.F.	35.232 C.F.
40.608 C.F.	41.905 C.F.
3.338 C.F.	3.694 C.F.
7.12 HOURS	4.58 HOURS

Calculated number based on flow thru proposed outlet pipe.  
 \*\* Based on head in pond above center line of proposed outlet pipe using the Orifice Formula.  
 \*\*\* Based on proposed outlet pipe.

SEDIMENT BASIN CALCULATIONS - OAKLAND COUNTY METHOD

**POND "A"**

CONTRIBUTING ACREAGE: 2.400 ACRES  
 C RUNOFF COEFFICIENT: 0.64 IMPERVIOUSNESS  
 VOLUME REQUIRED: 6.645 CUBIC FEET  
 V1 TOTAL VOLUME AVAILABLE: 11.760 CUBIC FEET  
 DEPTH OF STORAGE: 3.00 FEET  
 MEDIAN SURFACE AREA: 3,520.07 SQUARE FEET  
 ORIFICE AREA REQUIRED: 0.0157 INCHES  
 NUMBER OF 1" DIA. HOLES PROVIDED: 1  
 TIME TO DRAIN: 81.7 HOURS

SEDIMENT BASIN CALCULATIONS - OAKLAND COUNTY METHOD

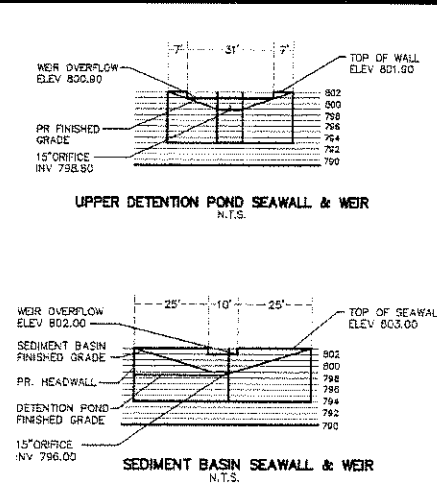
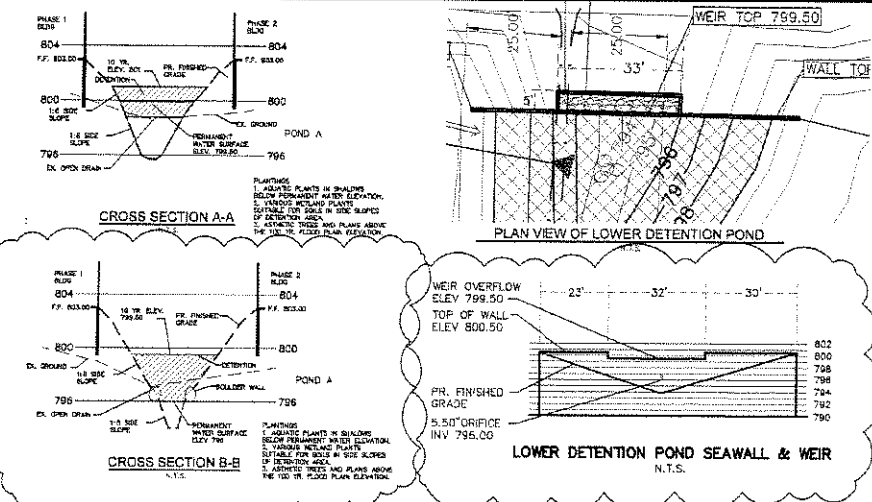
**POND "B"**

CONTRIBUTING ACREAGE: 0.850 ACRES  
 C RUNOFF COEFFICIENT: 0.70 IMPERVIOUSNESS  
 TOTAL VOLUME REQUIRED: 2.570 CUBIC FEET  
 V1 TOTAL VOLUME AVAILABLE: 2.975 CUBIC FEET  
 DEPTH OF STORAGE: 3.00 FEET  
 MEDIAN SURFACE AREA: 991.67 SQUARE FEET  
 ORIFICE AREA REQUIRED: 0.0040 INCHES  
 NUMBER OF 0.5" DIA. HOLES PROVIDED: 1  
 TIME TO DRAIN: 41.3 HOURS

SEDIMENT BASIN CALCULATIONS - OAKLAND COUNTY METHOD

**POND "C"**

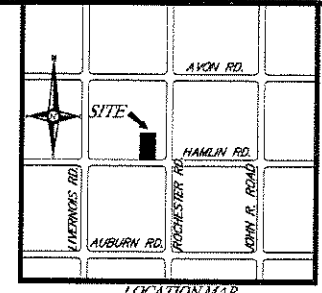
CONTRIBUTING ACREAGE: 2.80 ACRES  
 C RUNOFF COEFFICIENT: 0.36 IMPERVIOUSNESS  
 TOTAL VOLUME REQUIRED: 4.204 CUBIC FEET  
 V1 TOTAL VOLUME AVAILABLE: 4.408 CUBIC FEET  
 DEPTH OF STORAGE: 3.00 FEET  
 MEDIAN SURFACE AREA: 1,402.33 SQUARE FEET  
 ORIFICE AREA REQUIRED: 0.0050 INCHES  
 NUMBER OF 1.0" DIA. HOLES PROVIDED: 1  
 TIME TO DRAIN: 30.6 HOURS



DRAINAGE AREA CALCULATIONS

Location	Fractional Method	Mapping Eq.	Hydraulic Gradient
1	1.00	1.024	15.00
2	0.64	1.045	15.10
3	0.07	1.037	15.03
4	0.53	1.037	15.03
5	0.69	1.036	15.16
6	0.55	1.029	15.24
7	0.84	1.041	15.00
8	0.07	1.037	15.03
9	0.06	1.032	15.09
10	1.07	1.035	15.00
11	0.63	1.031	15.00
12	0.63	1.031	15.00
13	0.53	1.036	15.14
14	0.53	1.036	15.14

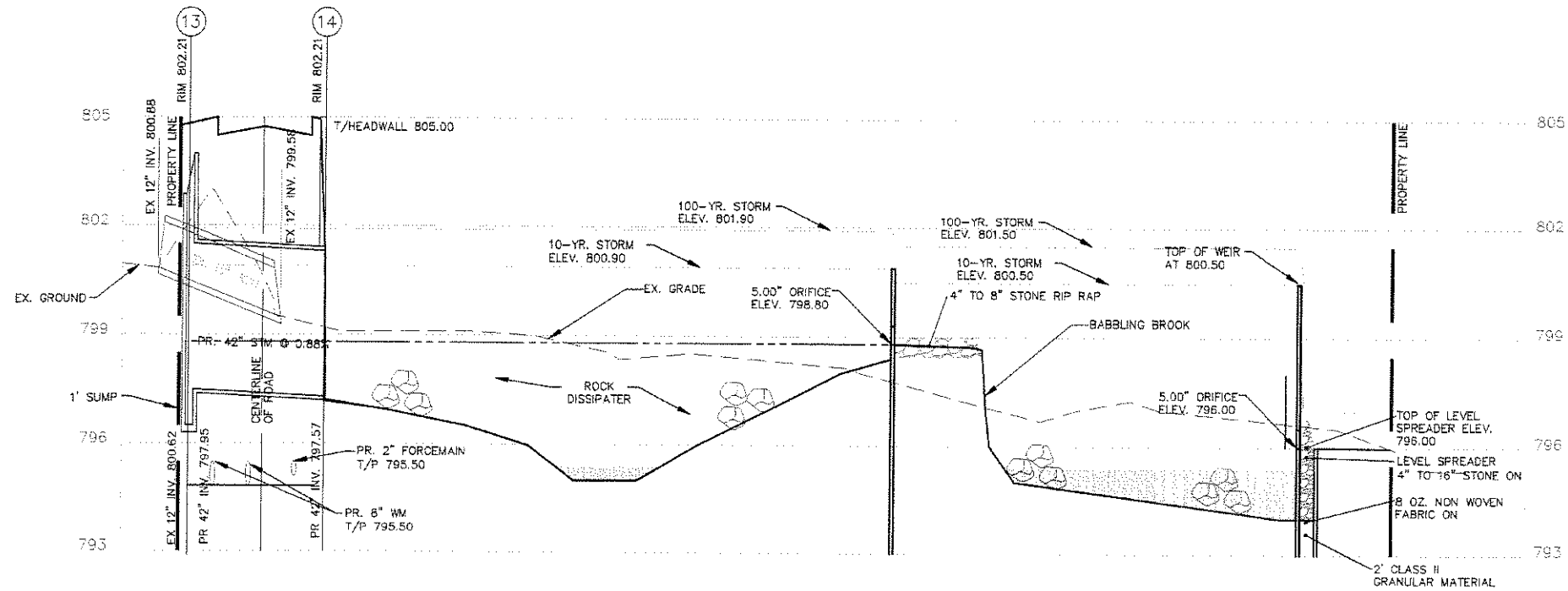
42" PIPE IS DESIGNED TO HANDLE 100-YR FLOW BASED ON CALCULATIONS PROVIDED BY APPLIED SCIENCE.



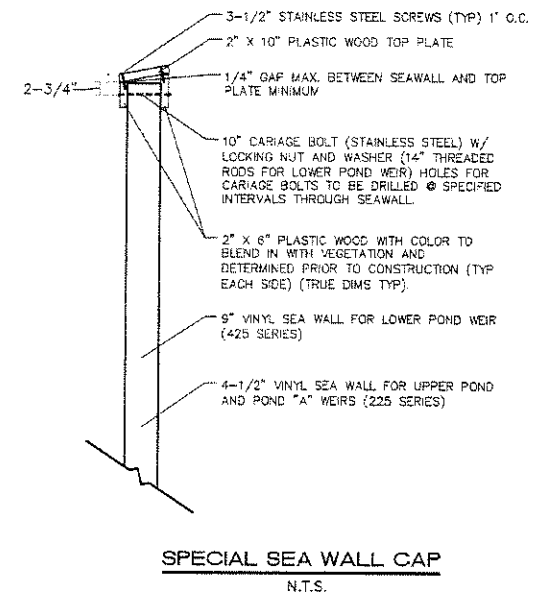
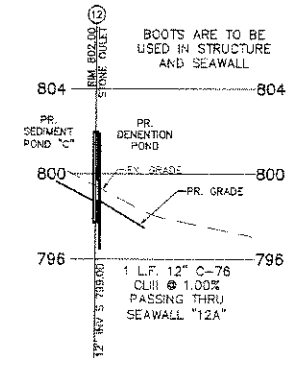
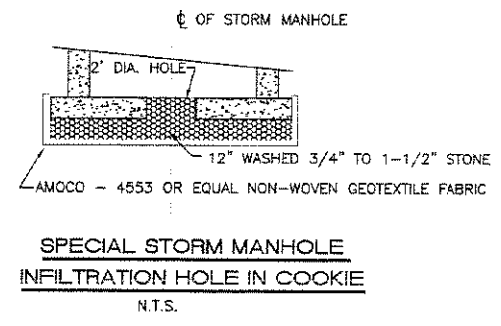
NOTES  
 1. ALL COSTS ASSOCIATED WITH CONSTRUCTION OF THE LEVEL SPREADER, RIP RAP, AND ALL OTHER ASSOCIATED ITEMS NECESSARY TO CONSTRUCT ARE TO BE INCLUDED IN THE UNIT BID PRICE FOR LEVEL SPREADER COMPLETE.

