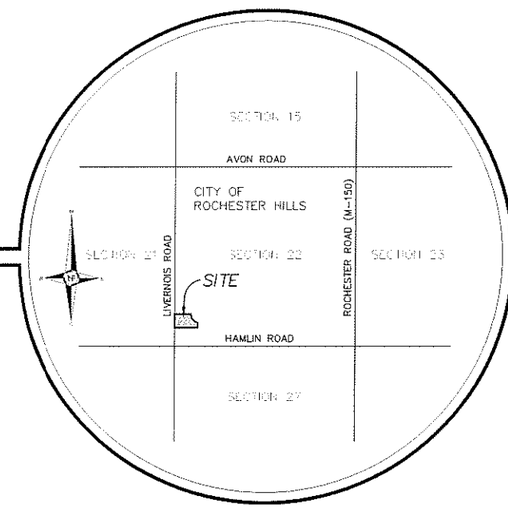
Han-Bit Korean Christian Reformed Church

PART OF THE SOUTHWEST 1/4 OF SECTION 22, T3N-R11E, CITY OF ROCHESTER HILLS, OAKLAND COUNTY, MICHIGAN

PRELIMINARY SITE PLAN



Location Map

SCALE: 1" =2000'

RECEIVED
OCT 17 2006
ROCHESTER HILLS
PLANNING DEPT.

LEGAL DESCRIPTION

A part of the Southwest 1/4 of Section 22, Town 3 North, Range 11 East, City of Rochester Hills, Oakland County, Michigan, being more particularly described as follows:

Commencing at the West 1/4 Corner of Section 22; thence S 02°31'08" E, 866.24 feet along the West line of Section 22; thence S 87°08'51" W 60.00 feet to the Southwest corner of Lot 33 of "Avon Hills Village Subdivision" as recorded in Liber 154, Pages 14 & 15, Oakland County Records, said point also being the Point of Beginning; thence the following four (4) courses along the Southerly and Westerly lines and arcs of said "Avon Hills Village Subdivision"; (1) S 87°08'51" W 470.43 feet; (2) 120.00 feet along the arc of a curve to the left (radius 350.00 feet, central angle 19°38'38", chord bears S 17°55'15" E, 119.41 feet); (3) 223.50 feet along the arc of a curve to the left (radius 245.00 feet, central angle 52°16'04", chord bears S 53°52'16" E, 215.83 feet) and (4) S 02°51'09" E 148.93 feet; thence S 87°08'51" W, 671.59 feet to a point on the Easterly line of Livernois Road (60 feet 1/2 width right-of-way); thence N 02°31'08" W, 400.00 feet along said Easterly line of Livernois Road to the Point of Beginning. Containing 5.326 acres or 231,994 square feet and subject to easements & restrictions of record.

SHEET INDEX

C-1	BOUNDARY & TOPOGRAPHIC SURVEY
C-2	TREE SURVEY
C-3	SITE & PAVING PLAN
C-4	UTILITY & GRADING PLAN
C-5	DRAINAGE CALCULATIONS PLAN
L1	TREE PRESERVATION PLAN
L2	LANDSCAPE PLAN
L3	LANDSCAPE NOTES AND DETAILS
P-1	SITE LIGHTING PHOTOMETRIC VALUES

THESE DRAWINGS SHALL NOT BE USED FOR CONSTRUCTION

STATE OF MICHIGAN
ROBERT E. LaDUKE
ENGINEER
No. 37731
LICENSED PROFESSIONAL ENGINEER

CITY FILE NUMBER 93-352.2

N&F JOB #9-D901

CLIENT

Han-Bit Korean Christian Reformed Church
1849 South Livernois Road
Rochester Hills, MI 48307

Rev. Young Ju Oh
(248) 608-9888

Prepared By:

NOWAK & FRAUS
Consulting Engineers • Land Surveyors • Land Planners
46777 Woodward Avenue
Pontiac, Michigan 48342
Tel. (248) 332-7931
Fax. (248) 332-8257

Issue Date: June 27, 2006
Revised Date: September 13, 2006
Revised Date: October 16, 2006

TOPOGRAPHY NOTES

All elevations are existing elevations.

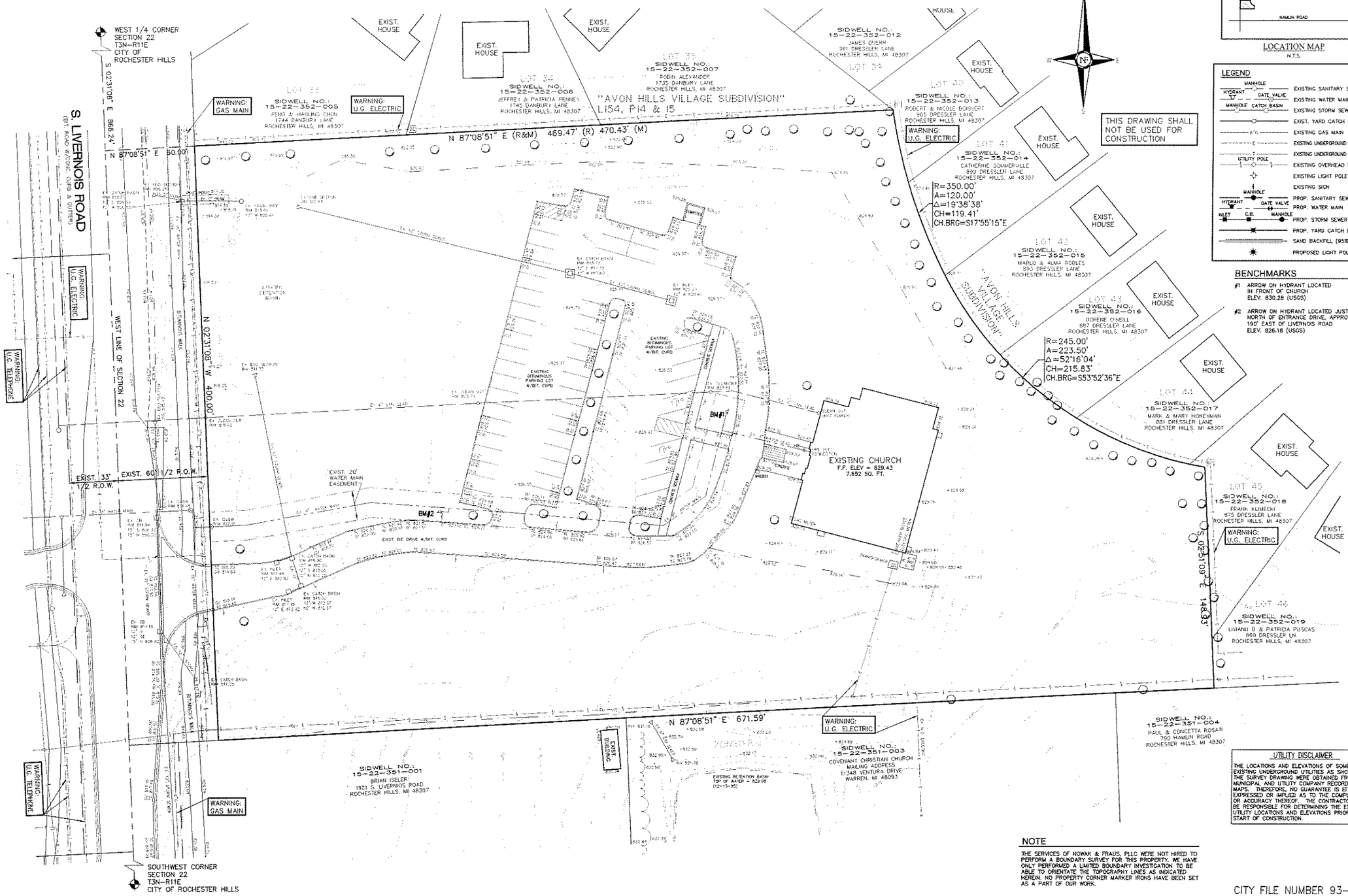
Utility locations were obtained from municipal officials and records of utility companies, and no guarantee can be made to the completeness, or exactness of location.

This survey may not show all easements of record unless an updated title policy is furnished to the surveyor by the owner

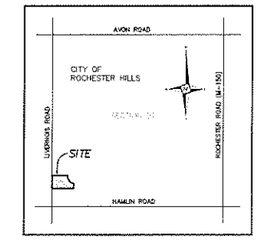
LEGAL DESCRIPTION

A part of the Southwest 1/4 of Section 22, Town 3 North, Range 11 East, City of Rochester Hills, Oakland County, Michigan, being more particularly described as follows:

Commencing at the West 1/4 Corner of Section 22; thence S 02°31'08" E, 866.24 feet along the West line of Section 22; thence S 87°08'51" W 60.00 feet to the Southwest corner of Lot 33 of "Avon Hills Village Subdivision" as recorded in Liber 154, Pages 14 & 15, Oakland County Records, said point also being the Point of Beginning; thence the following four (4) courses along the Southerly and Westerly lines and arcs of said "Avon Hills Village Subdivision": (1) S 87°08'51" W 470.43 feet; (2) 120.00 feet along the arc of a curve to the left (radius 350.00 feet, central angle 19°38'38", chord bears S 17°55'15" E, 119.41 feet); (3) 223.50 feet along the arc of a curve to the left (radius 245.00 feet, central angle 52°16'04", chord bears S 53°52'36" E, 215.83 feet) and (4) S 02°51'09" E 148.93 feet; thence S 87°08'51" W, 671.59 feet to a point on the Easterly line of Livernois Road (60 feet 1/2 width right-of-way); thence N 02°31'08" W, 400.00 feet along said Easterly line of Livernois Road to the Point of Beginning. Containing 5.326 acres or 231,994 square feet and subject to easements & restrictions of record.



THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION



LOCATION MAP
N.T.S.

LEGEND

- MANHOLE
- HYDRANT / GATE VALVE — EXISTING SANITARY SEWER
- EXISTING WATER MAIN
- MANHOLE / CATCH BASIN — EXISTING STORM SEWER
- EXIST. YARD CATCH BASIN
- EXISTING GAS MAIN
- EXISTING UNDERGROUND ELECTRIC
- EXISTING UNDERGROUND TELEPHONE
- UTILITY POLE — EXISTING OVERHEAD LINES
- EXISTING LIGHT POLE
- EXISTING SIGN
- MANHOLE
- HYDRANT / GATE VALVE — PROP. SANITARY SEWER
- PROP. WATER MAIN
- INLET / C.B. / MANHOLE — PROP. STORM SEWER
- PROP. YARD CATCH BASIN
- SAND BACKFILL (95% DENSITY)
- PROPOSED LIGHT POLE

BENCHMARKS

#1 ARROW ON HYDRANT LOCATED IN FRONT OF CHURCH ELEV. 830.28 (USGS)

#2 ARROW ON HYDRANT LOCATED JUST NORTH OF ENTRANCE DRIVE, APPROXIMATELY 190' EAST OF LIVERNOIS ROAD ELEV. 826.18 (USGS)

UTILITY DISCLAIMER

THE LOCATIONS AND ELEVATIONS OF SOME OF THE EXISTING UNDERGROUND UTILITIES AS SHOWN ON THE SURVEY DRAWING WERE OBTAINED FROM MUNICIPAL AND UTILITY COMPANY RECORDS AND MAPS. THEREFORE, NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

NOTE

THE SERVICES OF NOWAK & FRAUS, PLLC WERE NOT HIRED TO PERFORM A BOUNDARY SURVEY FOR THIS PROPERTY. WE HAVE ONLY PERFORMED A LIMITED BOUNDARY INVESTIGATION TO BE ABLE TO ORIENTATE THE TOPOGRAPHY LINES AS INDICATED HEREIN. NO PROPERTY CORNER MARKER IRONS HAVE BEEN SET AS A PART OF OUR WORK.

CITY FILE NUMBER 93-352.2

NOWAK & FRAUS

Consulting Engineers
Land Surveyors
Land Planners

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

PROJECT
Building Addition

CLIENT
Han-Bit Korean Christian Reformed Church
1849 South Livernois Road
Rochester Hills, MI 48307

Contact:
Rev. Young Ju Oh
(248) 608-9888

PROJECT LOCATION
Part of the Southwest 1/4 of Section 22 T3N-R11E, City of Rochester Hills, Oakland County, Michigan

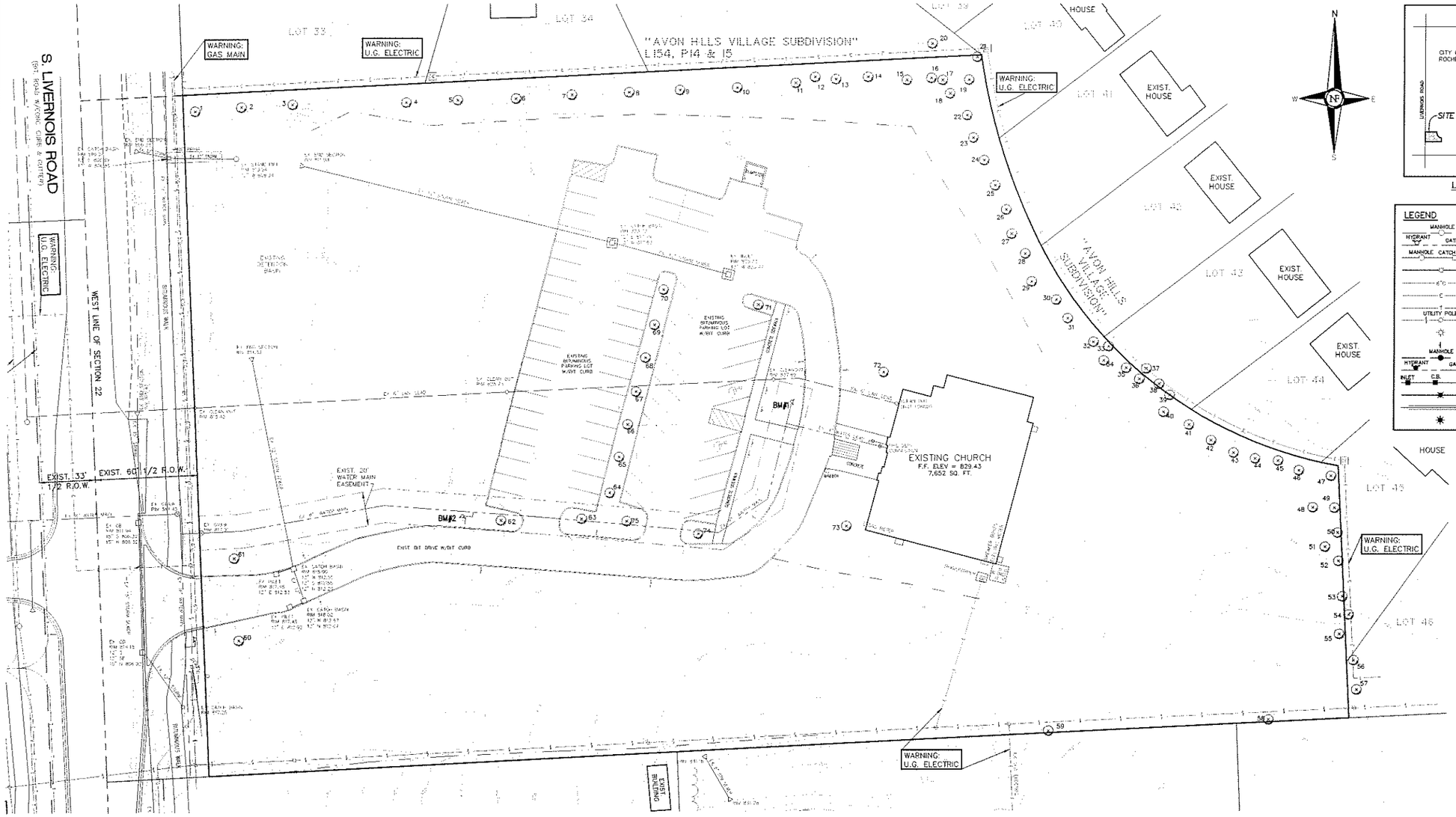
SEAL

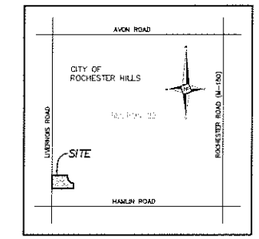
DATE/ REVISION

09-13-06 Revised per City

SHEET
Boundary & Topographic Survey

DRAWN BY: REL
DESIGNED BY: REL
APPROVED BY: JJH
DATE: 06-27-06
SCALE: 1" = 30'
N/F JOB NO. D901
SHEET NO. C-1





LOCATION MAP
N.T.S.

LEGEND

MANHOLE	EXISTING SANITARY SEWER
HYDRANT / GATE VALVE	EXISTING WATER MAIN
MANHOLE / CATCH BASIN	EXISTING STORM SEWER
	EXIST. YARD CATCH BASIN
G	EXISTING GAS MAIN
E	EXISTING UNDERGROUND ELECTRIC
T	EXISTING UNDERGROUND TELEPHONE
UTILITY POLE	EXISTING OVERHEAD LINES
	EXISTING LIGHT POLE
	EXISTING SIGN
MANHOLE	PROP. SANITARY SEWER
HYDRANT / GATE VALVE	PROP. WATER MAIN
INLET / C.B. / MANHOLE	PROP. STORM SEWER
	PROP. YARD CATCH BASIN
	SAND BACKFILL (95% DENSITY)
	PROPOSED LIGHT POLE

NOWAK & FRAUS

Consulting Engineers
Land Surveyors
Land Planners

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

PROJECT
Building Addition

CLIENT
Han-Bit Korean Christian Reformed Church
1849 South Livernois Road
Rochester Hills, MI 48307

Contact:
Rev. Young Ju Oh
(248) 608-9888

PROJECT LOCATION
Part of the Southwest 1/4 of Section 22 T3N-R11E, City of Rochester Hills, Oakland County, Michigan

SEAL

DATE/ REVISION

09-13-06 Revised per City

SHEET
Tree Survey

DRAWN BY: REL
DESIGNED BY: REL
APPROVED BY: JH
DATE: 06-27-06
SCALE: 1" = 30'
N/F JOB NO. D901
SHEET NO. C-2

Client Name: Han Bit Korean Christian Reformed Church
Job Number: D901
Job Location: Livernois Rd. N of Hamlin, Rochester Hills
Date Completed: 4/11/2006

Condition Description Notes:
"Good" – no observed structural defects*
"Fair" – minor structural defects, marginal form, some insect activity noted*
"Poor" – major structural defects, poor form, insect infested*

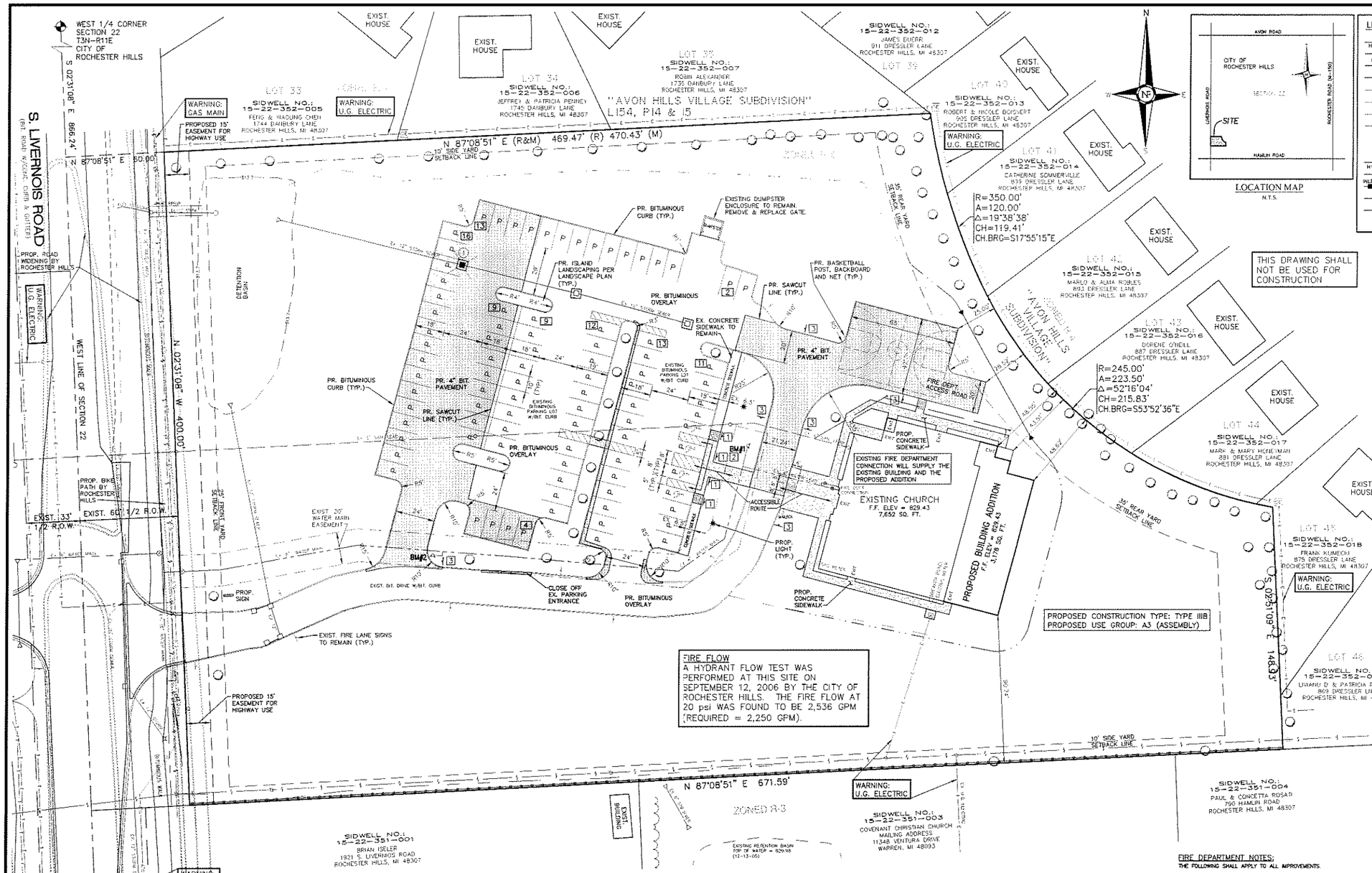
*Structural defects may include decayed wood, cracks, root problems, weak branch unions, cankers, poor tree architecture, dead/failed branches due to various causes.

TREE LIST

Tree #	Botanical Name	Common Name	Dia.	Type	Condition	Comments
1	Tilia cordata	Little-leaf Linden	4		Good	
2	Tilia cordata	Little-leaf Linden	5		Good	
3	Tilia cordata	Little-leaf Linden	5		Good	
4	Tilia cordata	Little-leaf Linden	5		Good	
5	Tilia cordata	Little-leaf Linden	4		Good	
6	Tilia cordata	Little-leaf Linden	4		Good	
7	Tilia cordata	Little-leaf Linden	5		Good	
8	Tilia cordata	Little-leaf Linden	5		Good	Small mechanical trunk injury but healing
9	Tilia cordata	Little-leaf Linden	5		Good	
10	Tilia cordata	Little-leaf Linden	4		Good	
11	Tilia cordata	Little-leaf Linden	5		Good	
12	Pinus nigra	Austrian Pine	7		Good	
13	Pinus nigra	Austrian Pine	7		Good	
14	Pinus nigra	Austrian Pine	7		Good	
15	Pinus nigra	Austrian Pine	6		Good	
16	Pinus nigra	Austrian Pine	7		Good	
17	Pinus nigra	Austrian Pine	5		Good	
18	Pinus nigra	Austrian Pine	8		Good	
19	Elaeagnus angustifolia	Russian Olive	7	multiple	Fair	Other trunks 4", 2", 2", dense crown, low vigor
20	Elaeagnus angustifolia	Russian Olive	8	multiple	Fair	Other trunks 4", 3", 3", dense crown, low vigor
21	Pinus strobus Eastern	White Pine	8		Good	
22	Pinus nigra	Austrian Pine	5		Good	
23	Pinus nigra	Austrian Pine	7		Good	
24	Pinus nigra	Austrian Pine	7		Good	
25	Pinus nigra	Austrian Pine	6		Good	
26	Pinus nigra	Austrian Pine	5		Good	
27	Pinus nigra	Austrian Pine	5		Good	
28	Pinus nigra	Austrian Pine	5		Good	
29	Pinus nigra	Austrian Pine	5		Good	Terminal leader deformed
30	Pinus nigra	Austrian Pine	5		Good	
31	Pinus nigra	Austrian Pine	6		Good	
32	Pinus nigra	Austrian Pine	6		Good	
33	Pinus nigra	Austrian Pine	4		Good	Terminal leader deformed
34	Picea glauca	White Spruce	4		Good	
35	Picea glauca	White Spruce	4		Good	
36	Picea glauca	White Spruce	4		Good	
37	Picea glauca	White Spruce	4		Good	
38	Picea glauca	White Spruce	4		Good	
39	Picea glauca	White Spruce	4		Good	
40	Pinus nigra	Austrian Pine	5		Good	
41	Pinus nigra	Austrian Pine	4		Good	
42	Pinus nigra	Austrian Pine	5		Good	
43	Pinus nigra	Austrian Pine	3		Good	
44	Pinus nigra	Austrian Pine	5		Good	
45	Pinus nigra	Austrian Pine	5		Good	
46	Pinus nigra	Austrian Pine	3		Good	
47	Pinus nigra	Austrian Pine	5		Good	
48	Malus pumila	Common Apple	9	multiple	Good	Many trunks, some fused
49	Picea pungens	Colorado Blue Spruce	12		Good	
50	Pinus nigra	Austrian Pine	3		Good	
51	Malus pumila	Common Apple	10	twin	Good	Other trunk 7", dense crown, low vigor
52	Malus pumila	Common Apple	12	twin	Good	Other trunk 6"
53	Pinus nigra	Austrian Pine	6		Good	
54	Pinus nigra	Austrian Pine	5		Good	
55	Pinus nigra	Austrian Pine	6		Good	
56	Pinus nigra	Austrian Pine	5		Good	
57	Pinus nigra	Austrian Pine	6		Good	
58	Prunus serotina	Black Cherry	22		Poor	Scaffold branch decay & cavities, lg branch failures
59	Crataegus spp.	Hawthorn	9	twin	Poor	Other trunk 8", being choked by poison ivy
60	Platanus occidentalis	Sycamore	3		Good	
61	Platanus occidentalis	Sycamore	4		Good	
62	Platanus occidentalis	Sycamore	6		Good	
63	Fraxinus americana	White Ash	5		Poor	Emerald ash borer (EAB), scale infestation
64	Fraxinus americana	White Ash	5		Poor	EAB & scale infestation
65	Fraxinus americana	White Ash	4		Dead	
66	Fraxinus americana	White Ash	3		Dead	
67	Fraxinus americana	White Ash	4		Poor	EAB & scale infestation
68	Fraxinus americana	White Ash	5		Poor	EAB & scale infestation
69	Fraxinus americana	White Ash	4		Poor	EAB & scale infestation
70	Fraxinus americana	White Ash	4		Poor	EAB & scale infestation
71	Platanus occidentalis	Sycamore	6		Good	
72	Picea glauca	White Spruce	4		Good	
73	Picea glauca	White Spruce	4		Good	
74	Platanus occidentalis	Sycamore	6		Good	
75	Fraxinus americana	White Ash	4		Poor	EAB & scale infestation

THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION

CITY FILE NUMBER 93-352.2



LOCATION MAP
N.T.S.

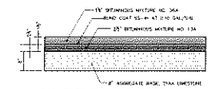
LEGEND

- EXISTING SANITARY SEWER
- EXISTING WATER MAIN
- EXISTING STORM SEWER
- EXIST. YARD CATCH BASIN
- EXISTING GAS MAIN
- EXISTING UNDERGROUND ELECTRIC
- EXISTING UNDERGROUND TELEPHONE
- EXISTING OVERHEAD LINES
- EXISTING LIGHT POLE
- EXISTING SIGN
- PROP. SANITARY SEWER
- PROP. WATER MAIN
- PROP. STORM SEWER
- PROP. YARD CATCH BASIN
- SAND BACKFILL (95% DENSITY)
- PROPOSED LIGHT POLE

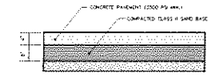
PAVING LEGEND

- 4" BITUMINOUS PAVEMENT
- 1" BITUMINOUS OVERLAY
- CONCRETE SIDEWALK
- BITUMINOUS CURB

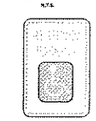
THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION



ON-SITE PAVING SECTION
4" BITUMINOUS PAVEMENT



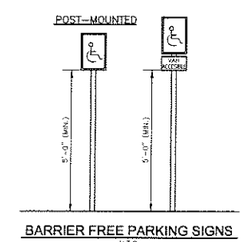
4" CONCRETE SIDEWALK SECTION
N.T.S.



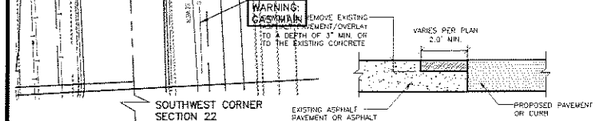
1 (BARRIER FREE) SIGN DETAIL
NOT TO SCALE

2 VAN ACCESSIBLE SIGN DETAIL
NOT TO SCALE

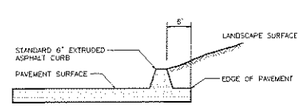
3 FIRE LANE SIGN DETAIL
NOT TO SCALE



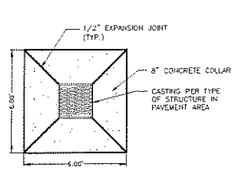
BARRIER FREE PARKING SIGNS
N.T.S.



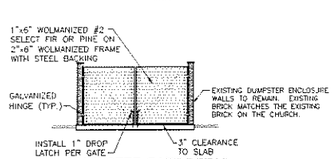
BUTT JOINT DETAIL



ASPHALT CURB DETAIL
N.T.S.



8" CONCRETE APRON
N.T.S.



DUMPSTER GATE DETAIL
N.T.S.

FIRE FLOW
A HYDRANT FLOW TEST WAS PERFORMED AT THIS SITE ON SEPTEMBER 12, 2006 BY THE CITY OF ROCHESTER HILLS. THE FIRE FLOW AT 20 psi WAS FOUND TO BE 2,536 GPM (REQUIRED = 2,250 GPM).

PLANNING NOTES:

1. SITE ZONING: R-4 ONE-FAMILY RESIDENTIAL.
2. THERE IS ONE (1) EXISTING ENCLOSED TRASH RECEPTACLE TO REMAIN AT THE NORTHEASTERLY PORTION OF THE SITE TO SERVICE THE PROPOSED ESTABLISHMENT.
3. SIGNAGE WILL MEET CITY REQUIREMENTS AND WILL REQUIRE A SEPARATE PERMIT FROM THE BUILDING DEPARTMENT. ALL SIGNS REQUIRE PERMITS.
4. THERE IS NO KNOWN INDUSTRIAL WASTE ON SITE.
5. THERE ARE NO PROPANE TANKS ON SITE.
6. THERE ARE THREE (3) EXISTING FIRE HYDRANTS ON THE SITE. THEY ARE LOCATED AT THE MAIN ENTRANCE, BY THE NORTHWEST PARKING ENTRANCE AND ACROSS THE DRIVE FROM THE NORTHWEST CORNER OF THE EXISTING BUILDING. ALL THREE (3) FIRE HYDRANTS WILL REMAIN AT THEIR CURRENT LOCATIONS. THE MAXIMUM DISTANCE FROM ANY POINT ON THE FIRE LANES TO A FIRE HYDRANT SHALL NOT EXCEED 210 FEET.
7. EXTERIOR LIGHTING LOCATIONS ARE AS SHOWN. METHODS OF SHIELDING ARE TO BE ADDRESSED BY THE ELECTRICAL DESIGNER.
8. NET ACREAGE: 5.305 ACRES
9. ALL PARKING SPACES AND MANEUVERING LANES ARE MEASURED FROM FACE OF CURB.
10. ALL LANDSCAPED AREAS ARE MEASURED FROM BACK OF CURB.
11. TREE PROTECTIVE FENCING FOR ALL TREES TO BE PRESERVED WILL BE INSTALLED, INSPECTED AND APPROVED BY THE CITY OF ROCHESTER HILLS LANDSCAPE ARCHITECT.
12. AN EXISTING OVERHEAD UTILITY LINE IS LOCATED ALONG THE SOUTH PROPERTY LINE.
13. THE HEIGHT OF THE PROPOSED BUILDING IS 22'.
14. THE EXISTING PARKING LOT WILL BE REPAIRED AND RESURFACED WITH 1" BITUMINOUS OVERLAY.