POND CALCULATIONS

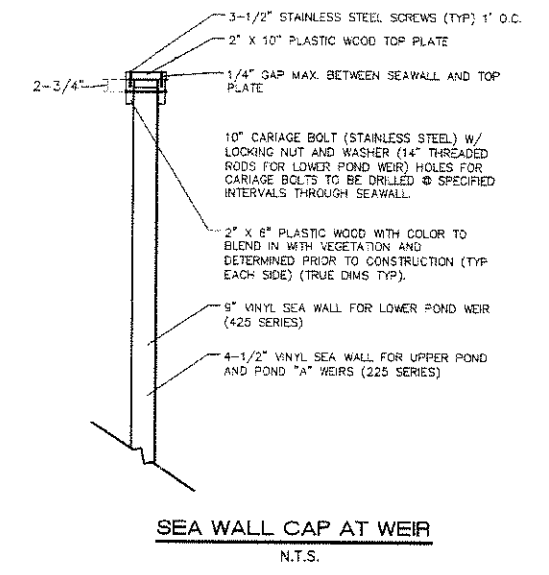
UPPER DETENTION POND	LOWER DETENTION POND	SEDIMENT DETENTION POND "A"	SEDIMENT DETENTION POND "B"	SEDIMENT DETENTION POND "C"	10-YEAR VOL. REQ. FOR SITE	10-YEAR DETENTION PROVIDED	EXTRA VOL. PROVIDED FOR SITE
800.0	800.0	807.33	806.33	802.33	37,567 C.F.	43,542 C.F.	6,375 C.F. (17%)
800	800	807	806	802			
798	798	805	804	800			
796	796	803	802	798			
795	795	802	801	797			
794	794	801	800	796			
793	793	800	799	795			
792	792	799	798	794			
791	791	798	797	793			
790	790	797	796	792			
789	789	796	795	791			
788	788	795	794	790			
787	787	794	793	789			
786	786	793	792	788			
785	785	792	791	787			
784	784	791	790	786			
783	783	790	789	785			
782	782	789	788	784			
781	781	788	787	783			
780	780	787	786	782			
779	779	786	785	781			
778	778	785	784	780			
777	777	784	783	779			
776	776	783	782	778			
775	775	782	781	777			
774	774	781	780	776			
773	773	780	779	775			
772	772	779	778	774			
771	771	778	777	773			
770	770	777	776	772			
769	769	776	775	771			
768	768	775	774	770			
767	767	774	773	769			
766	766	773	772	768			
765	765	772	771	767			
764	764	771	770	766			
763	763	770	769	765			
762	762	769	768	764			
761	761	768	767	763			
760	760	767	766	762			
759	759	766	765	761			
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757	757	764	763	759			
756	756	763	762	758			
755	755	762	761	757			
754	754	761	760	756			
753	753	760	759	755			
752	752	759	758	754			
751	751	758	757	753			
750	750	757	756	752			
749	749	756	755	751			
748	748	755	754	750			
747	747	754	753	749			
746	746	753	752	748			
745	745	752	751	747			
744	744	751	750	746			
743	743	750	749	745			
742	742	749	748	744			
741	741	748	747	743			
740	740	747	746	742			
739	739	746	745	741			
738	738	745	744	740			
737	737	744	743	739			
736	736	743	742	738			
735	735	742	741	737			
734	734	741	740	736			
733	733	740	739	735			
732	732	739	738	734			
731	731	738	737	733			
730	730	737	736	732			
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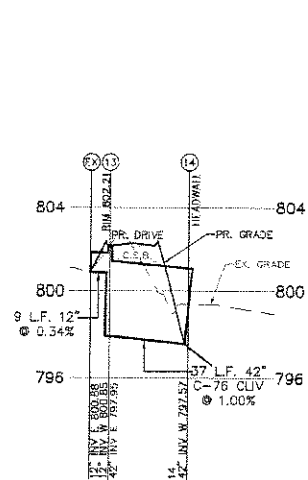
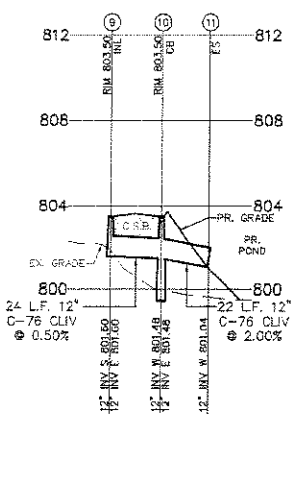
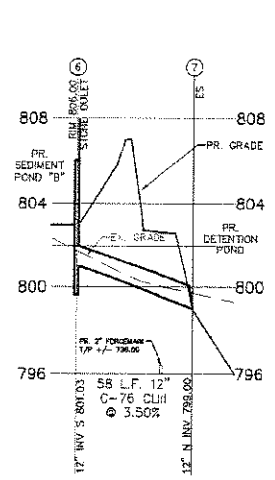
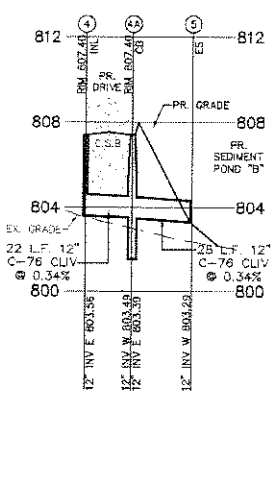
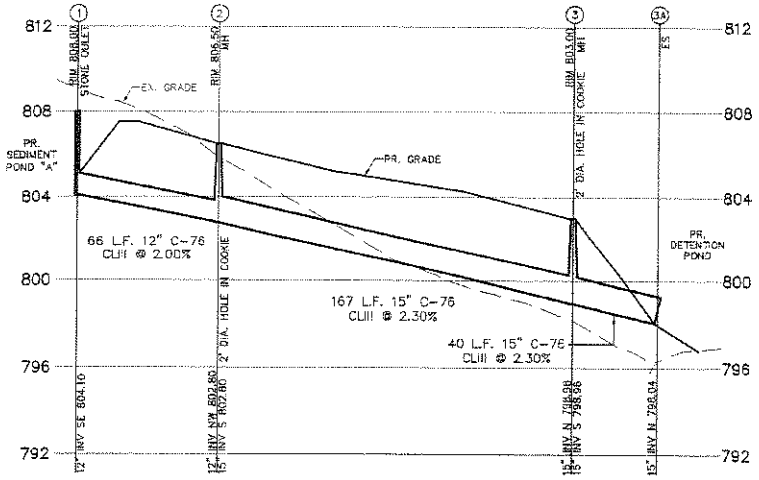
DETENTION POND 1 CROSS SECTION  
SCALE: H: 1"=20' V: 1"=3'



SPECIAL SEA WALL CAP  
N.T.S.



SEA WALL CAP AT WEIR  
N.T.S.



STORM PROFILES  
SCALE: H: 1"=40' V: 1"=4'

**NOWAK & FRAUS**

Consulting Engineers  
Land Surveyors  
Land Planners

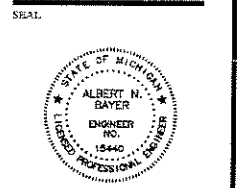
46777 Woodward Avenue  
Pontiac, Michigan 48342  
Tel. (248) 332-7931  
Fax. (248) 332-8257

PROJECT  
Faith Evangelical  
Presbyterian Church

CLIENT  
Merritt, McPherson &  
Cieslak, P.C.

Contact: Ron Cieslak  
248-476-3614

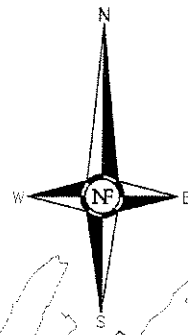
PROJECT LOCATION  
Part of the SE 1/4 of  
Section 22, T. 3 North,  
R. 11 E., Rochester Hills,  
Oakland County, Michigan



DATE/REVISION
04/12/07 SPA REV. #1
05/01/07 ISSUE FOR PERMIT
05/25/07 ISSUE FOR BIDS
06/08/07 SPA REVISIONS
07/11/07 SPA REVISIONS

SHEET  
Profiles

DRAWN BY:  
S. Salter  
DESIGNED BY:  
S. Salter  
APPROVED BY:  
A. Bayer  
DATE:  
01-11-07  
SCALE:  
Varies  
JOB NO.



# NOWAK & FRAUS

Consulting Engineers  
Land Surveyors  
Land Planners

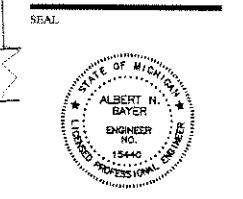
46777 Woodward Avenue  
Pontiac, Michigan 48342  
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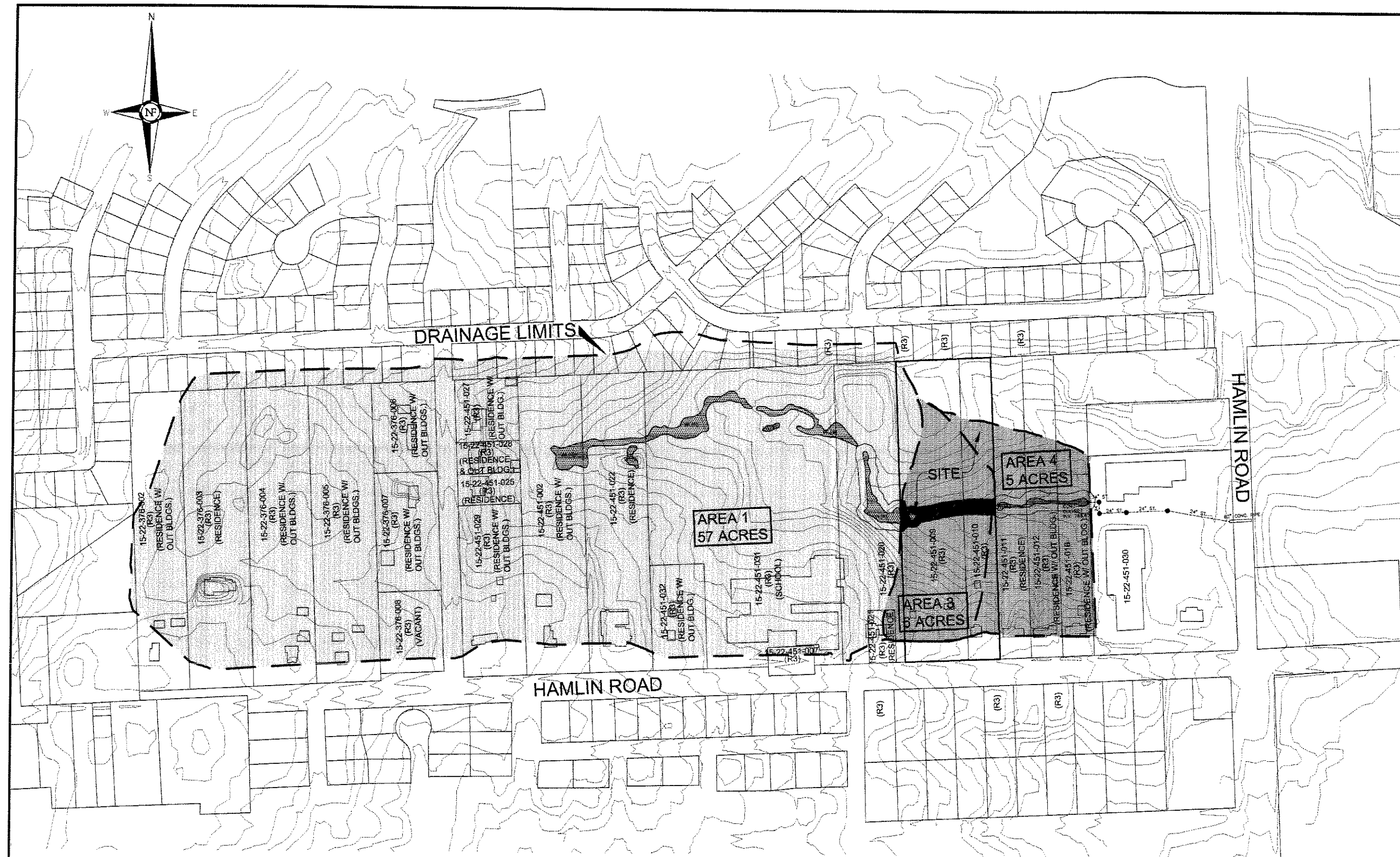
PROJECT LOCATION  
Part of the SE 1/4 of  
Section 22, T. 3 North,  
R. 11 E., Rochester Hills,  
Oakland County, Michigan



DATE/REVISION  
04/12/07 SPA REV. #1  
05/01/07 ISSUE FOR PERMIT  
06/08/07 SPA REVISIONS  
07/11/07 SPA REVISIONS

SHEET  
Tax Parcel, Drainage  
& Wetland Map

DRAWN BY:  
S. Saiter  
DESIGNED BY:  
S. Saiter  
APPROVED BY:  
A. Bayer  
DATE:  
03-27-07  
SCALE:  
1" = 150'  
N/F JOB NO.  
E559  
SHEET NO.  
SP7



### WETLAND USE PERMIT NOTES

1. A PRIOR WRITTEN NOTICE IS GIVEN TO THE CITY ENGINEER AND WRITTEN CONSENT IS OBTAINED FROM THE CITY MAYOR PRIOR TO WORK COMMENCING.
2. THE WORK IS TO CONDUCTED USING BEST MANAGEMENT PRACTICES (BMP) TO ENSURE FLOW AND CIRCULATION PATTERNS AND CHEMICAL AND BIOLOGICAL CHARACTERISTICS OF WETLANDS ARE NOT IMPACTED.
3. ALL IMPACTS TO THE AQUATIC ENVIRONMENT ARE MINIMIZED.