PARKING CALCULATIONS:
REQUIRED PARKING:

INSTITUTIONAL:
1 SPACE PER 3 SEATS IN MAIN UNIT OF WORSHIP (CHURCHES OR TEMPLES)

SEATS IN MAIN UNIT OF WORSHIP = 143 SEATS

REQUIRED PARKING TOTAL = 143/3 = 48 SPACES

PROVIDED PARKING TOTAL = 89 SPACES

ACCESSIBLE PARKING REQUIRED = 4 SPACES (INCLUDING 1 VAN ACCESSIBLE)

ACCESSIBLE PARKING PROVIDED = 4 SPACES (INCLUDING 1 VAN ACCESSIBLE)

ACCESSIBLE PARKING SPACE DIMENSIONS = 8' x 18'

LOT COVERAGE CALCULATIONS:
EXISTING CHURCH = 7,652 SQ. FT.
PROPOSED ADDITION = 3,178 SQ. FT.
TOTAL AREA OF BUILDING = 10,830 SQ. FT.

AREA OF SITE = 231,994 SQ. FT.

LOT COVERAGE = 10,830/231,994 = 4.7% < 30% MAX.

FIRE DEPARTMENT NOTES:
THE FOLLOWING SHALL APPLY TO ALL IMPROVEMENTS.

1. FIRE LANES 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. FIRE LANE SIGNS SHALL READ "NO STOPPING, STANDING, PARKING, FIRE LANE", AND SHALL BE IN CONFORMANCE WITH THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. FIRE PREVENTION ORDINANCE CHAPTER 58, SEC. 801.42

2. CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH UFC ARTICLE 87, SECTION 8701

3. 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 THE CITY OF ROCHESTER HILLS BURN PERMIT GUIDELINES. FIRE PREVENTION ORDINANCE CHAPTER 58, SEC. 1102.6.2 & 1102.6.2.3.

UTILITY DISCLAIMER
THE LOCATIONS AND ELEVATIONS OF SOME OF THE EXISTING UNDERGROUND UTILITIES AS SHOWN ON THE SURVEY DRAWING WERE OBTAINED FROM MUNICIPAL AND UTILITY COMPANY RECORDS AND MAPS. THEREFORE, NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

BENCHMARKS

#1 ARROW ON HYDRANT LOCATED IN FRONT OF CHURCH
ELEV. 830.28 (USGS)

#2 ARROW ON HYDRANT LOCATED JUST NORTH OF ENTRANCE DRIVE, APPROXIMATELY 190' EAST OF LIVERNOIS ROAD
ELEV. 826.18 (USGS)

Three full working days before you dig, call the MISS DIG System at: 1-(800)-482-7171

CITY FILE NUMBER 93-352.2

NOWAK & FRAUS
Consulting Engineers
Land Surveyors
Land Planners
46777 Woodward Avenue
Pontiac, Michigan 48342
Tel. (248) 332-7931
Fax. (248) 332-8257

PROJECT
Building Addition

CLIENT
Han-Bit Korean Christian Reformed Church
1849 South Livernois Road
Rochester Hills, MI 48307

Contact:
Rev. Young Ju Oh
(248) 608-9888

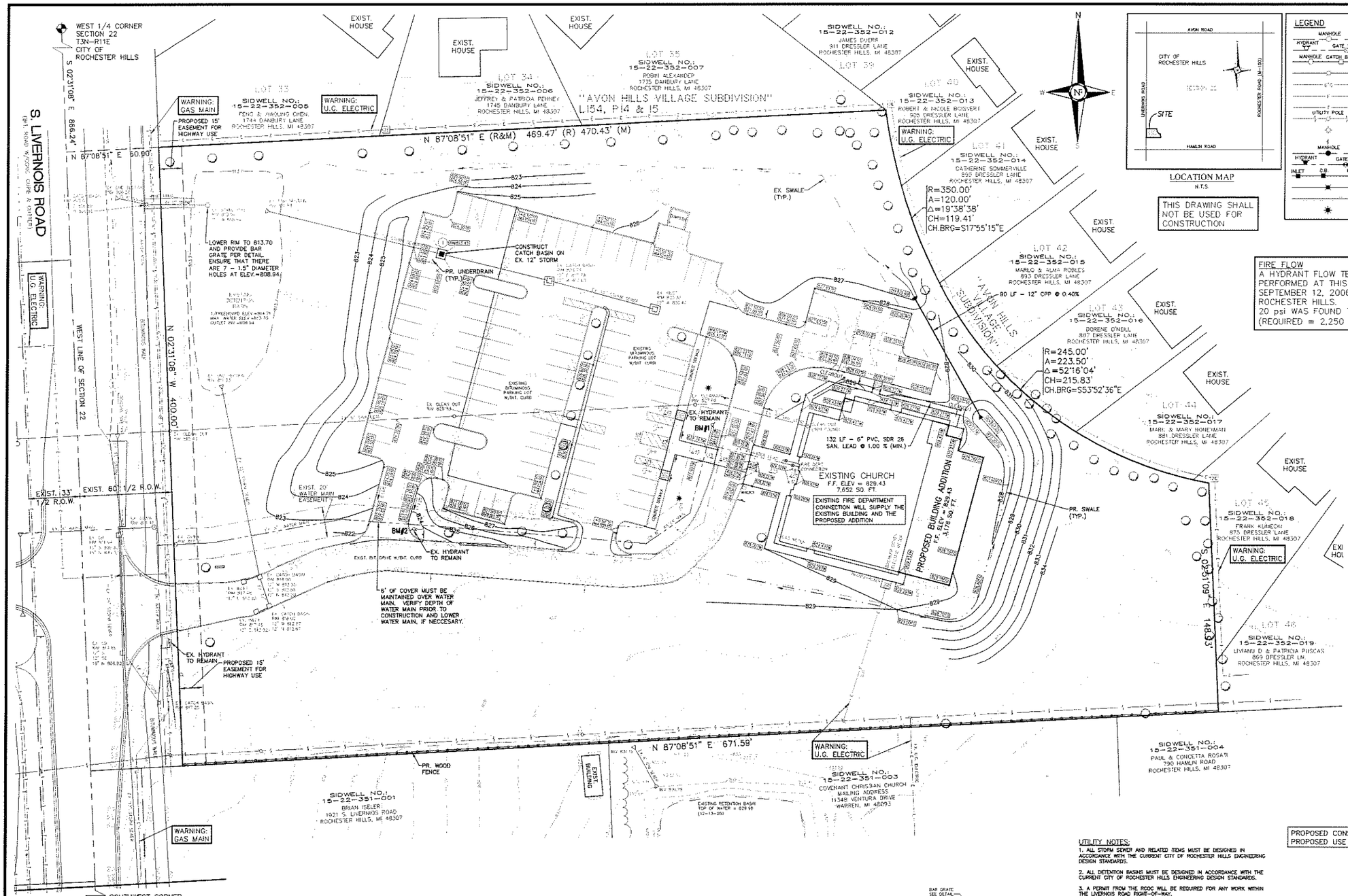
PROJECT LOCATION
Part of the Southwest 1/4 of Section 22 T3N-R11E, City of Rochester Hills, Oakland County, Michigan

SEAL:

DATE/ REVISION
10-16-06 Revised per City
09-13-06 Revised per City

SHEET
Site & Paving Plan

DRAWN BY: REL/GSM
DESIGNED BY: REL
APPROVED BY: JJH
DATE: 06-27-06
SCALE: 1" = 30'
N/F JOB NO. D901
SHEET NO. C-3



LOCATION MAP
N.T.S.

THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION

LEGEND

- MANHOLE — EXISTING SANITARY SEWER
- HYDRANT, GATE VALVE — EXISTING WATER MAIN
- MANHOLE, CATCH BASIN — EXISTING STORM SEWER
- EXIST. YARD CATCH BASIN
- EXISTING GAS MAIN
- EXISTING UNDERGROUND ELECTRIC
- UTILITY POLE — EXISTING UNDERGROUND TELEPHONE
- EXISTING OVERHEAD LINES
- EXISTING LIGHT POLE
- EXISTING SIGN
- MANHOLE — PROP. SANITARY SEWER
- HYDRANT, GATE VALVE — PROP. WATER MAIN
- INLET, C.B., MANHOLE — PROP. STORM SEWER
- PROP. YARD CATCH BASIN
- SAND BACKFILL (95% DENSITY)
- PROPOSED LIGHT POLE

FIRE FLOW
A HYDRANT FLOW TEST WAS PERFORMED AT THIS SITE ON SEPTEMBER 12, 2006 BY THE CITY OF ROCHESTER HILLS. THE FIRE FLOW AT 20 psi WAS FOUND TO BE 2,536 GPM (REQUIRED = 2,250 GPM).

NOWAK & FRAUS

Consulting Engineers
Land Surveyors
Land Planners

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

PROJECT
Building Addition

CLIENT
Han-Bit Korean Christian Reformed Church
1849 South Livernois Road
Rochester Hills, MI 48307

Contact:
Rev. Young Ju Oh
(248) 608-9888

PROJECT LOCATION
Part of the Southwest 1/4 of Section 22 T3N-R11E, City of Rochester Hills, Oakland County, Michigan

SEAL.

DATE/ REVISION

10-16-06 Revised per City
09-13-06 Revised per City

SHEET
Utility & Grading Plan

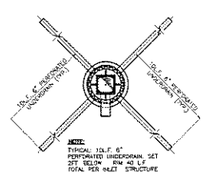
DRAWN BY: REL/GSM
DESIGNED BY: REL
APPROVED BY: JJH
DATE: 06-27-06
SCALE: 1" = 30'
N/F JOB NO. D901
SHEET NO. C-4

PROPOSED CONSTRUCTION TYPE: TYPE IIIB
PROPOSED USE GROUP: A3 (ASSEMBLY)

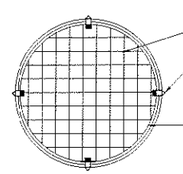
UTILITY NOTES:
1. ALL STORM SEWER AND RELATED ITEMS MUST BE DESIGNED IN ACCORDANCE WITH THE CURRENT CITY OF ROCHESTER HILLS ENGINEERING DESIGN STANDARDS.
2. ALL DETENTION BASINS MUST BE DESIGNED IN ACCORDANCE WITH THE CURRENT CITY OF ROCHESTER HILLS ENGINEERING DESIGN STANDARDS.
3. A PERMIT FROM THE RCOC WILL BE REQUIRED FOR ANY WORK WITHIN THE LIVERNOIS ROAD RIGHT-OF-WAY.

BENCHMARKS
#1 ARROW ON HYDRANT LOCATED IN FRONT OF CHURCH ELEV. 830.28 (USGS)
#2 ARROW ON HYDRANT LOCATED JUST NORTH OF ENTRANCE DRIVE, APPROXIMATELY 190' EAST OF LIVERNOIS ROAD ELEV. 826.18 (USGS)

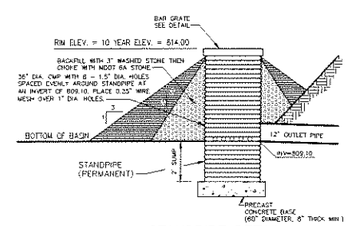
STORM STRUCTURE SCHEDULE
(7) PR. 4' DIAMETER CATCH BASIN WITH 3' SUMP
ELIM CONCP 1040-M1
PR. RIM ELEVATION 823.45
EX. 12" INV E 815.42±
EX. 12" INV W 815.42±



UNDERDRAIN DETAIL
N.T.S.



BAR GRATE DETAIL
N.T.S.

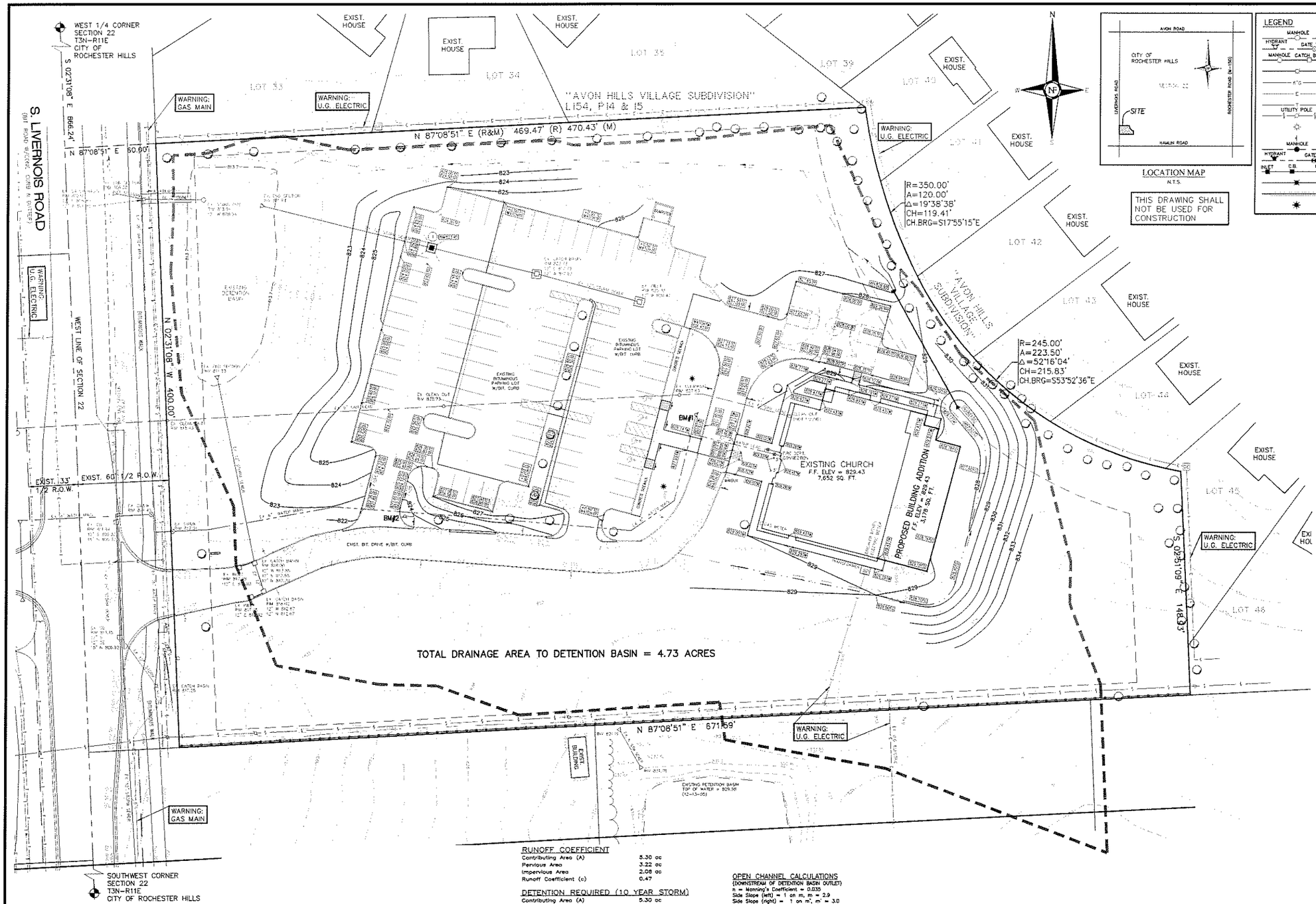


STANDPIPE DETAIL
NOT TO SCALE

UTILITY DISCLAIMER
THE LOCATIONS AND ELEVATIONS OF SOME OF THE EXISTING UNDERGROUND UTILITIES AS SHOWN ON THE SURVEY DRAWING WERE OBTAINED FROM MUNICIPAL AND UTILITY COMPANY RECORDS AND MAPS. THEREFORE, NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

Three full working days before you dig, call the MISS DIG System at : 1-(800)-482-7171

CITY FILE NUMBER 93-352.2



LOCATION MAP
N.T.S.

THIS DRAWING SHALL NOT BE USED FOR CONSTRUCTION

LEGEND

MANHOLE	EXISTING SANITARY SEWER
HYDRANT, GATE VALVE	EXISTING WATER MAIN
MANHOLE, CATCH BASIN	EXISTING STORM SEWER
	EXIST. YARD CATCH BASIN
G	EXISTING GAS MAIN
E	EXISTING UNDERGROUND ELECTRIC
UTILITY POLE	EXISTING UNDERGROUND TELEPHONE
	EXISTING OVERHEAD LINES
	EXISTING LIGHT POLE
	EXISTING SIGN
MANHOLE	PROP. SANITARY SEWER
HYDRANT, GATE VALVE	PROP. WATER MAIN
INLET, C.B., MANHOLE	PROP. STORM SEWER
	PROP. YARD CATCH BASIN
	SAND BACKFILL (95% DENSITY)
	PROPOSED LIGHT POLE

NOWAK & FRAUS

Consulting Engineers
Land Surveyors
Land Planners

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

PROJECT
Building Addition

CLIENT
Han-Bit Korean Christian Reformed Church
1849 South Livernois Road
Rochester Hills, MI 48307

Contact:
Rev. Young Ju Oh
(248) 608-9888

PROJECT LOCATION
Part of the Southwest 1/4 of Section 22 T3N-R11E, City of Rochester Hills, Oakland County, Michigan

SEAL

DATE/ REVISION

10-16-06 Revised per City
09-13-06 Revised per City

SHEET
Drainage Calculations Plan

RUNOFF COEFFICIENT

Contributing Area (A)	5.30 ac
Pervious Area	3.22 ac
Impervious Area	2.08 ac
Runoff Coefficient (c)	0.47

DETENTION REQUIRED (10 YEAR STORM)

Contributing Area (A)	5.30 ac
Runoff Coefficient (c)	0.47
Qo=0.20(A)	1.06 cfs
Qc=Qo/A(c)	0.423 cfs/ac-imp
t=-25+√(6,562.5/Qo)	99.16 min
Vs=[10,500(t)/(t+25)]-40(Qo)(t)	6,698 cf/ac-imp
Vr=Vs(A)(c)	16,685 cf

DETENTION VOLUME PROVIDED

Elevation	Area	Depth	Volume	Cum. Volume
814.00	7,957 sf			
813.00	5,791 sf	1.00 ft	6,874 cf	16,746 cf
812.00	3,889 sf	1.00 ft	4,840 cf	9,872 cf
811.00	2,238 sf	1.00 ft	3,064 cf	5,032 cf
810.00	893 sf	1.00 ft	1,565 cf	1,968 cf
809.10	0 sf	0.90 ft	447 cf	402 cf
			0 cf	0 cf

DETENTION PROVIDED 16,746 CF @ ELEV. 814.00

OPEN CHANNEL CALCULATIONS

(DOWNSTREAM OF DETENTION BASIN OUTLET)

n = Manning's Coefficient = 0.035
Side Slope (left) = 1 on m, m = 2.9
Side Slope (right) = 1 on m', m' = 3.0
b = Width of Bottom = 0.30 feet
y = Depth of Flow = 0.87 feet
A = Area of Channel = 2.52 ft^2
P = Wetted Perimeter of Channel = 5.77 feet
S = Slope of Channel = 2.60%

DETERMINE FLOW IN OPEN CHANNEL
Q = (1.486 / n) * (A^5/3 / P^2/3) * S^1/2
Q = 9.91 CFS

ORIFICE SIZING CALCULATIONS (10 YEAR STORM)

10 year storage elevation	814.00 ft
Outlet elevation	809.10 ft
h	4.90 ft
Qo=	1.06 cfs
Total area of holes=At=Qo/(0.62√2gh)=	0.0963 sf

A 1.5" diameter hole has an opening of 0.01227 sf
# of holes required = At / 0.01227 = 7.8 holes

Therefore, use 8-1.5" diameter holes around the periphery of the standpipe at an elevation of 809.10

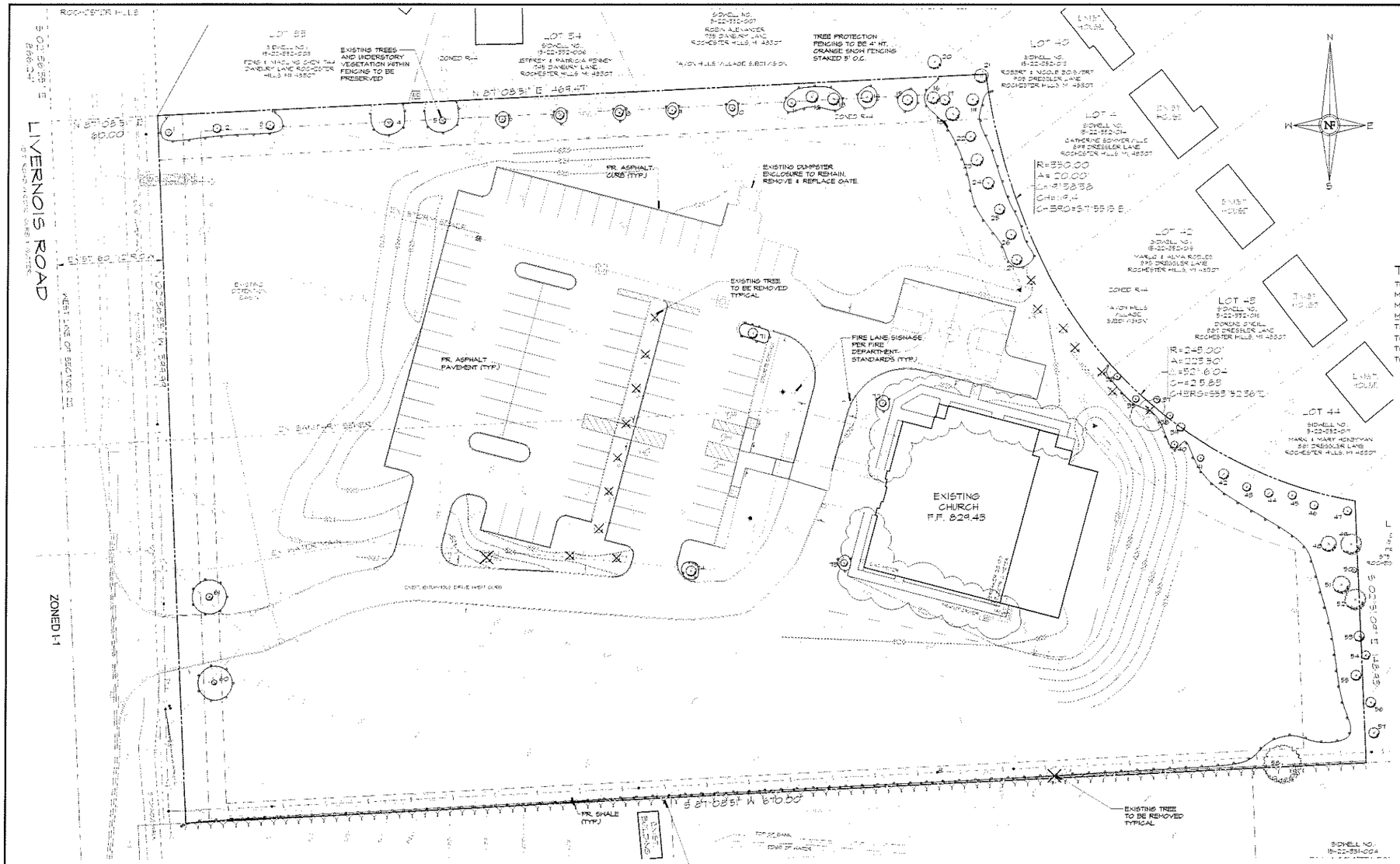
UTILITY DISCLAIMER

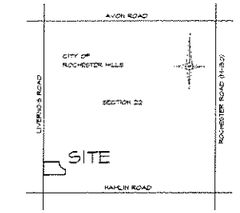
THE LOCATIONS AND ELEVATIONS OF SOME OF THE EXISTING UNDERGROUND UTILITIES AS SHOWN ON THE SURVEY DRAWING WERE OBTAINED FROM MUNICIPAL AND UTILITY COMPANY RECORDS AND MAPS. THEREFORE, NO GUARANTEE IS EITHER EXPRESSED OR IMPLIED AS TO THE COMPLETENESS OR ACCURACY THEREOF. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE EXACT UTILITY LOCATIONS AND ELEVATIONS PRIOR TO THE START OF CONSTRUCTION.

Three full working days before you dig, call the MISS DIG System at : 1-(800)-482-7171

CITY FILE NUMBER 93-352.2

DRAWN BY: REL/GSM
DESIGNED BY: REL
APPROVED BY: JJH
DATE: 06-27-06
SCALE: 1" = 30'
N/F JOB NO. D901
SHEET NO. C-5





LOCATION MAP

1"=2000'

TREE PRESERVATION SUMMARY

TOTAL TREES SURVEYED:	75
MINUS DEAD TREES:	0
MINUS ASH TREES:	-4
MINUS TREES OFF-SITE:	-8
TOTAL REGULATED TREES ON-SITE:	60
TOTAL REGULATED TREES SAVED:	51 (85%)
TOTAL REPLACEMENT CREDITS REQUIRED:	9
TOTAL REPLACEMENT CREDITS PROVIDED:	9

NOTE:
NO DIGGING, GRADING (CUT OR FILL), TRENCHING OR ANY OTHER CONSTRUCTION OPERATION IS PERMITTED WITHIN THE DRIPLINE OF ANY TREE DESIGNATED FOR PRESERVATION.

NOTE:
ALL ASH TREES ARE TO BE DISPOSED OF PER THE DIRECTIONS OF THE CITY OF ROCHESTER HILLS FORESTRY DIVISION.

NOTE:
SEE SHEET L2 FOR TREE REPLACEMENT.

PRESERVATION LEGEND

X: TREE TO BE REMOVED

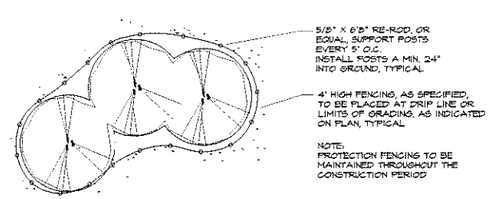
75 ⊙ TREE TO REMAIN

CITY TREE PROTECTION NOTES

1. THE TREE PROTECTION FENCING (TPF) SHALL BE ERECTED PER THE PLANS APPROVED BY THE CITY OF ROCHESTER HILLS PLANNING DEPARTMENT. THE TPF MUST BE IN PLACE AND INSPECTED BY THE CITY LANDSCAPE ARCHITECT PRIOR TO THE START OF ANY EARTHWORK OR CONSTRUCTION OPERATIONS. IT IS THE DEVELOPER'S RESPONSIBILITY TO CONTACT THE CITY PLANNING DEPARTMENT AT 248-656-4660 TO SCHEDULE A TPF INSPECTION. THE TPF SHALL REMAIN IN PLACE THROUGHOUT THE ENTIRE CONSTRUCTION PROCESS OR UNTIL THE CITY AUTHORIZES THE REMOVAL OR ISSUES A FINAL CERTIFICATE OF OCCUPANCY, WHICHEVER OCCURS FIRST.
2. UPON COMPLETION OF GRADING AND THE INSTALLATION OF THE INFRASTRUCTURE A SECOND INSPECTION OF THE TPF AND THE TREES DESIGNATED FOR PRESERVATION IS REQUIRED BY THE CITY OF ROCHESTER HILLS LANDSCAPE ARCHITECT PRIOR TO THE START OF ANY ADDITIONAL CONSTRUCTION. IT IS THE DEVELOPER'S RESPONSIBILITY TO CONTACT THE CITY PLANNING DEPARTMENT AT 248-656-4660 TO SCHEDULE THIS INSPECTION.
3. UPON COMPLETION OF ALL CONSTRUCTION AND PRIOR TO THE REMOVAL OF THE TPF THE CITY LANDSCAPE ARCHITECT MUST INSPECT ALL TREES DESIGNATED TO BE PRESERVED. THE LANDSCAPE PERFORMANCE BOND WILL NOT BE RELEASED UNTIL THIS INSPECTION IS COMPLETE AND ALL RELATED ISSUES ARE RESOLVED. IT IS THE DEVELOPER'S RESPONSIBILITY TO SCHEDULE THIS INSPECTION.
4. A FINAL INSPECTION BY THE CITY LANDSCAPE ARCHITECT IS REQUIRED AT THE END OF THE WARRANTY AND MAINTENANCE PERIOD. THE LANDSCAPE MAINTENANCE BOND WILL NOT BE RELEASED UNTIL THE INSPECTION IS COMPLETE AND ALL RELATED ISSUES ARE RESOLVED. IT IS THE DEVELOPER'S RESPONSIBILITY TO CONTACT THE CITY PLANNING DEPARTMENT AT 248-656-4660 TO SCHEDULE THIS INSPECTION.
5. THE TREE CONSERVATION ORDINANCE PROHIBITS ANY CONSTRUCTION OR DEVELOPMENT ACTIVITIES WITHIN THE DRIPLINE OF REGULATED TREES NOT APPROVED FOR REMOVAL INCLUDING BUT NOT LIMITED TO LAND CLEARING, GRUBBING, TRENCHING, GRADING OR FILLING. NO PERSON SHALL PLACE ANY SOLVENTS, BUILDING MATERIAL, CONSTRUCTION EQUIPMENT, SOIL DEPOSITS, OR HARMFUL MATERIALS WITHIN THE DRIPLINE LIMIT OF TREES DESIGNATED FOR PRESERVATION.
6. PROPOSED GRADES ARE TO MATCH THE EXISTING ELEVATIONS OUTSIDE THE LIMITS OF THE TPF. NO GRADING EITHER CUT OR FILL IS PERMITTED WITHIN THE DRIP LINE OF ANY TREE DESIGNATED FOR PRESERVATION.
7. DURING THE CONSTRUCTION PROCESS NO PERSON SHALL ATTACHED ANY DEVICE OR WIRE/CABLE/CORD/ROPE TO AN EXISTING TREE DESIGNATED FOR PRESERVATION.
8. ALL UTILITY SERVICE REQUESTS MUST INCLUDE NOTIFICATON TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE THE TPF.
9. SHALES SHALL BE ROUTED TO AVOID THE AREA WITHIN THE DRIPLINE OF ANY TREE DESIGNATED FOR PRESERVATION. SHALES SHALL CONSTRUCTED SO AS NOT TO DIRECT ANY ADDITIONAL FLOW INTO THE DRIPLINE OF A TREE DESIGNATED FOR PRESERVATION.
10. IF TREE PROTECTION CANNOT BE MAINTAINED FOR A TREE THROUGHOUT ENTIRE PERIOD REQUIRED, THE REPLACEMENT OF THAT TREE WILL BE REQUIRED ON AN INCH FOR INCH BASIS PRIOR TO THE ISSUANCE OF A CERTIFICATE OF OCCUPANCY.
11. REGULATED TREES LOCATED OFF-SITE ON ADJACENT PROPERTIES THAT MAY BE AFFECTED BY CONSTRUCTION OPERATIONS MUST BE PROTECTED AS DESCRIBED HEREIN.
12. THE TPF SHALL CONSIST OF A FOOT HIGH ORANGE SNOW FENCING TO BE INSTALLED AROUND THE DRIP LINE OF ALL DESIGNATED TREES TO BE SAVED. THIS FENCING SHALL BE SUPPORTED BY 6 FOOT METAL T-BAR POSTS 5 FEET ON CENTER AND DRIVEN A MIN. OF 24" INTO GROUND. THE TPF SHALL REMAIN UPRIGHT AND SECURELY IN PLACE FOR THE REQUIRED TIME AS SPECIFIED ABOVE.