### NATURAL FEATURES SETBACK TABLE

IMPACTED NATURAL FEATURES	SQUARE FEET	ACRES
WETLAND T <sup>1</sup>	13,282	0.42
TOTAL	13,282	0.42

APPROXIMATELY 320 LINEAL FEET OF DIRECT AND PERMANENT NATURAL FEATURES SETBACK IMPACTS WILL RESULT FROM THE PROPOSED CONSTRUCTION.

### WETLAND TABLE

WETLAND AREA	SQUARE FEET	ACRES
W(A)	7,893	0.18
W(B)	9,200	0.27
W(C)	25,343	0.58
W(D)	1,734	0.04
W(E)	845	0.02
W(F)	5,057	0.12
TOTAL	50,060	1.15

\* WETLANDS DO NOT MEET STATE REGULATORY CRITERIA

IMPACTED WETLANDS	SQUARE FEET	ACRES
F <sup>1</sup> - CITY REGULATED	1,008	0.023
TOTAL	1,008	0.023

LEGEND  
ZONE R3 - RESIDENTIAL ONE FAMILY

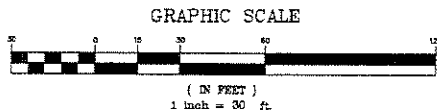
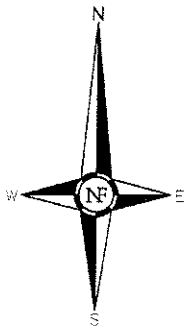
WETLAND LEGEND	
	WETLANDS
	IMPACTED WETLANDS

### GENERAL NOTES

1. THE INTENT OF THIS PLAN SHEET IS TO SHOW THE OVERALL DRAINAGE DISTRICT WITH CONTOUR INFORMATION, SUB DRAINAGE DISTRICTS, WETLANDS WITHIN THE DISTRICT, AND GENERAL DRAINAGE INFORMATION. THE INFORMATION PROVIDED HAS BEEN OBTAINED IN PART FROM DATA SUPPLIED BY THE CITY REFERENCED MATERIALS AND FROM THE HYDROLOGIC AND HYDRAULIC STUDY PREPARED BY APPLIED SCIENCE, INC DATED APRIL 10, 2007.

City File No. 05-039





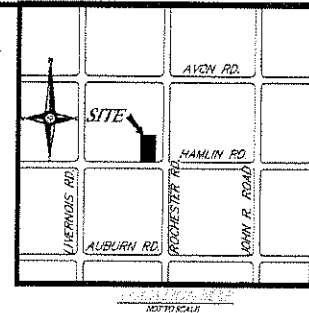
**SURVEY NOTE**  
 THIS SURVEY HAS BEEN PROVIDED BY JOHNSON & ASSOCIATES, P.C. FOR THE PURPOSES OF DESIGN BY NOWAK & FRAUS, P.L.L.C. NOWAK & FRAUS, P.L.L.C. HAS NOT FIELD VERIFIED THE INFORMATION CONTAINED ON THIS SHEET. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ORIGINAL SURVEYOR.

NO GUARANTEE IS MADE BY NOWAK & FRAUS, P.L.L.C. FOR THE ACCURACY OF THE DATA CONTAINED ON THIS SURVEY.

**TOPOGRAPHIC SURVEY NOTES**  
 ALL ELEVATIONS ARE EXISTING ELEVATIONS, UNLESS OTHERWISE NOTED.

UTILITY LOCATIONS WERE OBTAINED FROM MUNICIPAL OFFICIALS AND RECORDS OF UTILITY COMPANIES, AND NO GUARANTEE CAN BE MADE TO THE COMPLETENESS, OR EXACTNESS OF LOCATION.

THIS SURVEY MAY NOT SHOW ALL EASEMENTS OF RECORD UNLESS AN UPDATED TITLE POLICY IS FURNISHED TO THE SURVEYOR BY THE OWNER.



# NOWAK & FRAUS

Consulting Engineers  
 Land Surveyors  
 Land Planners

46777 Woodward Avenue  
 Pontiac, Michigan 48342  
 Tel. (248) 332-7931  
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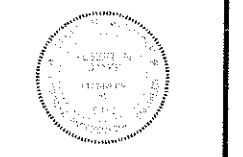
**PROJECT**  
 Faith Evangelical  
 Presbyterian Church

**CLIENT**  
 Merritt, McPherson &  
 Cieslak, P.C.

Contact: Ron Cieslak  
 248-476-3614

**PROJECT LOCATION**  
 Part of the SE 1/4 of  
 Section 22, T. 3 North,  
 R. 11 E., Rochester Hills,  
 Oakland County, Michigan

SEAL



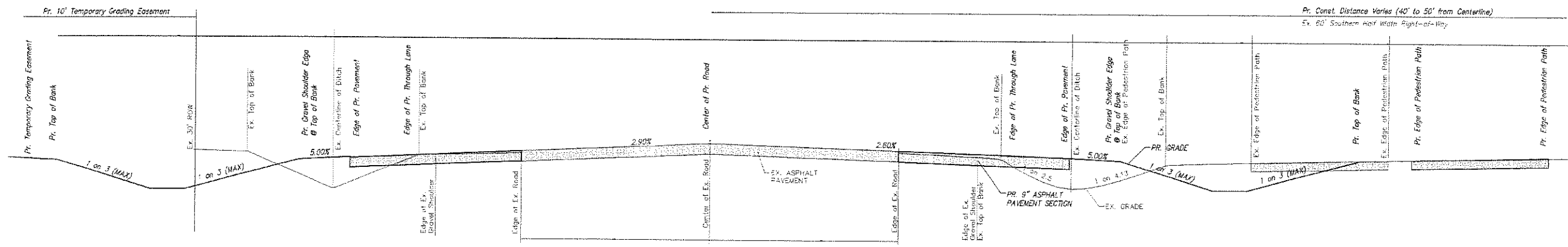
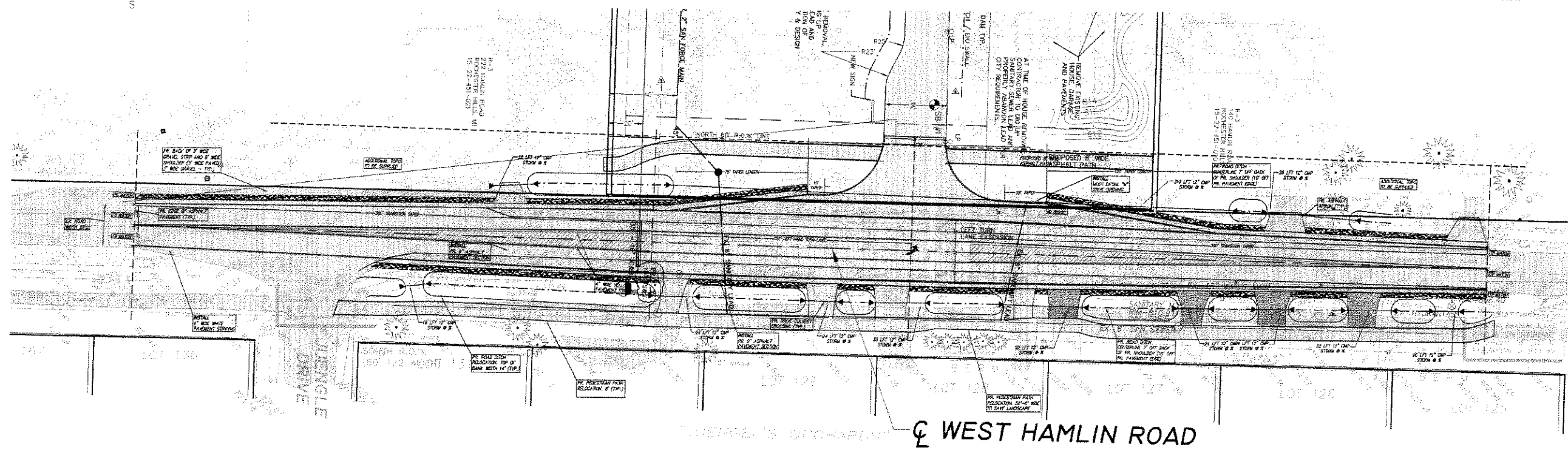
**DATE/REVISION**  
 04/12/07 SPA REV. #1  
 05/01/07 ISSUE FOR PERMIT  
 07/11/07 ISSUE FOR PERMIT