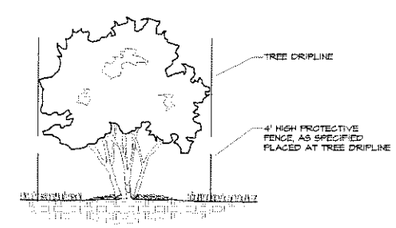
GENERAL TREE PROTECTION NOTES

1. APPROVED TREE PROTECTION SHALL BE ERECTED PRIOR TO THE START OF CONSTRUCTION ACTIVITIES, AND SHALL REMAIN IN PLACE UNTIL THE IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
2. ALL UNDERSTORY VEGETATION WITHIN THE LIMITS OF PROTECTIVE FENCING SHALL BE PRESERVED.
3. NO PERSON MAY CONDUCT ANY ACTIVITY WITHIN THE DRIP LINE OF ANY TREE DESIGNATED TO REMAIN, INCLUDING BUT NOT LIMITED TO, PLACING SOLVENTS, BUILDING MATERIALS, CONSTRUCTION EQUIPMENT, OR SOIL DEPOSITS WITHIN THE DRIP LINE.
4. WHERE GROUPINGS OF TREES ARE TO REMAIN, TREE FENCING SHALL BE PLACED AT THE LIMITS OF GRADING LINE.
5. DURING CONSTRUCTION NO PERSON SHALL ATTACH ANY DEVICE OR WIRE TO ANY TREE SCHEDULED TO REMAIN.
6. ALL UTILITY SERVICE REQUESTS MUST INCLUDE NOTIFICATION TO THE INSTALLER THAT PROTECTED TREES MUST BE AVOIDED. ALL TRENCHING SHALL OCCUR OUTSIDE OF THE PROTECTIVE FENCING.
7. SHALES SHALL BE ROUTED TO AVOID THE AREA WITHIN THE DRIP LINES OF PROTECTED TREES.
8. TREES LOCATED ON ADJACENT PROPERTIES THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED.
9. ROOT ZONES OF PROTECTED TREES SHOULD BE SURROUNDED WITH SUNDILY STAKED FENCING.
10. THE PARKING OF IDLE AND RUNNING EQUIPMENT SHALL BE PROHIBITED UNDER THE DRIP LINE OF PROTECTED TREES.
11. THE STRIPPING OF TOPSOIL FROM AROUND PROTECTED TREES SHALL BE PROHIBITED.
12. ALL TREES TO BE REMOVED SHALL BE CUT AWAY FROM TREES TO REMAIN.
13. THE GRUBBING OF UNDERSTORY VEGETATION WITHIN CONSTRUCTION AREAS SHOULD BE CLEARED BY CUTTING VEGETATION AT THE GROUND WITH A CHAIN SAW OR MINIMALLY WITH A HYDRO-AXE.
14. THE CONTRACTOR IS RESPONSIBLE FOR THE REPLACEMENT PER ORDINANCE GUIDELINES, FOR THE DAMAGE OR REMOVAL OF ANY TREE DESIGNATED TO REMAIN.
15. TREES TO BE REMOVED SHALL BE FIELD VERIFIED, EVALUATED AND FLAGGED FOR REMOVAL BY THE LANDSCAPE ARCHITECT OR FORESTER, ONLY AS DIRECTED BY THE OWNER OR OWNERS REPRESENTATIVE.
16. TREE PROTECTION FENCE SHALL CONSIST OF STAKED, 4' HT. ORANGE PLASTIC SNOW FENCE, OR SIMILAR STURDY MATERIAL, ACCEPTABLE TO THE CITY.



TREE PROTECTION DETAIL-PLAN

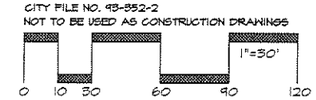
NTS



TREE PROTECTION DETAIL-SECTION

NTS

CITY FILE NO. 93-352-2
NOT TO BE USED AS CONSTRUCTION DRAWINGS



NOWAK & FRAUS

Consulting Engineers
Land Surveyors
Land Planners

1310 N. Stephenson Highway
Royal Oak, MI 48067-1508

Tel. (248) 399-0886
Fax. (248) 399-0805

SEAL

PROJECT
Building Addition

CLIENT
Han-Bit Korean Christian Reformed Church
1849 South Livernois Rd.
Rochester Hills, MI 48307

CONTACT:
Rev. Young Ju Oh
Tel:(248) 608-9888

PROJECT LOCATION
Part of the Southwest 1/4 of Section 22
T3N-R11E,
City of Rochester Hills ,
Oakland Co., Michigan

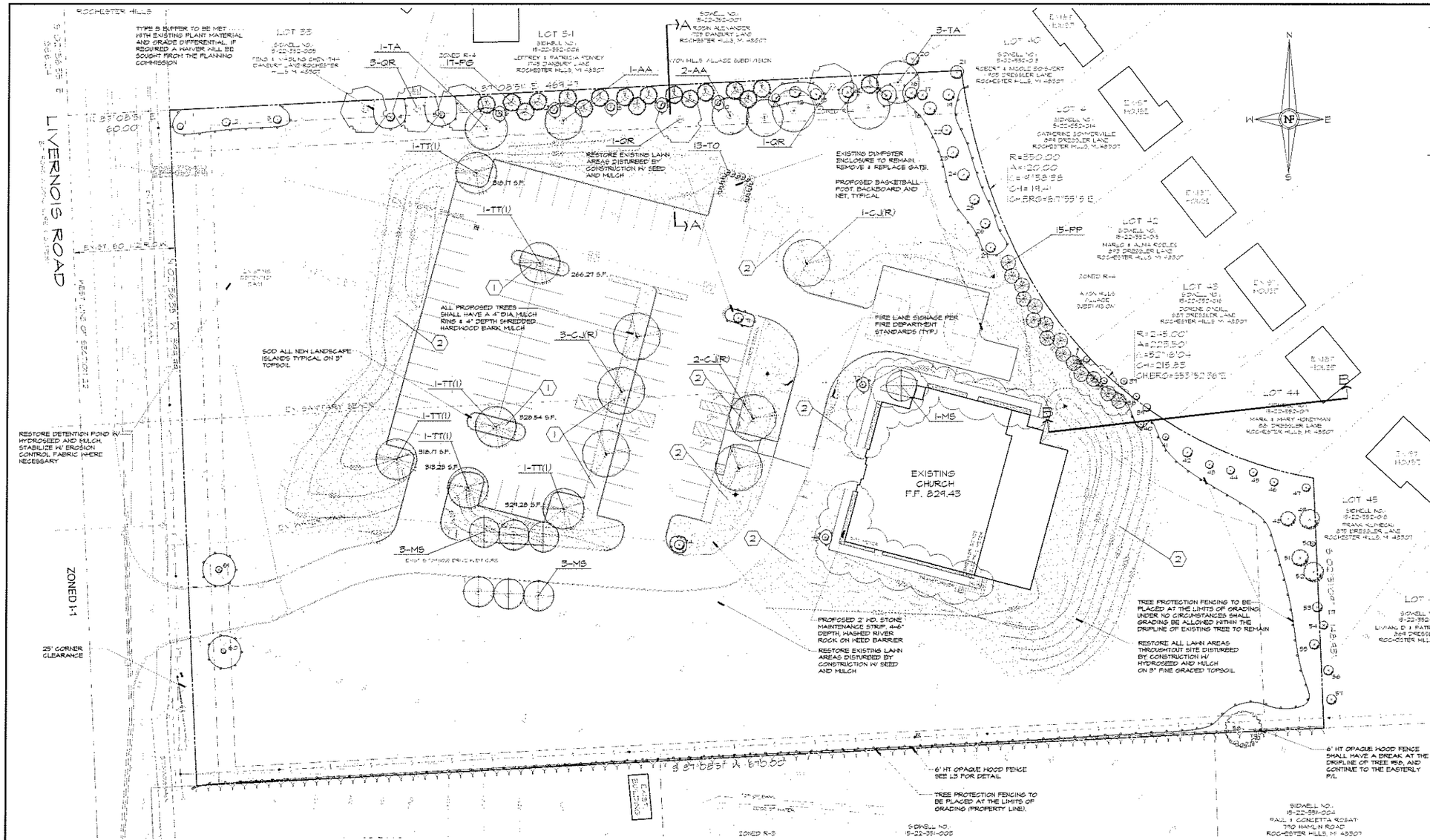
SHEET
Tree Preservation Plan

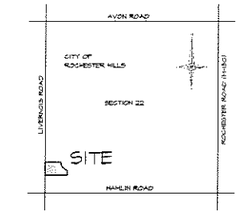
3 WORKING DAYS
BEFORE YOU DIG
CALL MISS DIG.
1-800-482-7171

DATE:	REVISION:
04/14/05	REVISED PER CITY REVIEW
12/14/05	REVISED PER CITY REVIEW
06/27/06	REVISED PER CLIENT
04/09/08	REVISED PER CITY REVIEW

DRAWN BY: A. Goldgraber
DESIGNED BY: G. Ostrowski
APPROVED BY: G. Ostrowski
DATE: 07-13-05
SCALE: 1" = 30'

N/F JOB NO. D901
SHEET NO. L1





LOCATION MAP
1"=2000'

LANDSCAPE REQUIREMENTS

EXISTING SITE ZONING: R-3, ONE FAMILY RESIDENTIAL DISTRICT
EXISTING SITE AREA: 213,043.19 S.F. OR 5.31 ACRES (GROSS)

BUFFER REQUIREMENT

TYPE 'B' BUFFER IS REQUIRED ADJACENT NORTH, EAST, AND SOUTH PROPERTY MINIMUM 25' WIDTH, 6' HT OPAQUE SCREENWALL OR FENCE AND PLANTINGS TO MEET THE REQUIRED IVO

EXISTING AND PROPOSED SUPPLEMENTAL TREES AND ELEVATION DIFFERENTIAL SHALL BE USED TO SATISFY BUFFER REQUIREMENTS ALONG N. AND E. P/L. ALONG S. P/L A 6' HT FENCE SHALL BE USED TO FULFILL BUFFER REQUIREMENTS A WAIVER WILL BE SOUGHT FOR 6' OPAQUE WALL OR FENCE ALONG NORTH BUFFER AND EAST BUFFER, AND A WAIVER FOR THE IVO PLANTINGS ALONG THE SOUTH P/L DUE TO EXISTING SETBACK OR PARKING AND BUILDING AND THE PRESENCE OF OVERHEAD UTILITY LINES

PARKING LOT LANDSCAPE REQUIREMENTS

AREA REQUIRED:
150 S.F. OF LANDSCAPE AREA FOR EACH 10 SPACES
89 PKG SPACES/10 = 8.9 OR 9
9 x 150 S.F. = 1,350 S.F. LANDSCAPE AREA REQUIRED
AREA PROVIDED: 1,545.12 S.F.

REQUIRED PARKING LOT TREES:
1 MEDIUM DECIDUOUS TREE PER 300 S.F. OF REQUIRED AREA OR 1 TREE PER ISLAND WHICHEVER IS GREATER.
1,350 S.F. / 300 S.F. = 4.5 OR 5 TREES
6 PARKING ISLANDS PROVIDED EQUALS 6 TREES REQUIRED

TREE PRESERVATION SUMMARY

TOTAL TREES SURVEYED:	75
MINUS DEAD TREES:	0
MINUS ASH TREES:	-9
MINUS TREES OFF-SITE:	-6
TOTAL REGULATED TREES ON-SITE:	60
TOTAL REGULATED TREES SAVED:	51 (85%)
TOTAL REPLACEMENT CREDITS REQUIRED:	9
TOTAL REPLACEMENT CREDITS PROVIDED:	9

GROUNDCOVER KEY

(1) TYPICAL SOD LAWN AREAS, SOWN ON 3" TOPSOIL MIN.
(2) TYPICAL SEED LAWN AREAS, SOWN ON 3" TOPSOIL MIN.

GENERAL GRADING NOTES:

1. PROVIDE POSITIVE DRAINAGE AWAY FROM BUILDINGS, TYPICAL.
2. PROVIDE POSITIVE DRAINAGE ON ALL WALKS.
3. CONTRACTOR TO CONTACT CIVIL ENGINEER OR LANDSCAPE ARCHITECT WITH ANY DISCREPANCIES BETWEEN GRADES SHOWN AND ACTUAL GRADES ON-SITE. DO NOT MAKE ADJUSTMENTS WITHOUT THE APPROVAL OF THE CIVIL ENGINEER OR LANDSCAPE ARCHITECT.
4. SEE CIVIL ENGINEERING DRAWINGS FOR PROPOSED GRADES FOR ALL ROADS, CURBS, BUILDINGS, UTILITIES, ETC.

NOTES:

SEE SHEET L1 FOR TREE PROTECTION DETAILS AND TRANSPLANT DETAIL

SEE SHEET L3 FOR MASTER TREE LIST, INCLUDING SIZE, QUANTITY AND TYPE

CITY OF ROCHESTER HILLS NOTES

1. 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 AND THE FORESTRY DIVISION MUST INSPECT ALL RIGHT-OF-WAYS 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.
2. 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.
3. 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.
4. PRIOR APPROVAL IS REQUIRED TO PLANT ANY TREE OR SHRUB IN THE PUBLIC RIGHT-OF-WAY.
5. 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.
6. 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.
7. REPLACEMENT TREES MAY NOT BE PLANTED WITHIN THE DRIP LINE OF EXISTING TREES.

NOTES:

PRIOR TO THE ISSUANCE OF A LAND IMPROVEMENT PERMIT, ALL TREE PROTECTION FENCING MUST BE INSTALLED, INSPECTED AND APPROVED BY THE CITY'S LANDSCAPE ARCHITECT.

PRIOR TO THE ISSUANCE OF A LAND IMPROVEMENT PERMIT FOR THIS DEVELOPMENT, A PERFORMANCE BOND MUST BE POSTED.