**SUBJECT**  
 Hamlin Road  
 Improvement Plan

**DRAWN BY:**  
 S. Salter  
**DESIGNED BY:**  
 S. Salter  
**APPROVED BY:**  
 A. Bayer

**DATE:**  
 01-11-07  
**SCALE:**  
 1" = 30'  
**N/F JOB NO.**

**SHEET NO.**  
 E559  
 SP8

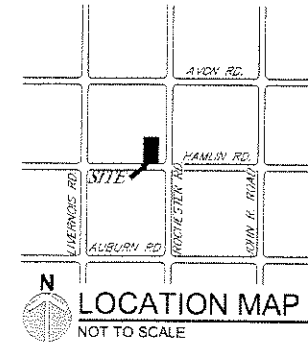


**TYPICAL CROSS-SECTION**  
 SCALE: H: 1" = 3'  
 V: 1" = 3'

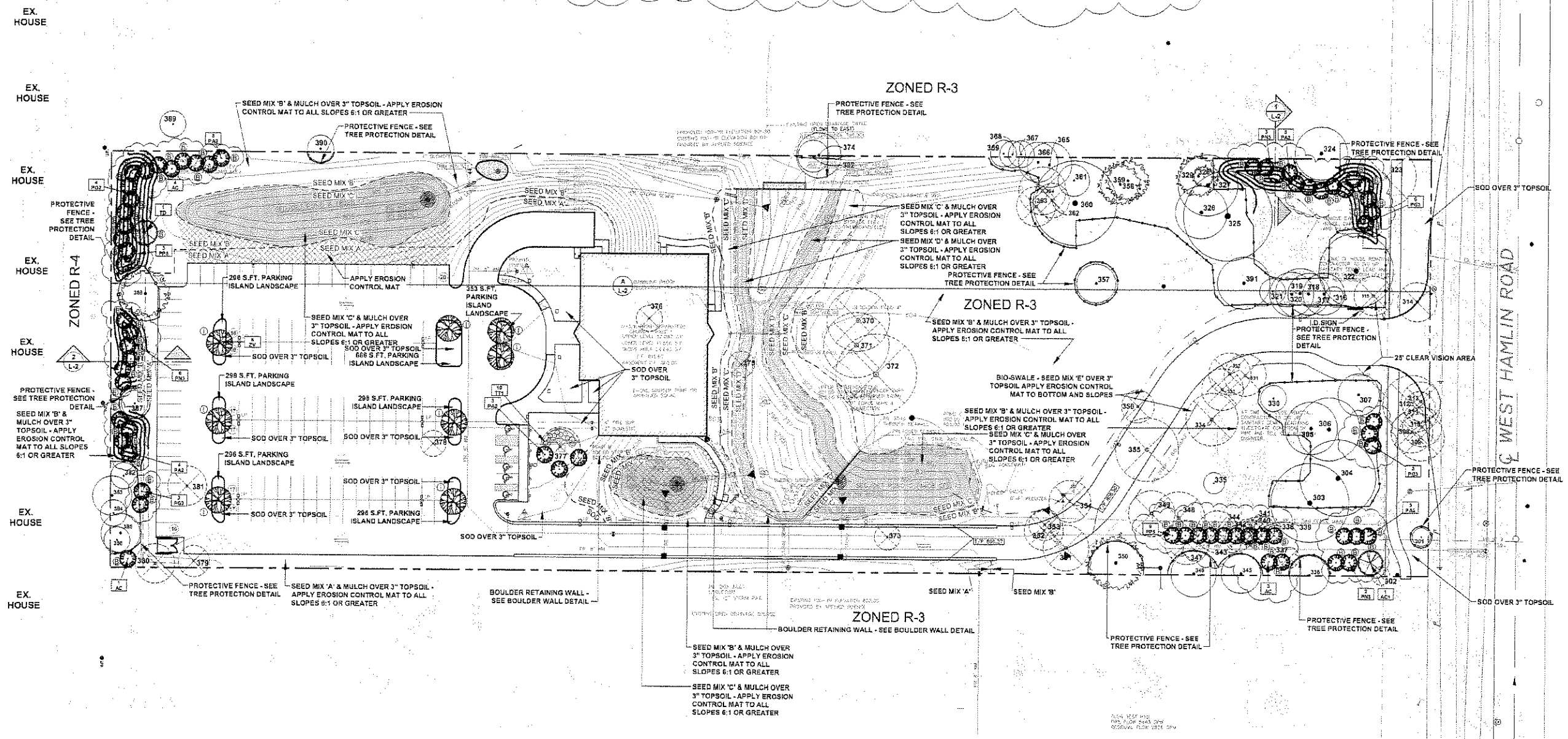
**NOTES:**

- ALL TREES BEING RETAINED WILL BE IDENTIFIED BY PAINTING, FLAGGING, OR SOME OTHER APPROVED METHOD.
- WHEN PROTECTIVE BARRIERS ARE NECESSARY, THEY WILL BE ERECTED BEFORE WORK STARTS.
- TREES WILL CONFORM TO THE GUIDELINES ESTABLISHED IN THE MOST RECENT EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1-1990), AND MUST BE APPROVED BY THE CITY PRIOR TO PLANTING.
- REPLACEMENT TREES NEED TO BE STAKED, GUARANTEED BY THE TREE REMOVAL PERMIT HOLDER TO EXHIBIT A NORMAL GROWTH CYCLE FOR AT LEAST TWO (2) YEARS FOLLOWING PLANTING.
- PRIOR TO THE RELEASE OF THE PERFORMANCE BOND, THE CITY OF ROCHESTER HILLS LANDSCAPE ARCHITECT MUST INSPECT ALL LANDSCAPE PLANTINGS INCLUDING BUT NOT LIMITED TO EXISTING TREES, REPLACEMENT TREES, BUFFER PLANTINGS, AND PARKING LOT ISLANDS. THE RIGHT-OF-WAY WILL BE INSPECTED BY THE FORESTRY DIVISION TO IDENTIFY ANY PLANTINGS NEW OR EXISTING THAT POSE A HAZARD TO THE SAFE USE OF THE RIGHT-OF-WAY. FORESTRY MAY REQUIRE THE DEVELOPER TO REMOVE AND POSSIBLY REPLACE ANY SUCH TREES.
- ALL TREES AND SHRUBS MUST BE PLANTED AT LEAST 10' FROM THE EDGE OF A PUBLIC ROADWAY. SHADE TREES AND SHRUBS MUST BE PLANTED AT LEAST 5' FROM THE EDGE OF A PUBLIC WALKWAY. EVERGREEN AND ORNAMENTAL TREES MUST BE PLANTED AT LEAST 10' FROM THE EDGE OF A PUBLIC WALKWAY. ALL TREES AND SHRUBS MUST BE PLANTED AT LEAST 10' FROM ANY FIRE HYDRANT. SHADE AND EVERGREEN TREES MUST BE PLANTED AT LEAST 15' FROM THE NEAREST OVERHEAD WIRE AND AT LEAST 10' FROM THE NEAREST UNDERGROUND UTILITY.
- NO TREE OR SHRUB MAY BE PLANTED WITHIN THE TRIANGULAR AREA FORMED AT THE INTERSECTION OF ANY STREET RIGHT-OF-WAY AT A DISTANCE OF 25' FROM THEIR POINT OF INTERSECTION. NO TREE OR SHRUB MAY BE PLANTED IN THE TRIANGULAR AREA FORMED AT THE INTERSECTION OF ANY DRIVEWAY WITH A PUBLIC SIDEWALK AT A DISTANCE ALONG EACH LINE OF 15' FROM THEIR POINT OF INTERSECTION.
- PRIOR APPROVAL IS REQUIRED TO PLANT ANY TREE OR SHRUB IN THE PUBLIC RIGHT-OF-WAY.
- NO SUBSTITUTIONS OR CHANGES OF LOCATION OR PLANT TYPES SHALL BE MADE WITHOUT THE APPROVAL OF THE DEVELOPER AND THE CITY OF ROCHESTER HILLS LANDSCAPE ARCHITECT.
- THE DEVELOPER AND/OR THE CITY OF ROCHESTER HILLS LANDSCAPE ARCHITECT SHALL HAVE THE RIGHT, AT ANY STAGE OF THE INSTALLATION, TO REJECT ANY WORK OR MATERIAL THAT DOES NOT MEET THE REQUIREMENTS OF THE PLANS OR SPECIFICATIONS.
- REPLACEMENT TREES MAY NOT BE PLANTED WITHIN THE DRIP LINE OF THE EXISTING TREES.
- NO SUBSTITUTIONS OR CHANGES OF LOCATION OR PLANT TYPE SHALL BE MADE WITHOUT THE APPROVAL OF THE DEVELOPER AND THE CITY OF ROCHESTER HILLS LANDSCAPE ARCHITECT.
- TREES MUST BE AT LEAST 10' FROM UNDERGROUND UTILITIES AND 15' FROM OVERHEAD UTILITIES.

PLANT SCHEDULE / COST ESTIMATE						
DECIDUOUS TREES - ISLAND TREES ONLY						
KEY	QTY	BOTANICAL / COMMON NAME	ROOT	SIZE	COMMENT	COST ESTIMATE
UNIT PRICE	TOTAL COST					
ZV	8	Zelkova serrata / Green Vase / Great Vase Zelkova	B&B	3" Caliper	6 Min. Branch Ht.	\$ 425.00 \$ 3,400.00
<b>DECIDUOUS TREES</b>						<b>TOTAL: \$ 3,400.00</b>
KEY	QTY	BOTANICAL / COMMON NAME	ROOT	SIZE	COMMENT	COST ESTIMATE
AC1	1	Acer campestre / Hedge Maple	B&B	3.5" Caliper		\$ 455.00 \$ 455.00
TD	1	Taxodium distichum / Common Bald Cypress	B&B	3.5" Caliper		\$ 455.00 \$ 455.00
<b>EVERGREEN TREES</b>						<b>TOTAL: \$ 855.00</b>
KEY	QTY	BOTANICAL / COMMON NAME	ROOT	SIZE	COMMENT	COST ESTIMATE
AC	8	Abies concolor / Concolor White Fir	B&B	14" Height	Non-Sheared	\$ 650.00 \$ 5,200.00
PA2	20	Picea abies / Norway Spruce	B&B	14" Height	Non-Sheared	\$ 650.00 \$ 13,000.00
PG2	3	Picea gleuca / White Spruce	B&B	14" Height	Non-Sheared	\$ 650.00 \$ 1,950.00
PN2	11	Picea pungens glauca / Colorado Blue Spruce	B&B	14" Height	Non-Sheared	\$ 650.00 \$ 7,150.00
PN3	11	Pinus nigra / Austrian Pine	B&B	14" Height	Non-Sheared	\$ 650.00 \$ 7,150.00
PP5	12	Picea pungens / Colorado Spruce	B&B	14" Height	Non-Sheared	\$ 650.00 \$ 7,800.00
<b>SHRUBS</b>						<b>TOTAL: \$ 42,250.00</b>
KEY	QTY	BOTANICAL / COMMON NAME	ROOT	SIZE	COMMENT	COST ESTIMATE
TT1	10	Thuja occidentalis 'Tobryi' / Mission Arborvitae	B&B	6" Height		\$ 65.00 \$ 650.00
<b>TURF / MULCH / IRRIGATION</b>						<b>TOTAL: \$ 650.00</b>
TYPE	QTY	DESCRIPTION	UNIT PRICE	TOTAL COST		
SEED MIX 'A'	1700	S. YDS. / 35% Kentucky Bluegrass (Min. 3 Varieties), 30% Perennial Rye, 20% Creeping Red Fescue, 15% Chewings Fescue	\$ 3.00	\$ 5,100.00		
SEED MIX 'B'	15500	S. YDS. / Low Profile Prairie Seed Mix - by JFNew (574) 586-2412	\$ 3.00	\$ 46,500.00		
SEED MIX 'C'	2300	S. YDS. / Detention Basin Seed Mix - by JFNew (574) 586-2412	\$ 3.00	\$ 6,900.00		
SEED MIX 'D'	800	S. YDS. / Emergent Wetland Seed Mix - by JFNew (574) 586-2412	\$ 3.00	\$ 2,400.00		
SEED MIX 'E'	1200	S. YDS. / Swale Seed Mix - by JFNew (574) 586-2412	\$ 3.00	\$ 3,600.00		
SCD	2840	S. YDS.	\$ 3.00	\$ 8,520.00		
MULCH	20	C. YDS.	\$ 35.00	\$ 700.00		
IRRIGATION	-			\$ 7,800.00		
<b>QUANTITIES ARE ESTIMATES ONLY. LANDSCAPE CONTRACTOR TO VERIFY AND PROVIDE ALL MATERIALS AS SHOWN ON PLANS.</b>				<b>TOTAL:</b>	<b>\$ 85,120.00</b>	
<b>COST ESTIMATE INCLUDES ALL MATERIALS AND INSTALLATION COSTS.</b>				<b>G. TOTAL:</b>	<b>\$ 132,275.00</b>	



LANDSCAPE REQUIREMENTS			
TYPE	REQUIRED	PROVIDED	
OFF-STREET PARKING			
LANDSCAPE ISLAND AREA	145' x 10' = 15		
CANOPY DECIDUOUS TREES	2250' / 300' = 8	2250	2503



NOT TO BE USED FOR CONSTRUCTION DRAWINGS  
CITY FILE# 05-039

BEFORE YOU DIG  
CALL MISS DIG  
1-800-485-7171

LANDSCAPE PLAN/TREE PRESERVATION PLAN  
L-2 PLAN VIEW  
SCALE: 1" = 40'

**E.J. KLECKNER & ASSOCIATES**  
7031 ORCHARD LAKE ROAD SUITE #304 WEST BLOOMFIELD, MICHIGAN 48322  
PHONE (248) 932-5788 FAX (248) 737-3048 E-MAIL: LA@klecknerassociates.com