CITY FILE NO. 93-352-2
NOT TO BE USED AS CONSTRUCTION DRAWINGS

1"=30'
0 10 30 60 90 120

NOWAK & FRAUS
Consulting Engineers
Land Surveyors
Land Planners
1310 N. Stephenson Highway
Royal Oak, MI 48067-1508
Tel. (248) 399-0886
Fax. (248) 399-0805

SEAL

PROJECT:
Building Addition

CLIENT:
Han-Bit Korean Christian Reformed Church
1849 South Livernois Rd.
Rochester Hills, MI 48307
CONTACT:
Rev. Young Ju Oh
Tel:(248) 608-9888

PROJECT LOCATION
Part of the Southwest 1/4 of Section 22
T3N-R11E,
City of Rochester Hills,
Oakland Co., Michigan

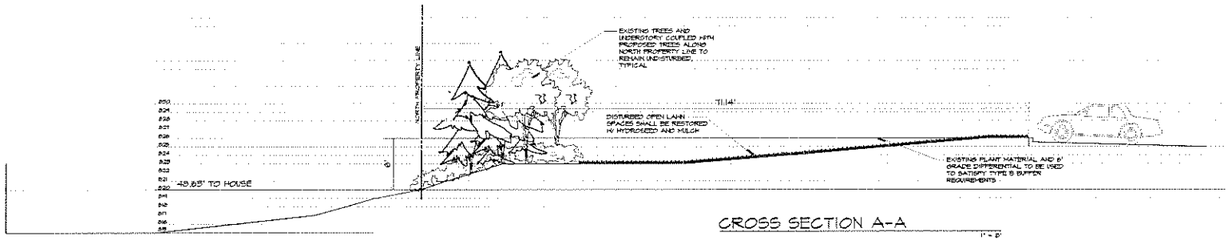
SHEET
Landscape Plan

3 WORKING DAYS
BEFORE YOU DIG CALL MISS DIG.
1-800-482-7171

DATE:	REVISION:
04/14/05	REVISED PER CITY REVIEW
12/14/05	REVISED PER CITY REVIEW
06/27/06	REVISED PER CLIENT
04/13/06	REVISED PER CITY REVIEW

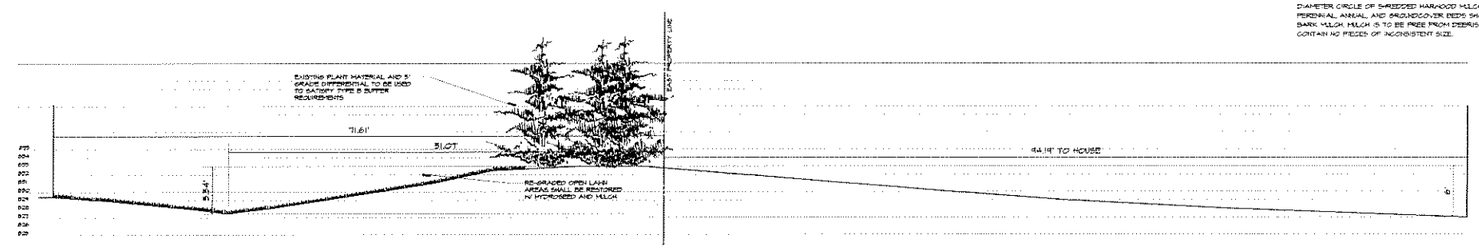
DRAWN BY: A. Goldgraber
DESIGNED BY: G. Ostrowski
APPROVED BY: G. Ostrowski
DATE: 07-13-05
SCALE: 1" = 30'

N/F JOB NO. D901
SHEET NO. L2



CROSS SECTION A-A

1" = 8'



CROSS SECTION B-B

1" = 8'

MISCELLANEOUS NOTES

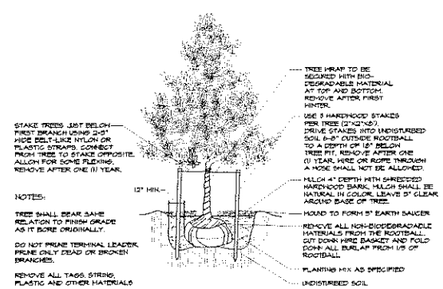
1. SEE PLANT SCHEDULE FOR SPECIES, SPACING AND SIZE.
2. TREE PROTECTION FENCING SHALL BE INSTALLED AND INSPECTED AS NECESSARY PRIOR TO THE START OF CONSTRUCTION.
3. ALL PLANT BEDS SHALL BE EDGED WITH SPADE CUT EDGE, TYPICAL.
4. ALL SOD LAWN AREAS SHALL BE FINE-GRADED, FERTILIZED AND SODDED W/ GLASS A BLENDED BLUEGRASS SOD, GROWN ON TOPSOIL, ON A MINIMUM OF 3" PREPARED TOPSOIL. PREPARED TOPSOIL SHALL CONSIST OF SCREENED ORGANIC TOPSOIL, WITH AMENDMENTS AS NECESSARY.
5. ALL LANDSCAPE ISLANDS SHALL BE BACKFILLED WITH A SAND MIXTURE TO FACILITATE DRAINAGE.
6. ALL PROPOSED LANDSCAPE ISLANDS SHALL BE CURBED.
7. ALL LANDSCAPE AREAS SHALL BE IRRIGATED, WITH AUTOMATIC UNDERGROUND IRRIGATION SYSTEM.
8. OVERHEAD UTILITY LINES AND POLES TO BE RELOCATED SHALL BE COORDINATED AND DIRECTED BY THE UTILITY COMPANY OF RECORD.
9. EVERGREEN AND CANOPY TREES SHALL BE PLANTED A MINIMUM OF 10' FROM A FIRE HYDRANT AND MANHOLE, AND 15' FROM OVERHEAD WIRES.
10. ALL PLANT MATERIAL SHALL BE GUARANTEED FOR A PERIOD OF TWO (2) YEARS AFTER PLANTING AND SHALL BE INSTALLED AND MAINTAINED ACCORDING TO THE CITY OF ROCHESTER HILLS STANDARDS.
11. ALL PROPOSED PARKING LOT TREES SHALL BE PLANTED A MINIMUM OF 4' FROM THE BACK OF CURB AND PROPOSED HOLES.
12. ALL TREE AND SHRUB PLANTING BEDS SHALL BE MULCHED WITH SHREDDED HARDWOOD BARK, SPREAD TO A MINIMUM DEPTH OF 4". ALL LAWN AREA TREES SHALL HAVE A 4' DIAMETER CIRCLE OF SHREDDED HARDWOOD MULCH 3" MINIMUM AWAY FROM TRUNK. ALL PERENNIAL, ANNUAL, AND GROUNDCOVER BEDS SHALL RECEIVE 2-3" OF DARK COLORED BARK MULCH. MULCH IS TO BE FREE FROM DEBRIS AND FOREIGN MATERIAL AND SHALL CONTAIN NO PIECES OF INCONSISTENT SIZE.

GENERAL LANDSCAPE NOTES

1. LANDSCAPE CONTRACTOR SHALL VISIT SITE, INSPECT EXISTING CONDITIONS AND REVIEW PROPOSED PLANTING AND RELATED WORK. IN CASE OF DISCREPANCY BETWEEN PLAN AND PLANT LIST, THE PLAN SHALL GOVERN QUANTITIES. CONTACT THE LANDSCAPE ARCHITECT WITH ANY CONCERNS.
2. THE CONTRACTOR SHALL VERIFY LOCATIONS OF ALL ON-SITE UTILITIES PRIOR TO BEGINNING CONSTRUCTION ON HIS/HER PHASE OF WORK. ANY DAMAGE OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
3. THE CONTRACTOR SHALL COORDINATE ALL RELATED ACTIVITIES WITH OTHER TRADES, AND SHALL REPORT ANY UNACCEPTABLE SITE CONDITIONS TO THE OWNER'S REPRESENTATIVE PRIOR TO COMMENCEMENT.
4. PLANTS SHALL BE FULL WELL-BRANCHED, AND IN HEALTHY VIGOROUS GROWING CONDITION.
5. PLANTS SHALL BE WATERED BEFORE AND AFTER PLANTING IS COMPLETE.
6. ALL TREES MUST BE STAKED, FERTILIZED AND MULCHED AND SHALL BE GUARANTEED TO EXHIBIT A NORMAL GROWTH CYCLE FOR AT LEAST TWO (2) YEARS FOLLOWING PLANTING.
7. ALL MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED IN THE MOST RECENT EDITION OF THE "AMERICAN STANDARDS FOR NURSERY STOCK".
8. CONTRACTOR WILL SUPPLY FINISHED GRADE AND EXCAVATE AS NECESSARY TO SUPPLY PLANT MIX DEPTH IN ALL PLANTING BEDS AS INDICATED IN PLANT DETAILS AND A DEPTH OF 4" IN ALL LAWN AREAS.
9. PROVIDE CLEAN BACKFILL SOIL USING MATERIAL STOCKPILED ON-SITE. SOIL SHALL BE SCREENED AND FREE OF DEBRIS, FOREIGN MATERIAL AND STONE.
10. SLOW-RELEASE FERTILIZER SHALL BE ADDED TO THE PLANT PITS BEFORE BEING BACKFILLED. APPLICATION SHALL BE AT THE MANUFACTURERS RECOMMENDED RATES.
11. AMENDED PLANT MIX (PREPARED TOPSOIL) SHALL CONSIST OF 1/3 SCREENED TOPSOIL, 1/3 SAND, AND 1/3 PEAT, MIXED WELL AND SPREAD TO A DEPTH AS INDICATED IN PLANTING DETAILS.
12. ALL PLANTINGS SHALL BE MULCHED WITH SHREDDED HARDWOOD BARK, SPREAD TO A DEPTH OF 4" FOR TREES AND SHRUBS, AND 2" ON ANNUALS, PERENNIALS, AND GROUNDCOVER PLANTINGS. MULCH SHALL BE FREE FROM DEBRIS AND FOREIGN MATERIAL, AND PIECES ON INCONSISTENT SIZE.
13. NO SUBSTITUTIONS OR CHANGES OF LOCATION, OR PLANT TYPE SHALL BE MADE WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT OR OWNERS REPRESENTATIVE.
14. THE LANDSCAPE ARCHITECT SHALL BE NOTIFIED OF ANY DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS PRIOR TO INSTALLATION.
15. THE LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL PLANT MATERIAL IN A VERTICAL CONDITION THROUGHOUT THE GUARANTEED PERIOD.
16. THE LANDSCAPE ARCHITECT OR OWNERS REPRESENTATIVE SHALL HAVE THE RIGHT TO REJECT ANY WORK OR MATERIAL THAT DOES NOT MEET THE REQUIREMENTS OF THE PLANS AND/OR SPECIFICATIONS.
17. THE LANDSCAPE CONTRACTOR SHALL SEED AND MULCH OR SOD (AS INDICATED ON PLANS) ALL AREAS DESIGNATED AS SUCH ON THE PLANS, THROUGHOUT THE CONTRACT LIMITS. FURTHER, THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING AREAS DISTURBED DURING CONSTRUCTION, NOT IN THE CONTRACT LIMITS, TO EQUAL OR GREATER CONDITION.
18. ALL LANDSCAPE AREAS SHALL HAVE PROPER DRAINAGE THAT PREVENTS EXCESSIVE WATER FROM PONDING ON LAWN AREAS OR AROUND TREES AND SHRUBS.
19. ALL LANDSCAPE AREAS SHALL BE IRRIGATED WITH AN AUTOMATIC UNDERGROUND SYSTEM.

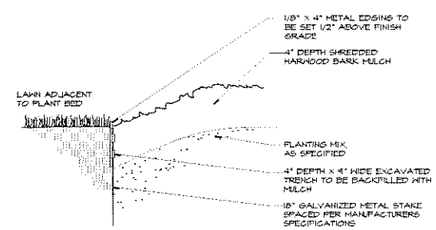
EVERGREEN TREE PLANTING DETAIL

NTS



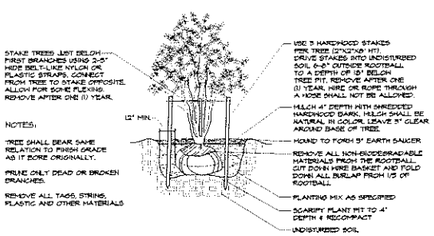
DECIDUOUS TREE PLANTING DETAIL

NTS



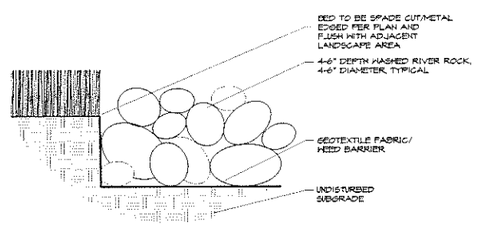
METAL EDGING DETAIL

NTS



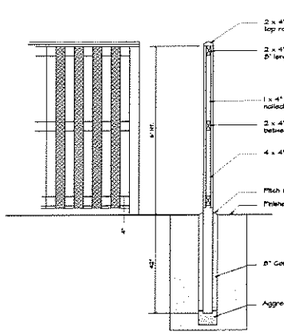
MULTI-STEM TREE PLANTING DETAIL

NTS



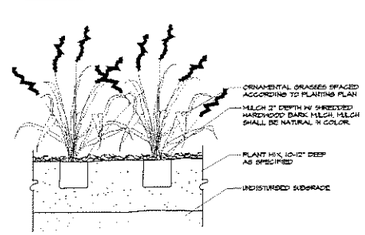
COBBLESTONE MULCH DETAIL

NTS



6' HT OPAQUE WOOD FENCE DETAIL

NTS



ORNAMENTAL GRASS PLANTING DETAIL

NTS

SOD NOTE:

ALL LAWN AREAS DESIGNATED TO BE SODDED, SHALL BE SODDED WITH A SPECIES NORMALLY GROWN IN OAKLAND COUNTY. ALL SOD SHALL BE PLACED ON 3" PREPARED TOPSOIL, AND WATERED DAILY UNTIL ESTABLISHED.

SEED NOTE:

ALL LAWN AREAS DESIGNATED TO BE SEEDED, SHALL BE HYDROSEEDED WITH SPECIES NORMALLY GROWN IN OAKLAND COUNTY. IN AREAS SUBJECT TO EROSION LAWN SHALL BE SODDED & STAKED UNTIL ESTABLISHED. ALL SEED SHALL BE APPLIED OVER 3" PREPARED TOPSOIL, AND SHALL BE KEPT MOIST AND WATERED DAILY UNITL ESTABLISHED.

LOW-GROW LAWN MIX:

ALL LAWN AREAS DESIGNATED TO BE SEEDED, SHALL BE HYDROSEEDED WITH LOW-GROW LAWN SEED MIX, AT A RATE OF 5 LBS/1,000 S.F.
SEED AVAILABLE FROM:
NATIVESCAPES, LLC
(T) 1-517-456-7248
* MIX IS COMPRISED OF
22.8% PENNLAWN RED FESCUE
22.5% CREEPING RED FESCUE
21.7% CHEWINGS FESCUE
11.8% VICTORY II CHEWINGS FESCUE
9.8% SPARTAN HEAD FESCUE
9.9% AZAY SHEEPS FESCUE

PLANT MIX SPECIFICATION

PLANT MIX SHALL BE PROVIDED FOR ALL PROPOSED PLANTINGS
PLANT MIX SHALL BE COMPOSED OF:
1/3 SCREENED TOPSOIL
1/3 CLEAN COARSE SAND
1/3 PEAT MOSS
PLANT MIX FOR ANNUAL, PERENNIAL AND GROUNDCOVER PLANTINGS SHALL INCLUDE AMENDMENT WITH FERTILIZER PER THE RATES DESCRIBED BELOW:

FERTILIZERS FOR ANNUAL, PERENNIAL AND GROUNDCOVER PLANTINGS:
"ROSMARINE", OR APPROVED EQUAL APPLIED AT THE MANUFACTURERS RECOMMENDED RATES
15-15-15 FERTILIZER; APPLIED AT THE MANUFACTURERS RECOMMENDED RATES
BONE MEAL; APPLIED AT 5 LBS PER CUBIC YARD OF SOIL MIX.