**SITE CONSULTANTS**  
WEBSITE: www.klecknerassociates.com

**LANDSCAPE ARCHITECTS**

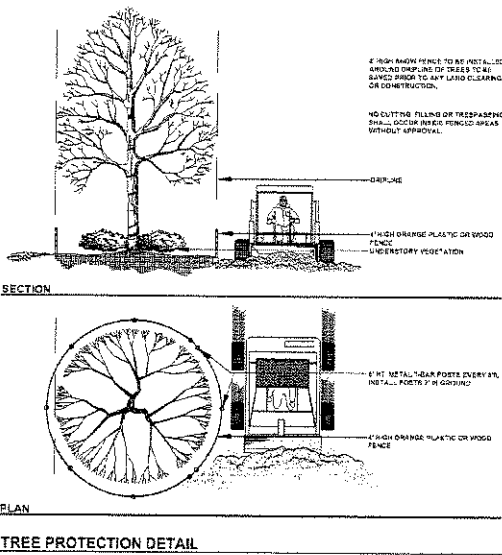
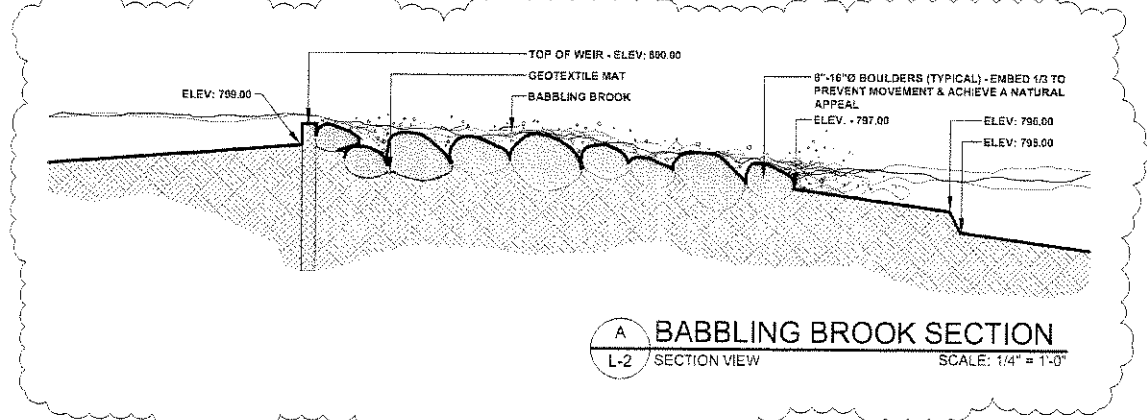
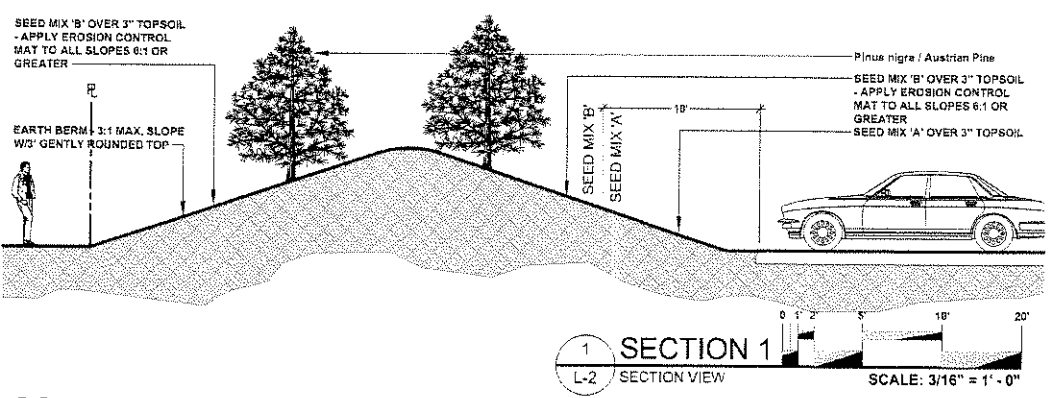
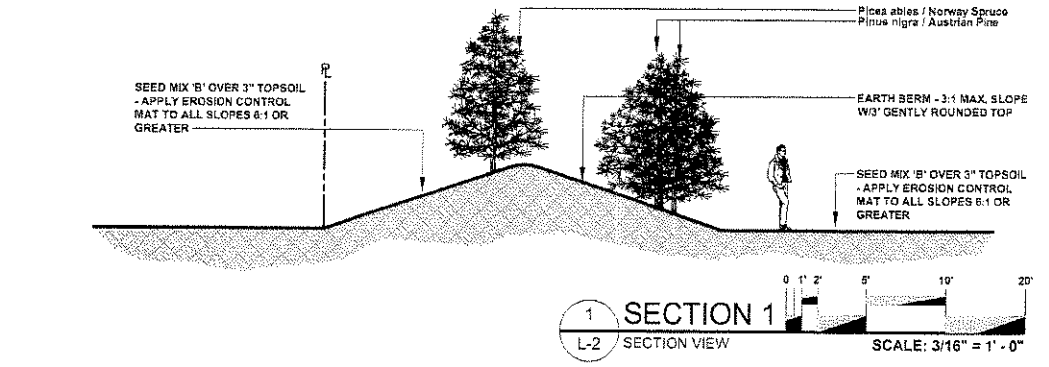
**FAITH EVANGELICAL PRESBYTERIAN CHURCH**  
ROCHESTER HILLS, MICHIGAN  
OWNER FAITH EVANGELICAL PRESBYTERIAN CHURCH

ISSUED  
01/11/07 SPA / SCLU  
4/12/07 S.P.A. REVISIONS  
5/1/07 ISSUED FOR PERMITS  
6/25/07 ISSUE FOR BIDS  
8/8/07 REVISED S.P.A.  
7/11/07 REVISED S.P.A.

JOB NO. **06401**

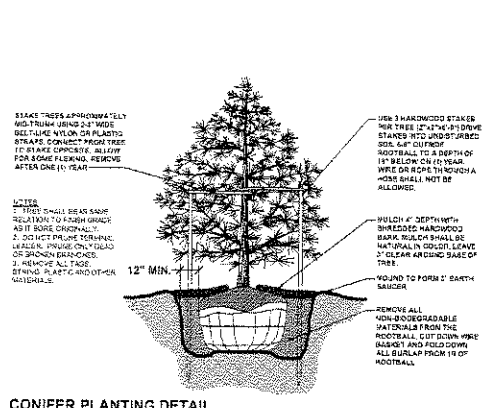
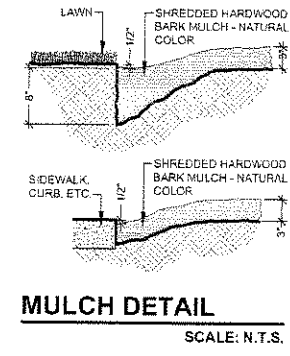
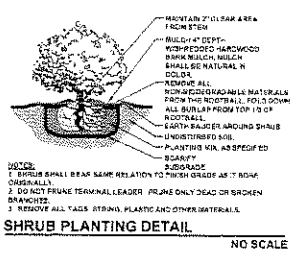
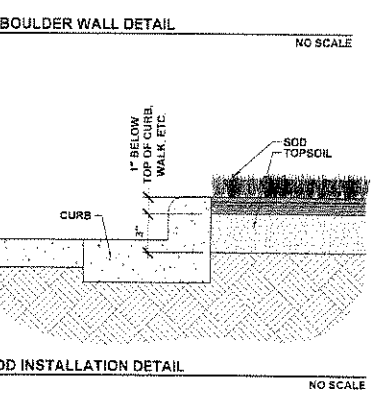
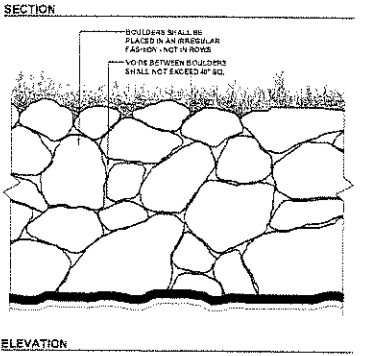
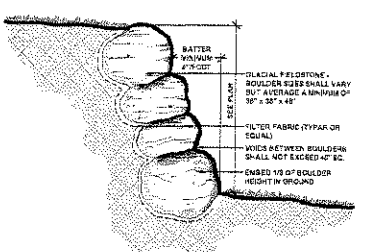
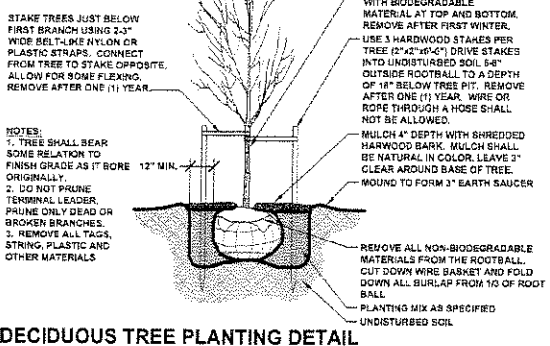
SHEET NO. **L-1**

EXISTING TREE CHART						
TAG #	ELEV. (USGS DATUM)	D.B.H. (INCHES)	BOTANICAL NAME	COMMON NAME	CONDITION	DISPOSITION
301	817.4	7	Thuja occidentalis	White Cedar	Fair	SAVE - ROW
302	816.5	7	Acer negundo	Box Elder	Good	REMOVE
303	818.7	31	Acer saccharinum	Silver Maple	Good	SAVE
304	817.5	30	Acer saccharinum	Silver Maple	Fair	SAVE
305	817.1	20	Picea abies	Norway Spruce	Fair	SAVE
306	816.8	24	Picea abies	Norway Spruce	Fair	SAVE
307	815.6	16	Picea abies	Norway Spruce	Fair	SAVE
308	815.5	16	Picea abies	Norway Spruce	Fair	REMOVE - ROW
309	815.5	18	Picea abies	Norway Spruce	Fair	REMOVE - ROW
310	815.5	15	Picea abies	Norway Spruce	Fair	REMOVE - ROW
311	815.5	12	Picea abies	Norway Spruce	Fair	REMOVE - ROW
312	815.5	22	Picea abies	Norway Spruce	Fair	REMOVE - ROW
313	815.5	15	Picea abies	Norway Spruce	Fair	REMOVE - ROW
314	813	12.10.9.7	Picea glauca	White Spruce	Fair	REMOVE - ROW
316	813.6	15	Pinus sylvestris	Scotch Pine	Poor	REMOVE
318	814.4	7	Pinus resinosa	Red Pine	Fair	SAVE
317	814.5	16	Pinus sylvestris	Scotch Pine	Fair	SAVE
318	814.5	16	Pinus sylvestris	Scotch Pine	Fair	SAVE
319	814.5	19	Pinus sylvestris	Scotch Pine	Fair	SAVE
320	814.2	17	Pinus sylvestris	Scotch Pine	Fair	SAVE
321	813.6	6	Picea abies	Norway Spruce	Fair	SAVE
322	814	30	Acer saccharinum	Silver Maple	Good	SAVE
323	811	23	Acer saccharinum	Silver Maple	Poor	REMOVE
324	811.5	20	Robinia pseudoacacia	Black Locust	Good	SAVE - OFFSITE
325	812.2	34	Ulmus pumila	Siberian Elm	Fair	SAVE
326	811.3	16.16	Acer saccharinum	Silver Maple	Fair	SAVE
327	810.7	23	Acer saccharinum	Silver Maple	Poor	SAVE
328	810.2	5	Picea pungens	Colorado Spruce	Poor	SAVE
329	810.2	15	Picea pungens	Colorado Spruce	Fair	SAVE
330	815.2	7	Acer saccharinum	Silver Maple	Fair	SAVE
331	813.8	16	Juniperus virginiana	Red Cedar	Fair	REMOVE
332	813.4	11.7	Thuja occidentalis	White Cedar	Fair	REMOVE
333	813.9	16	Picea abies	Norway Spruce	Fair	REMOVE
334	816.4	15.15.9	Catalpa speciosa	Northern Catalpa	Fair	REMOVE
335	816.7	8	Pinus strobus	White Pine	Fair	SAVE
336	820	14.13	Malus sylvestris	Common Apple	Poor	SAVE
337	816.6	8.6	Malus sylvestris	Common Apple	Poor	REMOVE
338	817.3	7	Thuja occidentalis	White Cedar	Fair	REMOVE
339	817.3	7	Thuja occidentalis	White Cedar	Fair	REMOVE
340	817.3	10	Thuja occidentalis	White Cedar	Fair	REMOVE
341	817.3	7	Thuja occidentalis	White Cedar	Fair	REMOVE
342	817.3	9	Thuja occidentalis	White Cedar	Fair	REMOVE
343	817.3	7.8	Pyrus communis	Common Pear	Poor	REMOVE
344	816.8	16	Acer saccharinum	Silver Maple	Good	REMOVE
345	818.2	7.7.6.6	Malus sylvestris	Common Apple	Fair	SAVE
346	817	14.13.12	Malus sylvestris	Common Apple	Good	SAVE
347	816.2	17	Ulmus pumila	Siberian Elm	Fair	REMOVE
348	815.2	15.15	Acer negundo	Box Elder	Poor	REMOVE
349	814.4	14.11	Acer negundo	Box Elder	Poor	REMOVE
350	814.1	20	Pinus strobus	White Pine	Good	SAVE
351	811.4	15.11	Acer negundo	Box Elder	Good	REMOVE
352	809.8	15	Pinus strobus	White Pine	Fair	REMOVE
353	809.4	12	Pinus strobus	White Pine	Fair	REMOVE
354	810	16	Acer negundo	Box Elder	Fair	REMOVE
355	813.2	24.22	Acer negundo	Box Elder	Good	REMOVE
356	811.2	12.12.10	Acer saccharinum	Silver Maple	Fair	REMOVE
357	805.6	10.9.8	Acer platanoides	Norway Maple	Fair	SAVE
358	807.6	14	Picea pungens	Colorado Spruce	Fair	SAVE
359	807.6	15	Picea pungens	Colorado Spruce	Fair	SAVE
360	806.6	32	Acer saccharinum	Silver Maple	Fair	SAVE
361	805.5	11	Picea pungens	Colorado Spruce	Fair	SAVE
362	804.7	13	Acer saccharinum	Silver Maple	Poor	REMOVE
363	803.6	15	Acer saccharinum	Silver Maple	Fair	REMOVE
364	804.3	18	Acer saccharinum	Silver Maple	Fair	REMOVE
365	804.5	17	Acer saccharinum	Silver Maple	Fair	SAVE
366	804.1	15	Pinus sylvestris	Scotch Pine	Fair	SAVE
367	803	7	Picea pungens	Colorado Spruce	Fair	SAVE - OFFSITE
368	802.5	10	Picea pungens	Colorado Spruce	Fair	SAVE - OFFSITE
369	802	9	Picea pungens	Colorado Spruce	Fair	SAVE - OFFSITE
370	798.8	22.19	Populus deltoides	Eastern Cottonwood	Good	REMOVE
371	799.1	23.15.12.6	Populus deltoides	Eastern Cottonwood	Good	REMOVE
372	796.2	31	Populus deltoides	Eastern Cottonwood	Good	REMOVE
373	802.5	9.6.6	Malus (spp.)	Flowering Crabapple	Good	REMOVE
374	796.6	16.16	Populus deltoides	Eastern Cottonwood	Fair	SAVE - OFFSITE
375	796.7	6.9	Salix discolor	Pussy Willow	Good	REMOVE
376	801.8	8	Acer negundo	Box Elder	Good	REMOVE
377	808	12.9	Malus (spp.)	Flowering Crabapple	Good	REMOVE
378	812.3	6	Acer negundo	Box Elder	Good	REMOVE
379	813.5	11	Pinus resinosa	Red Pine	Fair	REMOVE
380	814.6	15	Pinus resinosa	Red Pine	Fair	REMOVE
381	813.3	12.6	Acer negundo	Box Elder	Fair	REMOVE
382	813.1	14.8.9	Malus sylvestris	Common Apple	Fair	SAVE
383	813.6	14	Prunus crasus	Sour Cherry	Poor	SAVE
384	816	10.10.10.6	Crataegus (spp.)	Hawthorn (spp.)	Fair	SAVE
385	816	11	Prunus crasus	Sour Cherry	Poor	SAVE
386	816.3	9	Prunus crasus	Sour Cherry	Poor	SAVE
387	812.9	8	Pinus strobus	White Pine	Good	SAVE
388	811.5	25	Picea abies	Norway Spruce	Good	SAVE
389	809.2	7	Fraxinus pennsylvanica	Green Ash	Poor	SAVE - OFFSITE
390	806.7	6	Morus rubra	Red Mulberry	Good	SAVE - OFFSITE
391	812.7	20	Tilia cordata	Littleleaf Linden	Fair	SAVE
392	796.6	12	Salix nigra	Black Willow	Poor	SAVE



**TREE PROTECTION NOTES:**

1. THE TREE PROTECTION FENCING SHALL BE INSTALLED PRIOR TO THE START OF ANY CONSTRUCTION OPERATIONS. IT IS THE DEVELOPER'S RESPONSIBILITY TO CONTACT THE CITY PLANNING DEPARTMENT AT 733-3048 TO OBTAIN THE NECESSARY PERMITS AND TO OBTAIN THE CITY PLANNING DEPARTMENT'S APPROVAL OF THE TREE PROTECTION PLAN. THE CITY PLANNING DEPARTMENT SHALL REVIEW THE TREE PROTECTION PLAN AND SHALL ISSUE A PERMIT TO INSTALL THE TREE PROTECTION FENCING. THE CITY PLANNING DEPARTMENT SHALL NOT BE RESPONSIBLE FOR THE MAINTENANCE OF THE TREE PROTECTION FENCING.
2. THE TREE PROTECTION FENCING SHALL BE INSTALLED WITHIN THE Drip Line OF THE TREE TO BE PROTECTED. THE Drip Line SHALL BE DETERMINED BY THE TREE SURVEYOR OR THE CITY PLANNING DEPARTMENT. THE TREE PROTECTION FENCING SHALL BE INSTALLED WITHIN THE Drip Line OF THE TREE TO BE PROTECTED. THE Drip Line SHALL BE DETERMINED BY THE TREE SURVEYOR OR THE CITY PLANNING DEPARTMENT.
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**E.J. KLECKNER & ASSOCIATES**  
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**SITE CONSULTANTS**

**LANDSCAPE ARCHITECTS**

**FAITH EVANGELICAL PRESBYTERIAN CHURCH**  
ROCHESTER HILLS, MICHIGAN  
OWNER FAITH EVANGELICAL PRESBYTERIAN CHURCH

PROJECT

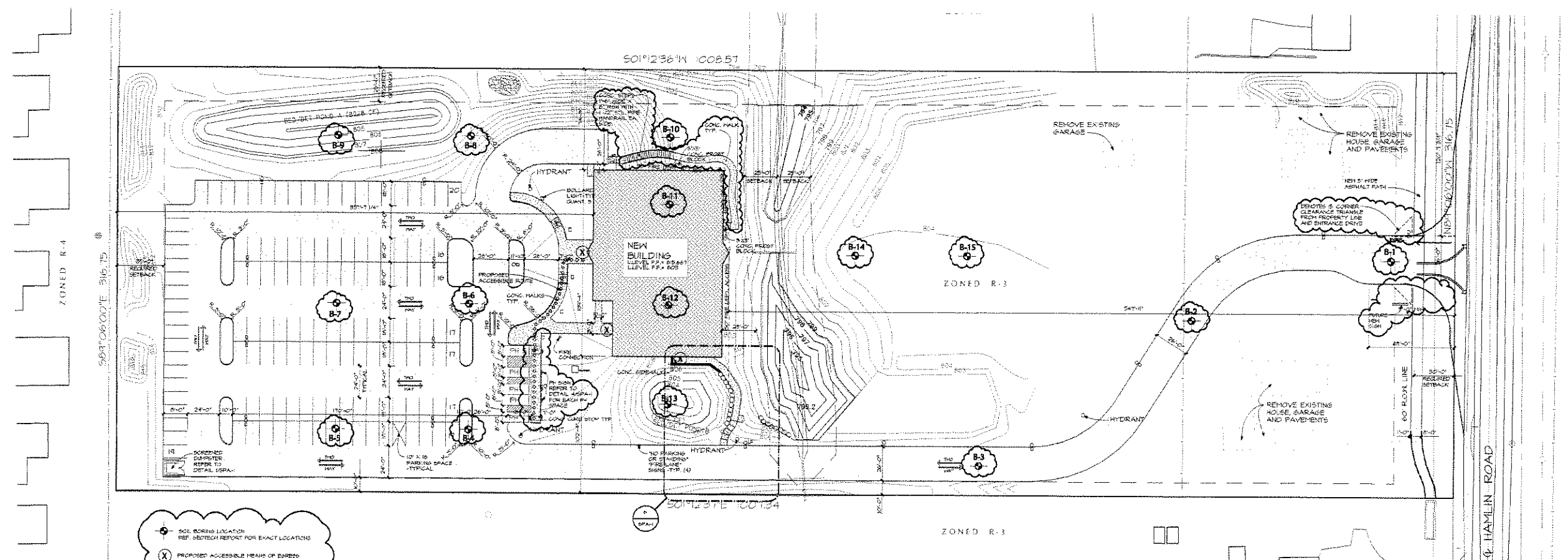
ISSUED

01/11/07 SPA / SCLU  
4/12/07 S.P.A. REVISIONS  
5/1/07 ISSUED FOR PERMITS  
5/25/07 ISSUE FOR BIDS  
6/8/07 REVISED S.P.A.

JOB NO. **06401**

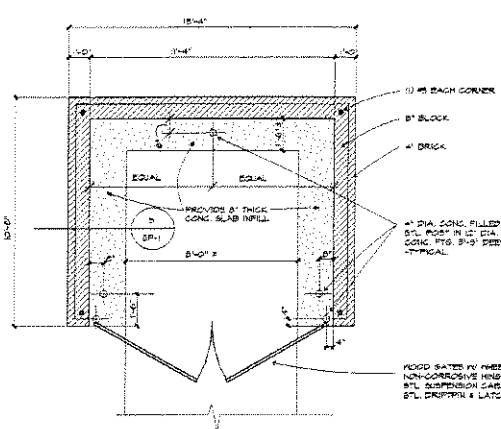
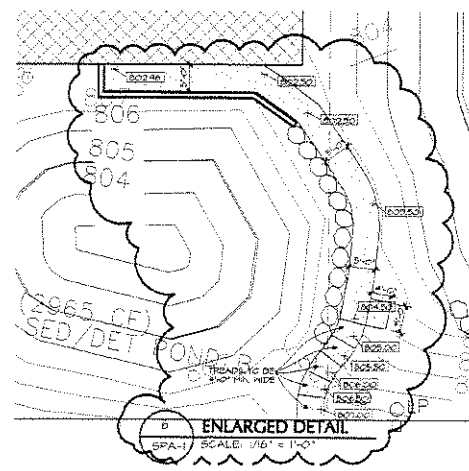
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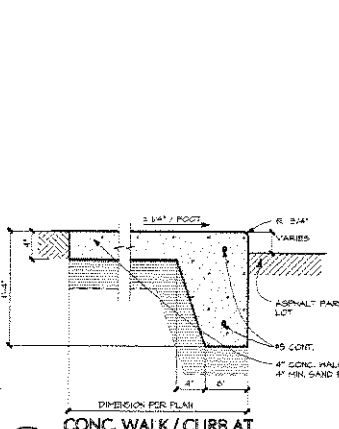


(X) SOI BORING LOCATION  
 REF. GEOTECH REPORT FOR EXACT LOCATIONS  
 (X) PROPOSED ACCESSIBLE HEARS OF ENRSES

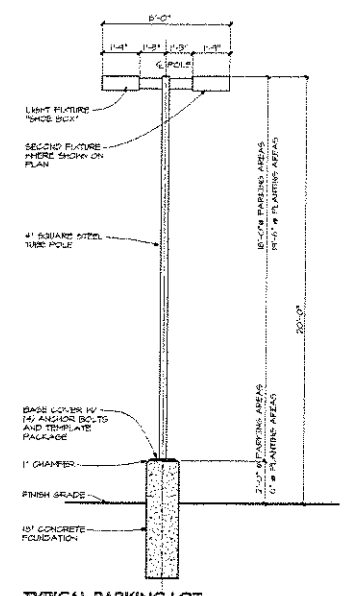
**SITE PLAN**  
 SCALE: 1" = 40'-0"  
**CITY FILE NUMBER #05-039**