MASTER PLANT SCHEDULE

BUFFER TREES AND SHRUBS

KEY	QTY	BOTANICAL/COMMON NAME	SIZE	SPACING	ROOT	UNIT COST	TOTAL
TREES							
AA	5	Acer x freemanii 'Armstrong' Armstong Maple	3.5" CAL	SEE PLAN	B&B	$450	$1,250
MS	7	Malus 'Spring Snow' Spring Snow Crabapple	2" CAL	SEE PLAN	B&B	$275	$1,925
PG	17	Picea glauca 'Densata' Black Hills Spruce	12' HT	10' OC	B&B	$450	$7,650
PP	19	Picea pungens Colorado Green Spruce	14' HT	10' OC	B&B	$650	$12,350
QR	5	Quercus rubra Red Oak	3.5" CAL	25' OC	B&B	$450	$2,250
TA	4	Tilia americana 'Redmond' Redmond Linden	3.5" CAL	VARIES	B&B	$450	$1,800
SHRUBS							
TO	13	Thuja occidentalis 'Techny' Mission Arborvitae	5' HT	36" OC	B&B	$125	$1,625
MISCELLANEOUS							
442 SQ YD		SOD GROWN ON TOPSOIL	SYD			$2.50	$1,250
5,215 SQ YD		HYDROSEED AND MULCH	SYD			$1.00	$5,215
						TOTAL	$32,745

ISLAND TREES

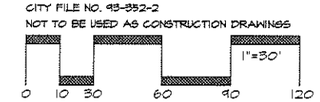
KEY	QTY	BOTANICAL/COMMON NAME	SIZE	SPACING	ROOT	UNIT COST	TOTAL
TREES							
TT	6	Tilia tomentosa 'Sterling' Sterling Silver Linden	2" CAL	SEE PLAN	B&B	$275	$1,650
						TOTAL	$1,650

REPLACEMENT TREES

KEY	QTY	BOTANICAL/COMMON NAME	SIZE	SPACING	ROOT	UNIT COST	TOTAL
TREES							
CJ	6	Cercidiphyllum japonicum Katsuratree	2.5" CAL.	25' OC	B&B	$375	$2,250
						TOTAL	$2,250

BUFFER TREES	$32,520
ISLAND TREES	$1,650
REPLACEMENT TREES	$2,250
GRAND TOTAL	$36,845

CITY FILE NO. 93-352-2
NOT TO BE USED AS CONSTRUCTION DRAWINGS



NOWAK & FRAUS
Consulting Engineers
Land Surveyors
Land Planners
1310 N. Stephenson Highway
Royal Oak, MI 48067-1508
Tel. (248) 399-0886
Fax. (248) 399-0805

SEAL

PROJECT
Building Addition

CLIENT
Han-Bit Korean Christian Reformed Church
1849 South Livernois Rd.
Rochester Hills, MI 48307
CONTACT:
Rev. Young Ju Oh
Tel:(248) 608-9888

PROJECT LOCATION
Part of the Southwest 1/4 of Section 22
T3N-R11E,
City of Rochester Hills, Oakland Co., Michigan

SHEET
Landscape Notes and Details

3 WORKING DAYS BEFORE YOU DIG CALL MISS DIG. 1-800-482-7171

DATE:	REVISION:
04/14/05	REVISED PER CITY REVIEW
12/14/05	REVISED PER CITY REVIEW
06/21/06	REVISED PER CLIENT
04/17/06	REVISED PER CITY REVIEW

DRAWN BY: A. Goldgraber
DESIGNED BY: G. Ostrowski
APPROVED BY: G. Ostrowski
DATE: 07-13-05
SCALE: AS NOTED

N/F JOB NO. D901
SHEET NO. L3

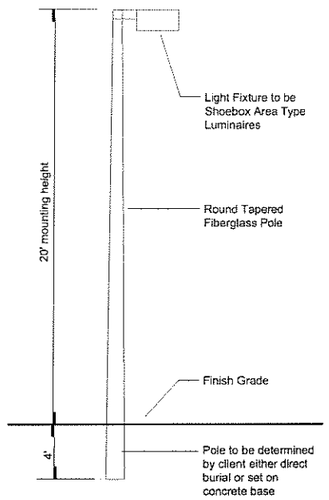
LITHONIA LIGHTING

FEATURES & SPECIFICATIONS

CONTOUR

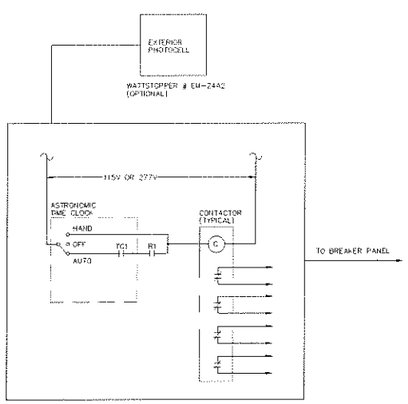
Soft Square Cutoff Lighting

KAD



Parking Lot Light Pole

Not to Scale



NOTE:
XX = SPECIFY QUANTITY OF CONTACTOR POLES REQUIRED (MULTIPLES OF 4)
VOLT = SPECIFY 115V OR 277V
CONTRACTOR TO SPECIFY NUMBER OF CIRCUITS REQUIRED

EXTERIOR LIGHTING CONTROL PANEL DIAGRAM

NO SCALE

SITE LIGHTING PHOTOMETRIC VALUES

Scale 1" = 40'

NOTES

1. SEE MH COLUMN OF LUMINAIRE LOCATIONS FOR MOUNTING HEIGHTS.
2. SEE LUMINAIRE SCHEDULE FOR LIGHT LOSS FACTORS.
3. CALCULATIONS ARE SHOWN IN FOOTCANDLES AT GRADE SURFACE.

THE ENGINEER AND/OR ARCHITECT MUST DETERMINE APPLICABILITY OF THE LAYOUT TO EXISTING / FUTURE FIELD CONDITIONS. THIS LIGHTING LAYOUT REPRESENTS ILLUMINATION LEVELS CALCULATED FROM LABORATORY DATA TAKEN UNDER CONTROLLED CONDITIONS IN ACCORDANCE WITH ILLUMINATING ENGINEERING SOCIETY APPROVED METHODS. ACTUAL PERFORMANCE OF ANY MANUFACTURER'S LUMINAIRE MAY VARY DUE TO VARIATION IN ELECTRICAL VOLTAGE, TOLERANCE IN LAMPS, AND OTHER VARIABLE FIELD CONDITIONS.
THESE LIGHTING CALCULATIONS ARE NOT A SUBSTITUTE FOR INDEPENDENT ENGINEERING ANALYSIS OF LIGHTING SYSTEM SUITABILITY AND SAFETY. THE ENGINEER AND/OR ARCHITECT IS RESPONSIBLE TO REVIEW FOR MICHIGAN ENERGY CODE COMPLIANCE.

LUMINAIRE LOCATIONS

No.	Label	Location X	Location Y	MH	Orientation	Tilt
1	HA	212.1	212.8	20.0	100.0	0.0
2	HA	193.8	140.9	20.0	100.0	0.0

LUMINAIRE SCHEDULE

Symbol	Label	Qty	Catalog Number	Description	Lamp	File	Lumens	LLF	Watts
	HA	2	LITHONIA #KAD 250M R3 (SINGLE - - 20' MTD HTG)	DIE-CAST CUTOFF LUMINAIRE	ONE 250-WATT CLEAR BT-28 METAL HALIDE, HORIZONTAL POSITION.	920420001JES	19500	0.72	297

STATISTICS

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
SITE LIGHTING VALUES AT GRADE	+	0.5 fc	4.9 fc	0.0 fc	N / A	N / A

09/13/06 REVISD PER CITY REVIEW

HAN-BIT KOREAN CHRISTIAN REFORMED CHURCH

ROCHESTER HILLS, MI

SITE LIGHTING PHOTOMETRIC VALUES

GASSER BUSH ASSOCIATES

Designer
MM/JB

Date
JUNE 27, 2006

Scale
AS NOTED

Drawing No.
05564V2

P-1

PROPOSED CONSTRUCTION FOR:

HAN-BIT CHURCH ADDITION

1849 S. LIVERNOIS RD, ROCHESTER HILLS, MI, 48307

ABBREVIATIONS

A	
AFF	ABOVE FINISHED FLOOR
ARF	ABOVE REFERENCE FLOOR
ACCT	ACCENT
AP	ACCESS PANEL
AC	ACOUSTICAL
ACT	ACOUSTICAL TILE (OR ACTIVE)
ADD	ADDENDUM OR ADDITIONAL
ADJ	ADJACENT
AGG	AGGREGATE
A/C	AIR CONDITIONING
ALT	ALTERNATE OR ALTERNATIVE
ALUM	ALUMINUM
ANCH	ANCHOR, ANCHORAGE
AB	ANCHOR BOLT
ANOD	ANODIZED
ARCH	ARCHITECTURAL)
ASPH	ASPHALT
AUTO	AUTOMATIC
B	
B.F.	BARRIER FREE
BP, BE	BASE PLATE OR BEARING E
BRG	BEARING
BM	BENCH MARK OR BEAM
BTW	BETWEEN
BIT	BITUMINOUS
BLKG	BLOCKING
BD	BOARD
BS	BOTH SIDES
BOT	BOTTOM
BC	BOTTOM OF CURB
BLDG	BUILDING
BL	BUILDING LINE
B.O.	BY OTHERS
C	
CAB	CABINET
CR	CARD READER
CPT	CARPETED)
CES	CARPET EDGE STRIP
CI	CAST IRON
CIP	CAST-IN-PLACE
CB	CATCH BASIN
CLG	CEILING
CEMT	CEMENT
C TO C	CENTER TO CENTER
CN	CENTER(S)
C	DEGREES CENTIGRADE
CER	CERAMIC
CT	CERAMIC TILE
CHCK PL	CHECKERED PLATE
CLR	CLEAR(ANCE)
CLOS	CLOSET
CO	CLEAN OUT
C&K	COAT HOOK
CW	COLD WATER
COL	COLUMN
COMB	COMBINATION
COMP	COMPRESS(ED)(ION)(IBLE)
CNCLD	CONCEALED
CONC	CONCRETE
CMU	CONCRETE MASONRY UNIT (CONCRETE BLOCK)
CONN	CONNECTION
CONST	CONSTRUCTION
CONST JT	CONSTRUCTION JOINT
CONT	CONTINUOUS OR CONTINUE
CONTR	CONTRACT(OR)
CJ	CONTROL JOINT
CORR	CORRUGATED OR CORRIDOR
CTR	CENTER
CTSK	COUNTERSUNK
CF	CUBIC FOOT
CY	CUBIC YARD
CYL	CYLINDER
D	
DMPR	DAMPER
DP	DAMPPROOFING
DL	DEAD LOAD
DET	DETAIL
DIAG	DIAGONAL
Ø	DIAMETER
DIFF	DIFFUSER
DIM	DIMENSION
D/W	DISHWASHER
DO	DOOR OPENING
DN	DOWN
DT	DRAIN TILE
DWG	DRAWING
DF	DRINKING FOUNTAIN
E	
EA	EACH
EF	EACH FACE
EW	EACH WAY
E	EAST
ELEC	ELECTRIC(AL)
EWC	ELECTRIC WATER COOLER
EL, ELEV	ELEVATION
EL, ELEV	ELEVATOR
EMER	EMERGENCY
ENC	ENCLOSE(D,URE)
EQ	EQUAL
EQUIP	EQUIPMENT
ESC	ESCALATOR
EXH	EXHAUST
EB	EXPANSION BOLT
EJ	EXPANSION JOINT
EXP CONSTR	EXPOSED CONSTRUCTION
EXT, EXTR	EXTERIOR
F	
FOC	FACE OF CONCRETE
FF	FACTORY FINISH
F°	DEGREES FAHRENHEIT
FT	FEET/FOOT
FIN	FINISH(ED)
FE	FIRE EXTINGUISHER
FEC	FIRE EXTINGUISHER CABINET
FLD	FIELD
FHS	FIRE HOSE STATION
FPR	FIRE PROOFING
FL, FLR	FLOOR(ING)
FD	FLOOR DRAIN
FLUOR	FLUORESCENT
FTG	FOOTING
FDN	FOUNDATION
FA	FRESH AIR
FS	FAR SIDE
FURR	FURRED, (ING)
FVC	FIRE VALVE CABINET
G	
GA	GAGE, GAUGE
GAL	GALLON
GALV	GALVANIZED
GL	GLASS, GLAZING
GR	GRADE, GRADING
g	GRAM
GRD	GROUND
GYP	GYPSUM
GYP L	GYPSUM LATH
GP	GYPSUM PLASTER
GWB	GYPSUM WALL BOARD
H	
HDCP, HC	HANDICAPP(ED)
HDBD	HARDBOARD
HDWR	HARDWARE
HDWD	HARDWOOD
HTG	HEATING
H/V	HEATING & VENTILATING
HVAC	HEATING/VENTILATION/ AIR CONDITIONING
HT, HGT	HEIGHT
H	HIGH
HP	HIGH POINT
HS	HIGH STRENGTH
HC	HOLLOW CORE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HP	HORSE POWER
HB	HOSE BIBB
HW	HOT WATER
HWH	HOT WATER HEATER
HR	HOUR
I	
IN(")	INCH(ES)
INCL	INCLUDE(D), (ING)
INFO	INFORMATION
ID	INSIDE DIMENSION
INS	INSULATED(D), (ION)
ICA	INTEGRAL COLOR ANODIZED
INT, INTR	INTERIOR/INTERNAL
INTERM	INTERMEDIATE
INV	INVERT
IRR	IRRIGATION
J	
JC	JANITOR'S CLOSET
JT	JOINT
JIST	JOIST
JB	JUNCTION BOX
K	
KG	KILOGRAMS
KV	KILOVOLT
KVA	KILOVOLT/AMPERE
KW	KILOWATT(S)
KWH	KILOWATT-HOUR
KG/m²	KILOGRAM PER METER
KG/cm²	KILOGRAM PER SQUARE CENTIMETER
K	KIPS
KSI	KIPS PER SQUARE INCH
KIT	KITCHEN
KO	KNOCKOUT
L	
LAB	LABORATORY
LAM	LAMINATE(D)
LAV	LAVATORY
LCC	LEAD COATED COPPER
LH	LEFT HAND
LHR	LEFT HAND REVERSE
L	LENGTH
LT	LIGHT
LTG	LIGHTING
LP	LIGHTING PANEL
LIN	LINEAR, LINEAL
LL	LIVE LOAD
LG	LONG
LLBB	LONG LEGS BACK TO BACK
LLH	LONG LEGS HORIZONTAL
LLO	LONG LEG OUTSTANDING
LLV	LONG LEG VERTICAL
LOC	LOCATE/LOCATION
L.P.	LOW POINT
LV	LOW VOLTAGE
M	
MAG	MAGNETIC
MH	MANHOLE
MFR	MANUFACTURE(R)
MAR	MARBLE
MAR THOLD	MARBLE THRESHOLD
MB	MARKER BOARD
MAS	MASONRY
MO	MASONRY OPENING
MAT	MATERIAL(S)
MAX	MAXIMUM
MECH	MECHANICAL
MC	MEDICINE CABINET
MED	MEDIUM
MBR	MEMBER
MET	METAL
MDB	METAL DIVIDER STRIP
ML	METAL LATH
MET THOLD	METAL THRESHOLD
M	MONITOR(ED)
MEZZ	MEZZANINE
mm	MILLIMETER(S)
MIN	MINIMUM
MIR	MIRROR
MISC	MISCELLANEOUS
MI	MISCELLANEOUS IRON
MCC	MOTOR CONTROL CENTER
MTD	MOUNTED), (ING)
MULL	MULLION
N	
NAT	NATURAL
NCA	NATURAL COLOR ANODIZED
NEG	NEGATIVE
NRC	NOISE REDUCTION COEFFICIENT
NOM	NOMINAL
N	NORTH
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
NO (#)	NUMBER
O	
OFF	OFFICE
OC	ON CENTER(S)
OPG	OPENING
OPP	OPPOSITE
OPP HD	OPPOSITE HAND
ORIG	ORIGINAL
OZ	OUNCE
OS	OUTSIDE
OA	OUTSIDE AIR
OD	OUTSIDE DIAMETER
OH	OVERHEAD
P	
PH	PHYSICALLY HANDICAPPED
PNT	PAINT(ED)
PR	PAIR
PNL	PANEL
PTD	PAPER TOWEL DISPENSER
PTD/R	PAPER TOWEL DISPENSER & RECEPTACLE COMBINATION
PKG	PARKING
PBD	PARTICLE BOARD
PARTN	PARTITION
PE	PASSENGER ELEVATOR
PERM	PERMANENT
PLAS	PLASTER
PLAM	PLASTIC LAMINATE
PL	PLATE
PLBG	PLUMBING
PLWD	PLYWOOD
PT	POINT
POL	POLISHED
PVC	POLYVINYL CHLORIDE
lb#	POUND(S)
PCF	POUNDS PER CUBIC FOOT
PFF	POUNDS PER FOOT
PLF	POUNDS PER LINEAL FOOT
PSF	POUNDS PER SQUARE FOOT
PC	PRECAST CONCRETE
PRE-FAB	PREFABRICATE(D)
PL, PE	PROPERTY LINE
Q	
QT	QUARRY TILE
QTR	QUARTER
R	
RAD	RADIUS, RADIATOR, RADIATION
RC	RAINWATER CONDUCTOR
RECVG	RECEIVING
REC	RECEIVE(D)
REF	REFERENCE
REFL	REFLECT(ED), (IVE), (OR)
REFR	REFRIGERATOR
REG	REGISTER
REINF	REINFORCE(D), (ING)
REQD	REQUIRED
RESIL	RESILIENT
RT	RESILIENT TILE
RA	RETURN AIR
REV	REVISION(S), REVISED
RH	RIGHT HAND
RHR	RIGHT HAND REVERSE
ROW	RIGHT OF WAY
R	RISER
Rd	ROAD
RD	ROOF DRAIN
RS	ROOF SUMP
RFG	ROOFING
RT	ROOT
RO	ROUGH OPENING
RUB	RUBBER
S	
SAN	SANITARY
SND	SANITARY NAPKIN DISPENSER
SNWR	SANITARY NAPKIN WASTE RECEPTACLE
SCH	SCHEDULE
SJ	SCORED JOINT
SL	SEALER
SECT	SECTION
SS	SERVICE SINK
SHT	SHEET
SLO	SHORT LEG OUTSTANDING
SIM	SIMILAR
SK	SINK
SB	SOIL BORING
STC	SOUND TRANSMISSION CLASS
S	SOUTH
SPC	SPACER, SPACING
SPK	SPEAKER
SPEC(S)	SPECIFICATION(S)
SQ	SQUARE
cm²	SQUARE CENTIMETER
SF	SQUARE FOOT
STAG	STAGGERED
SST	STAINLESS STEEL
STD	STANDARD
STA	STATION
STL	STEEL
STN	STONE
STOR	STORAGE
SD	STORM DRAIN
ST	STREET
STRUCT	STRUCTURAL
SA	SUPPLY AIR
SUPP	SUPPORTS
SUSP	SUSPENDED
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
SYM	SYMMETRY(ICAL)
T	
TKBD	TACKBOARD
TP	TANGENT POINT
TEL	TELEPHONE
TV	TELEVISION
TEMP	TEMPERATURE, TEMPERED
TERR	TERRAZZO
THERM	THERMOSTAT
THK	THICKNESS)
THOLD	THRESHOLD
THRU	THROUGHOUT
WC	TOILET
TPH	TOILET PAPER HOLDER
TOL	TOLERANCE
T&G	TONGUE AND GROOVE
T&B	TOP & BOTTOM
TE	TOP ELEVATION
TOC	TOP OF CONCRETE
TC	TOP OF CURB
TOS	TOP OF STEEL
TWC	TOWEL & WASTE CABINET
TRAN	TRANSFORMER
T	TREAD
TYP	TYPICAL
U	
UH	UNIT HEATER
UNO	UNLESS NOTED OTHERWISE
UON	UNLESS OTHERWISE NOTED
UR	URINAL
V	
VA	VALVE
VB	VAPOR BARRIER
VAR	VARNISH
VERT	VERTICAL
VEST	VESTIBULE
VIN	VINYL
VCT	VINYL COMPOSITION TILE
VWC	VINYL WALL COVERING
VIT	VITREOUS
VRB	VINYL RESILIANT STRIP
W	
WSCT	WAINSCOT
WHYD	WALL HYDRANT
WH	WATER HEATER
WC	WATER CLOSET
WM	WATER MAIN
WP	WATERPROOFING
WR	WATER RESISTANT
WS	WATERSTOP
WT	WEIGHT
WWF	WELDED WIRE FABRIC
WWM	WELDED WIRE MESH
W	WIDTH, WIDE, WEST
W/	WITH
W/O	WITHOUT
WD	WOOD
Y	
YD	YARD