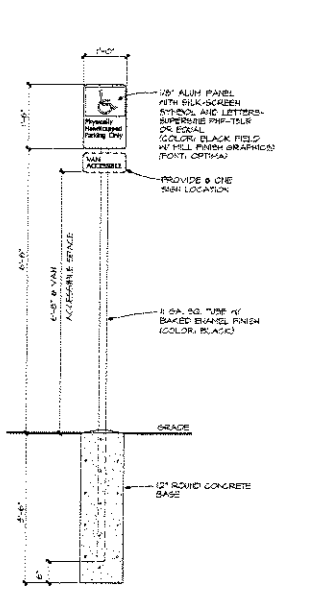
**DUMPSTER SCREEN PLAN**  
 SPA-1 SCALE: 1/4" = 1'-0"



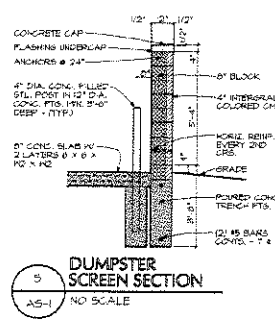
**CONC. WALK / CURB AT ASPHALT PAVEMENT**  
 SPA-1 NO SCALE



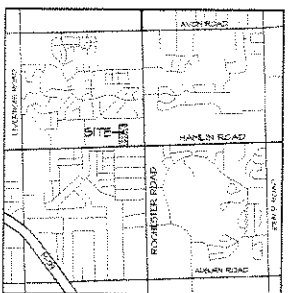
**TYPICAL PARKING LOT LIGHTING DETAIL (FOR NEW AND EXISTING)**  
 SPA-1 NO SCALE



**BARRIER FREE PARKING SIGN**  
 SPA-1 NO SCALE



**DUMPSTER SCREEN SECTION**  
 NO SCALE



**LOCATION MAP**  
 NO SCALE

**CITY FILE NUMBER #05-039**

<b>OWNER</b>		FAITH EVANGELICAL PRESBYTERIAN CHURCH 878 EAST 2ND STREET SUITE 300 ROCHESTER HIGHLAND MI 48067	
<b>SITE DATA</b>		<b>PROPOSED USE:</b> CHURCH <b>GROSS FLOOR AREA:</b> 11,500 SF <b>USABLE FLOOR AREA:</b> 10,700 SF	
<b>COMBINED PARCEL:</b>		<b>SETBACKS:</b> 30'-0" (FRONT), 25'-0" (REAR), 25'-0" (SIDE) <b>REAR YARD:</b> 25'-0" <b>SIDE YARD (EAST PROPERTY LINE):</b> 25'-0" <b>MAX. BUILDING HEIGHT:</b> 3 STORIES <b>MAX. LOT AREA COVERED BY BUILDING:</b> 45% <b>PARKING REQUIREMENTS:</b> 100 SPACES FOR EACH 500 SQ. FT. OF GROSS FLOOR AREA. <b>BARRIER FREE SPACES (PER ADA):</b> 4	
<b>GENERAL NOTES:</b>		REFER TO DING, LI AND L-2 FOR LANDSCAPING AND LANDSCAPE DETAILS. REFER TO DING, SPA-1 - SPA-8 FOR CIVIL ENGINEERING PLANS AND DETAILS. THE OWNER IS SEEKING A BUFFER MODIFICATION AT THE WEST PROPERTY LINE ADJACENT TO HAMLIN ROAD. THIS WILL INCLUDE ADDITIONAL LANDSCAPING. REFER TO DRAWING L-1. SITE LIGHTING SHALL BE IN ACCORDANCE WITH THE CITY OF ROCHESTER HILLS REQUIREMENTS. FINAL LOCATIONS AND POINTS OF CONNECTION FOR ALL UTILITIES TO BE CO-ORDINATED WITH EACH UTILITY'S SERVICE PLANNER. OWNER IS SEEKING A WAIVER FOR NOT PROVIDING A SIDEWALK FROM THE RIGHT OF WAY TO THE BUILDING. KNOX BOX TO BE PROVIDED PER ROCHESTER HILLS FIRE DEPARTMENT REQUIREMENTS. OFFICE HOURS TO BE 9:00 AM TO 4:30 PM MON-FRI. SERVICES TO BE 9:00 AM TO 4:00 PM AND 10:30 AM TO 12:00 PM SATURDAY SERVICE IS 9:00 AM TO 12:00 PM SUNDAY SERVICE IS 9:00 AM TO 12:00 PM. OUTDOOR STORAGE SHALL NOT OCCUR ON SITE.	

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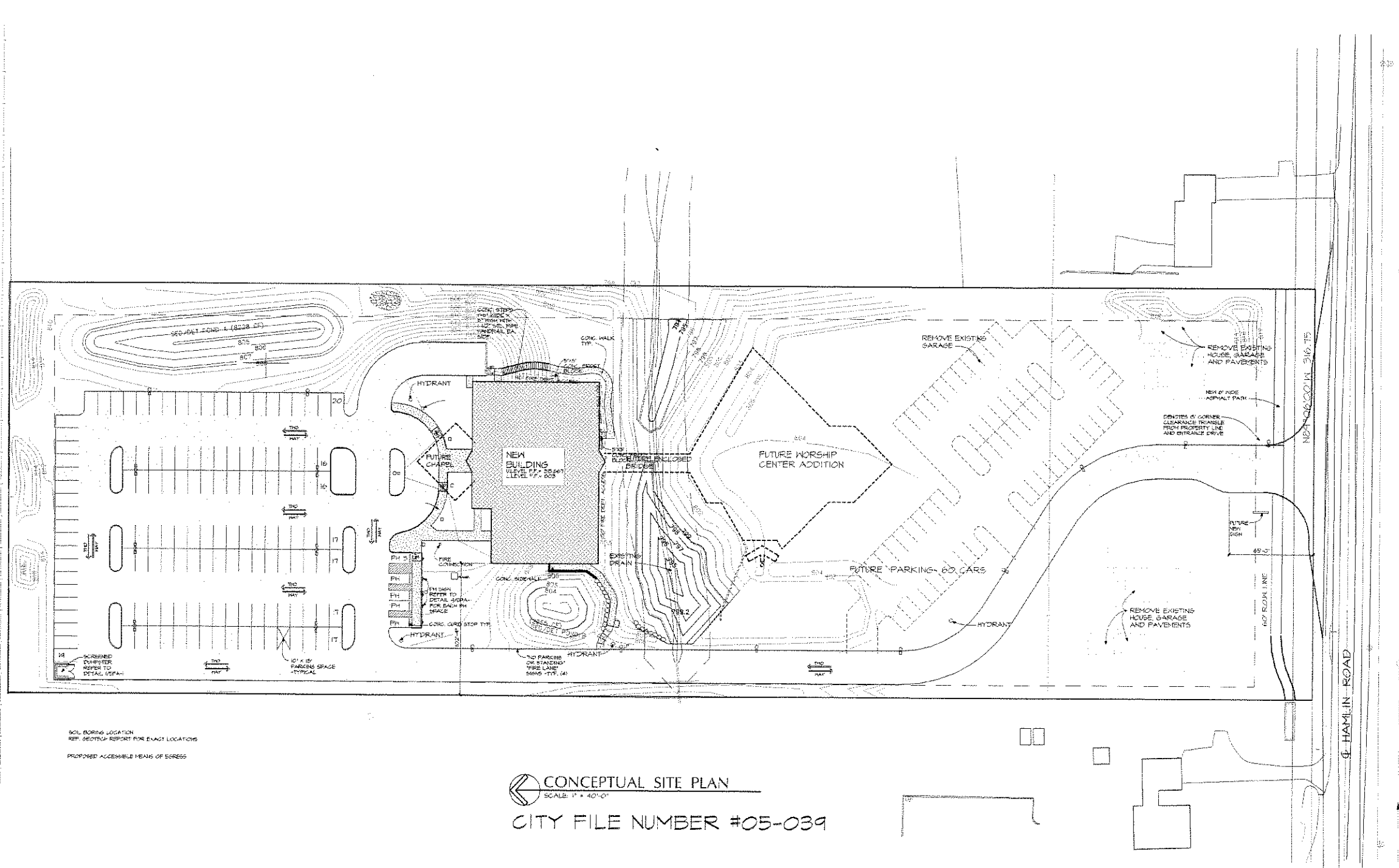
**FAITH EVANGELICAL PRESBYTERIAN CHURCH**

ROCHESTER HILLS, MICHIGAN

**ARCHITECTURAL SITE PLAN**

Project No. **06905**      Sheet No. **SPA-1**

**Issued**  
 01-11-07 SPA & SCLU  
 02-08-07 50% C.D.'S  
 03-05-07 90% C.D.'S  
 04-12-07 SPA REVISIONS  
 06-08-07 SPA REVISIONS  
 07-11-07 SPA REVISIONS



SOIL BORING LOCATION  
REF. GEOTECH REPORT FOR EXACT LOCATIONS  
PROPOSED ACCESSIBLE MEANS OF EGRESS

CONCEPTUAL SITE PLAN  
SCALE: 1" = 40'-0"  
CITY FILE NUMBER #05-039

Issued

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**FAITH EVANGELICAL PRESBYTERIAN CHURCH**  
ROCHESTER HILLS, MICHIGAN

CONCEPTUAL SITE PLAN

Project No. <b>06905</b>	Sheet No. <b>SPA-2</b>
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### BOLLARD

**REQUIREMENTS:** - One year warranty, two-year maintenance. The height shall be 34" (863 mm) minimum to the top of the cap. The bollard shall be constructed of 304 stainless steel. The bollard shall be constructed of 304 stainless steel. The bollard shall be constructed of 304 stainless steel.

**FINISHES:** - Each bollard is finished with 1200 Dura-Grip™ powder primer and epoxy finish. The bollard shall be finished with 1200 Dura-Grip™ powder primer and epoxy finish. The bollard shall be finished with 1200 Dura-Grip™ powder primer and epoxy finish.

**ANCHOR BOLTS:** - Each bollard has 4 #5 x 10" galvanized anchor bolts. Each bollard has 4 #5 x 10" galvanized anchor bolts. Each bollard has 4 #5 x 10" galvanized anchor bolts.

**PHOTOMETRICS:** - Please refer to the site plan for luminaire locations and photometric calculations. Please refer to the site plan for luminaire locations and photometric calculations. Please refer to the site plan for luminaire locations and photometric calculations.

### CITATION

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### SITE LIGHTING FIXTURE DETAIL

**NOTE:** THIS DESIGN IS BASED ON GOOD SOIL CONDITIONS HAVING 3000 PSI CAPACITY OR BETTER. THE WHOLE ASSEMBLY SHALL SUSTAIN 80 MPH WIND WITHOUT PERMANENT DAMAGE.

### LUMINAIRE LOCATIONS

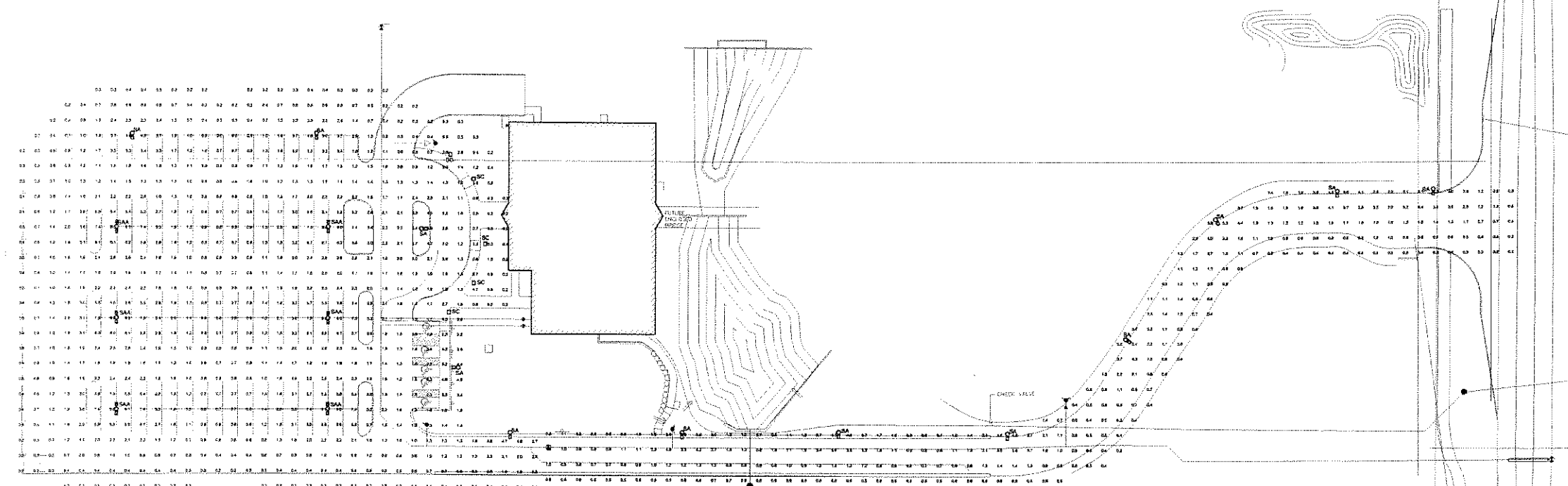
No.	Label	MH
1	SAA	20.0
2	SAA	20.0
3	SAA	20.0
4	SAA	20.0
5	SAA	20.0
6	SAA	20.0
7	SC	3.5
8	BC	3.5
9	SC	3.5
10	SA	20.0
11	SA	20.0
12	SA	20.0
13	SA	20.0
14	SA	20.0
15	SA	20.0
16	SA	20.0
17	SA	20.0
18	SA	20.0
19	SA	20.0
20	SA	20.0
21	SA	20.0
22	SC	3.5
23	SC	3.5

**ISSUED:**

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## SITE PLAN - PHOTOMETRICS

SCALE: 1" = 40'-0"

- ### NOTES
- SEE LUMINAIRE LOCATIONS FOR MOUNTING HEIGHTS.
  - SEE LUMINAIRE SCHEDULE FOR LIGHT LOSS FACTORS.
  - CALCULATIONS ARE SHOWN AT -GRADE SURFACE - IN FOOTCANDLES.
  - ALL FIXTURES ARE FULLY SHIELDED AND DOWNWARD DIRECTED WITH CONCEALED SOURCE LIGHTING AND A FLAT LENS - REFER TO SPECIFICATIONS.
  - PROVIDE AUTOMATIC SITE LIGHTING CONTROL SO THAT ALL LIGHTING EXCEPT SECURITY AND/OR LIMITED OPERATION LIGHTING SHALL BE TURNED OFF AFTER SITE'S HOURS OF OPERATION.

THIS LIGHTING PATTERN REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURERS LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.

### STATISTICS

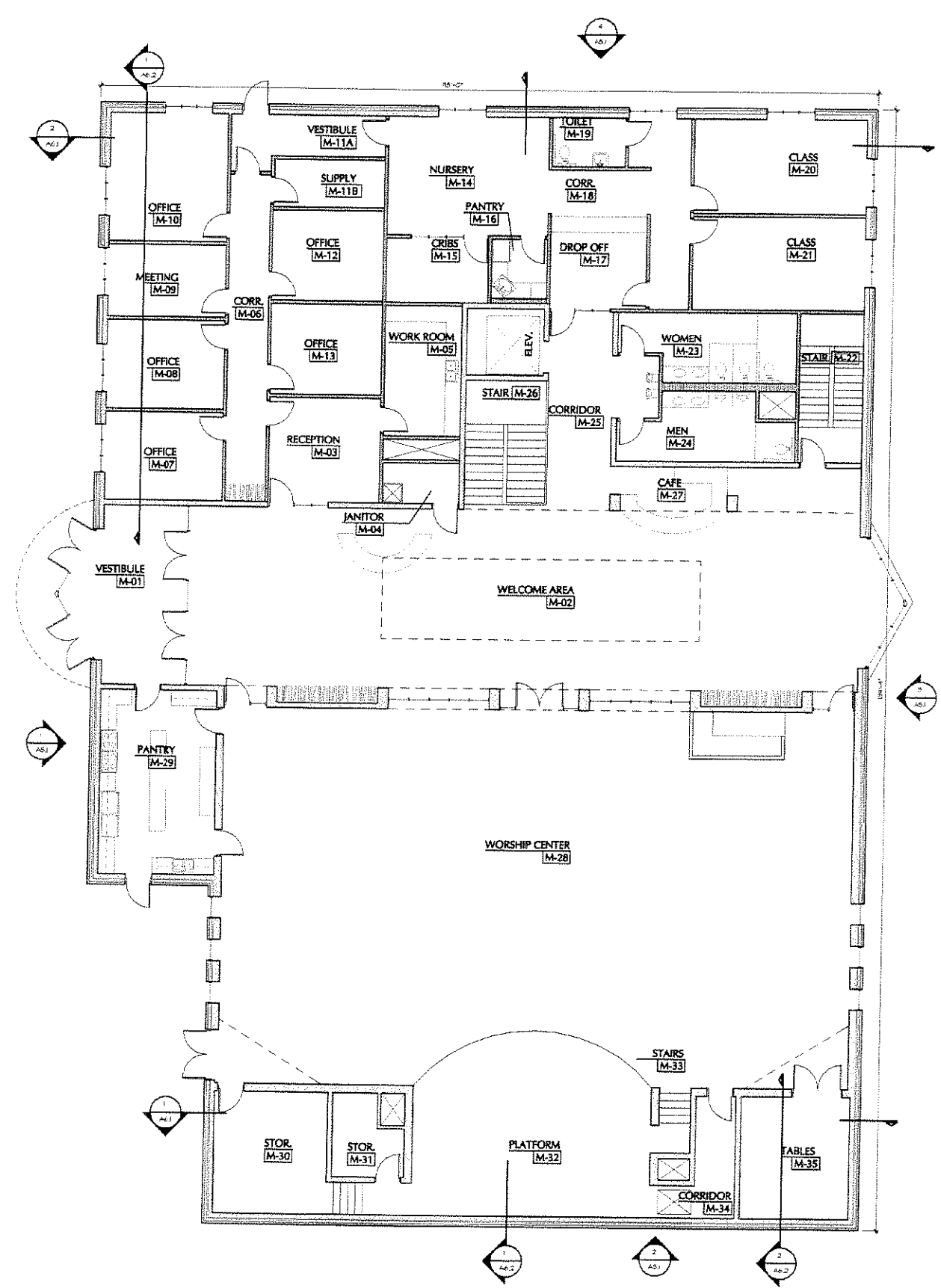
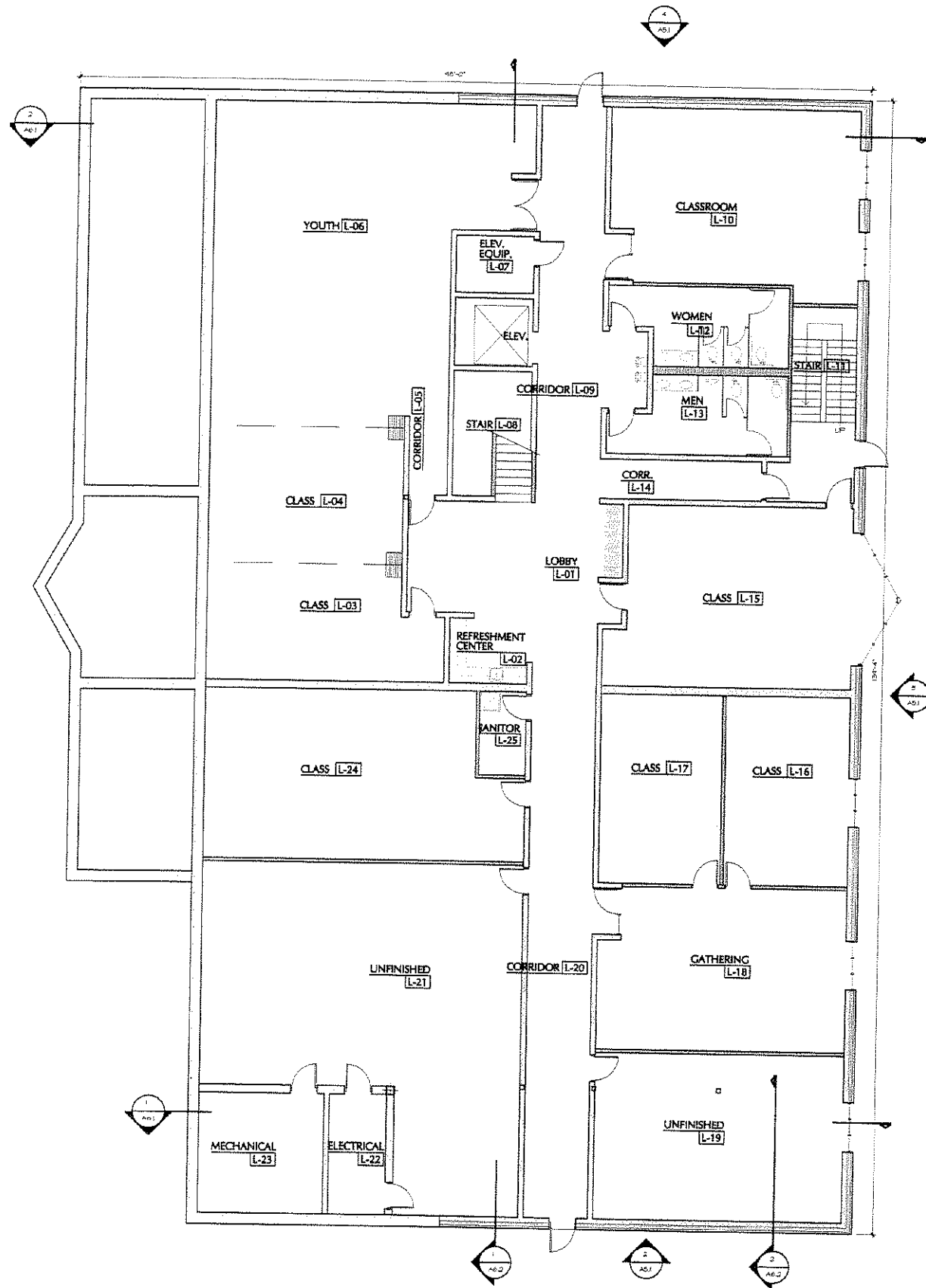
Description	Avg	Max	Min	Avg/Min
SITE PARKING AND WALKS	1.9 fc	0.8 fc	0.2 fc	9.4:1
ROADWAY	1.6 fc	5.4 fc	0.2 fc	7.4:1

### LUMINAIRE SCHEDULE

Symbol	Label	Qty	Catalog Number	Description	Lamp	LLF	Watts
□	SA	12	LSI LIGHTING CT2H 3 250 MH F	CITATION SMALL FULL CUTOFF	1-250W CLEAR SMV HOR	0.72	295
□	SAA	6	LSI LIGHTING CT2H 3 250 MH F	CITATION SMALL FULL CUTOFF	1-250W CLEAR SMV HOR	0.72	590
□	SC	5	LSI LIGHTING VER-TOMH	ALUMINUM BOLLARD	1-70W M61 COATED	0.72	100

## SITE PLAN - PHOTOMETRICS

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FLOOR PLANS

Project No. 06905  
Sheet No. A2.1

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