ZONING REQUIREMENTS

PARCEL ID:
15-22-351-012

LEGAL DESCRIPTION:
T3N, R11E, SEC 22 PART OF SW 1/4 BEG AT PT DIST N 01-03-07 E 661.05 FT FROM SW SEC COR, TH N 00-58-15 E 400.00 FT, TH S 89-16-19 E 528.47 FT, TH ALG CURVE CONCAVE NELY, RAD 350.00 FT, CHORD BEARS S 14-20-48 E 119.41 FT, DIST OF 120.00 FT, TH ALG CURVE CONCAVE NELY, RAD 245.00 FT, CHORD BEARS S 50-15-58 E 215.84 FT, DIST OF 223.51 FT, TH S 00-43-41 W 148.93 FT, TH N 89-16-19 W 730.00 FT TO BEG 5.86 A

ZONING:
RESIDENTIAL

BUILDING CODE DATA

CODE COMPLIANCE:

BUILDING CODE:	2003 MICHIGAN BUILDING CODE
PLUMBING CODE:	2003 MICHIGAN PLUMBING CODE
MECHANICAL CODE:	2003 MICHIGAN MECHANICAL CODE
ELECTRICAL CODE:	STATE OF MICHIGAN ELECTRICAL CODE (NATIONAL ELECTRIC CODE - 2002 (NED-2002) W/ PART 8 AMENDMENTS)
BARRIER FREE CODE:	MICHIGAN BARRIER FREE - ICC / ANSI A117.1-1998
FIRE CODE:	INTERNATIONAL FIRE CODE 2003

USE GROUP:
A-3

CONSTRUCTION TYPE:
TYPE III B
FULLY SPRINKLED

HEIGHT & AREAS:
MAX. BLDG HT. = 35'
PROPOSED BLDG HT. = 30'-2"
MAX. BLDG AREA = 38,315 SF PER AREA MODIFICATION
PROPOSED BLDG AREA
EXISTING BLDG AREA = 7547 S.F.
NEW BLDG AREA = 3088 S.F.
TOTAL BLDG AREA = 10635 S.F.
MAX. # OF STORIES: 2

AREA MODIFICATION CALCS:
A = [9500 + [(9500(75)/100)] + [(9500(300)/100)]
A = 45, 125 SF

BUILDING AREA:
FRONT YARD SETBACK: 25'-0"
SIDE YARD SETBACK: 10'-0"
REAR YARD SETBACK: 30'-0"
ADDITION BUILDING AREA = 3088 SF

OCCUPANT LOAD
1623 S.F./15 S.F.= 121.56 OR 122 OCCUPANTS

EGRESS WIDTH REQUIRED
0.2" x 122 = 24.4"

EGRESS WIDTH PROVIDED
2 EXITS @ 72"

EGRESS TRAVEL DISTANCE
200'-0" MAXIMUM ALLOWED TRAVEL DISTANCE

PROPOSED PLUMBING COUNTS
FIXTURE COUNT BASED ON 51 MEN AND 61 WOMEN = 122 OCCUPANTS

FIXTURE TYPE:	REQUIRED	PROVIDED
WATER CLOSET:	1 MEN (1/125 OCC.) 1 WOMEN (1/65 OCC.)	1 MEN 2 WOMEN
URINALS:	0 MEN	1 MEN
LAVATORIES:	1 MEN (1/200 OCC.) 1 WOMEN (1/200 OCC.)	1 MEN 2 WOMEN
DRINKING FOUNTAIN:	1 ((1/500 OCC.)	1
SERVICE SINK:	1	EXISTING

CONSULTANTS

MECHANICAL/ELECTRICAL

NORTH CONSULTING ENGINEERS
16291 WEST 14 MILE ROAD #26
BIRMINGHAM, MICHIGAN 48025
Phone 248.644.8598
Fax 248.644.5198

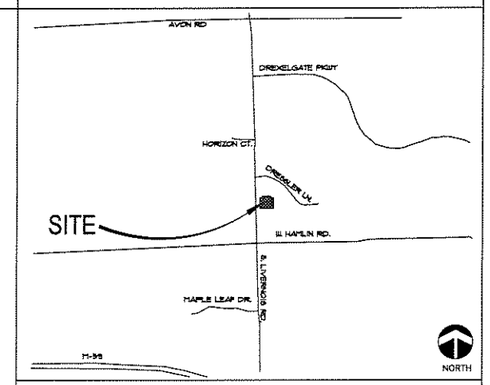
INDEX OF DRAWINGS

GENERAL
T000 TITLE SHEET

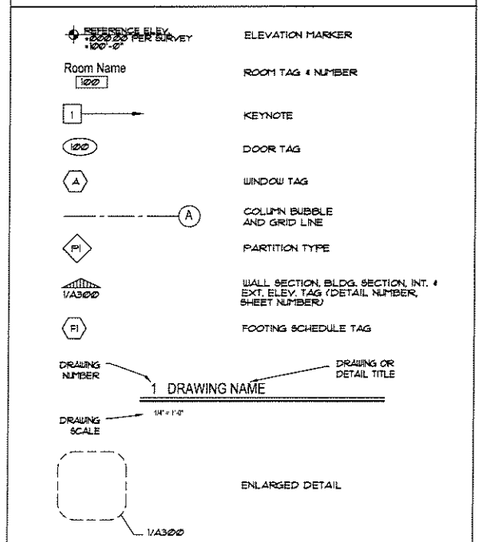
ARCHITECTURAL
A000 SPECIFICATIONS & SITE PLAN
A100 FLOOR PLAN, FOUNDATION PLAN, ROOF FRAMING, & ROOF PLAN
A200 EXTERIOR ELEVATIONS
A300 BUILDING SECTION, WALL SECTION, & DETAILS
A600 INTERIOR ELEVATIONS, ROOM FINISH & DOOR SCHEDULES, & DETAILS

MECHANICAL / PLUMBING
M100 MECHANICAL, ELECTRICAL, & PLUMBING PLANS

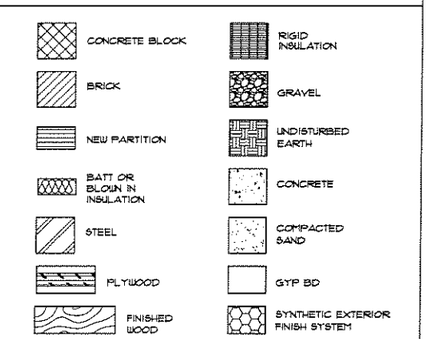
LOCATION MAP



DRAWING SYMBOLS



MATERIAL SYMBOLS LIST



architectural studios of
GERALD J. YURK ASSOCIATES
Incorporated

ARCHITECTURE & INTERIORS
101 Main Street, Suite 400
Rochester, Michigan 48307
Phone 248.656.1881
Fax 248.656.7625
webmaster@geraldjyurk.com

The design concepts and creative forms or systems graphically or directly expressed on this drawing have been generated by the architect for exclusive application to this project. They are the sole property of the architect and can only be used, duplicated, or reproduced at the exclusive discretion of and by written permission of the architect. © 2006 Architectural Studios of Gerald J. Yurk Associates, Inc.

APPROVED FOR CONSTRUCTION
The owner acknowledges receipt and review of these drawings and specifications. Approval for construction is hereby granted for the Index of drawings listed on this sheet.

Signature Date

Signature Date

SHEET TITLE:
TITLE SHEET

DATE:	ISSUED FOR:
09.07.06	BIDS & PERMITS
09.18.06	BULLETIN #1

PROPOSED ADDITION FOR:
HAN-BIT CHURCH ADDITION
1849 S. LIVERNOIS RD
ROCHESTER HILLS, MI 48307

DRAWN BY: TA
CHECKED BY: JPS
COMMISSION: 06-009

SHEET NUMBER: T000

SPECIFICATIONS

GENERAL REQUIREMENTS:

1. COMPLY WITH ALL STATE, COUNTY AND LOCAL BUILDING CODES, ORDINANCES AND REGULATIONS PERTAINING TO CONSTRUCTION.
2. CONNECT WATER, GAS AND ELECTRIC LINES TO EXISTING UTILITIES IN ACCORDANCE WITH LOCAL CITY BUILDING CODES.
3. PROVIDE ATTIC VENTILATION WITH ONE OF THE FOLLOWING:
   A. LOUVERED VENTS AT GABLE ENDS EQUAL TO ONE (1) SQUARE FOOT PER 150 SQUARE FEET OF ATTIC.
   B. THERMOSTATICALLY CONTROLLED POWER VENTILATORS.
   C. APPROVED EQUIVALENT METHOD.
4. MINIMUM FINISHED FLOOR ELEVATION WILL BE ATLEAST 6" PLUS ONE PERCENT (1%) ABOVE LOW POINT OF LOT, MINIMUM FEMA FLOOD ELEVATION OR AS NOTED ON SITE SURVEY.
5. PERIMETER BEARING WALL FOOTINGS SHALL SHALL EXTEND BELOW GRADE THE MINIMUM DEPTH REQUIRED BY LOCAL CODE. INTERIOR BEARING WALL FOOTINGS SHALL EXTEND A MINIMUM OF 6" INTO NATURAL GRADE U.N.O.
6. PROVIDE MOISTURE RESISTANT GYPSUM BOARD AT ALL FRAME WALLS IN WET LOCATIONS SUCH AS BATHROOMS.
7. THIS STRUCTURE HAS BEEN DESIGNED IN ACCORDANCE WITH THE MICHIGAN BUILDING CODE 2003. ALL PHASES OF CONSTRUCTION SHALL BE PERFORMED IN COMPLIANCE WITH MBC AND ANY OTHER APPLICABLE STATE, CITY, COUNTY, AND CITY CODES AND ORDINANCES.
8. THESE PLANS HAVE BEEN REVIEWED BY A MICHIGAN LICENSED ARCHITECT
9. ROOF DESIGN LOADS:
   TOP CHORD LIVE LOADS = 20 P.S.F.
   DEAD LOAD = 40 P.S.F. (TILE)
10. FLOOR DESIGN LOADS:
    TOP CHORD LIVE LOADS = 40 P.S.F.
    DEAD LOAD = 15 P.S.F.
11. A CONTINUOUS LOAD PATH FROM FOUNDATION THROUGH WALLS AND ROOF SHALL BE PROVIDED. APPROVED CONNECTORS, ANCHORS AND OTHER FASTENING DEVICES NOT INCLUDED IN THE STANDARD BUILDING CODE SHALL BE PROVIDED AND INSTALLED PER MANUFACTURER'S SPECIFICATIONS.
12. ALL STRUCTURAL STEEL ANCHORS AND CONNECTORS SHALL BE THE PRODUCT OF SIMPSON STRONG-TIE U.N.O. ALL STRUCTURAL STEEL CONNECTORS SHALL BE FABRICATED OF GALVINIZED OR STAINLESS STEEL.
13. BUILDING CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ALL DIMENSIONS PRIOR TO CONSTRUCTION. CONTRACTOR SHALL REPORT ANY DIMENSIONAL DISCREPANCIES IN WRITING TO THE DESIGNER BEFORE PROCEEDING WITH THE WORK. BY USE OF THESE PLANS, THE CONTRACTOR ASSUMES FULL LIABILITY AND ANY COST FOR NONCOMPLIANCE WITH THIS PARAGRAPH.
14. DO NOT SCALE DRAWINGS. REFER TO DIMENSIONAL INFORMATION PROVIDED OR CONTACT THE ENGINEER OR BUILDING DESIGNER FOR CLARIFICATION.
15. THIS STRUCTURE HAS BEEN DESIGNED TO BE SELF SUPPORTING AND STABLE ONCE COMPLETE. THE BUILDING CONTRACTOR IS RESPONSABLE FOR ALL NECESSARY SAFETY MEASURES DURING CONSTRUCTION
16. ALLOW 3 1/2" (NOM.) DIMENSION FROM FACE OF STUD TO FACE OF STUD FOR INTERIOR WALLS UNLESS SPECIFIED OTHERWISE AND/OR NEEDED FOR VENTING AND/OR BRACING. ALL WALLS, OPENINGS AND OPENING LOCATIONS ARE BASED ON NOMINAL MODULAR SIZES. DIMENSIONS MAY VARY DUE TO KILN DRYING, FURRING TRUSS ALIGNMENT, LOADING, BLOCK SIZE, CODE REQUIREMENTS OR OTHER CONDITIONS NECESSARY TO COMPLETE CONSTRUCTION IN A FUNCTIONAL MANNER.

FOUNDATION NOTES:

1. FOUNDATIONS ARE DESIGNED BASED ON AN ASSUMED ALLOWABLE BEARING PRESSURE OF 3,000 P.S.F. ACTUAL SOIL BEARING CAPACITY SHALL BE VERIFIED PRIOR TO CONSTRUCTION BY SUBSURFACE INVESTIGATIONS AND LABORORATORY TESTS PERFORMED BY A CERTIFIED TESTING LABORATORY. A WRITTEN SOILS REPORT SHALL INCLUDE FULL ANALYSIS AND RECOMMENDATIONS FOR SITE PREPARATION REQUIRED FOR THE FOUNDATION LOADS. THE SOILS REPORT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL BEFORE COMMENCEMENT OF CONSTRUCTION.
2. FOUNDATIONS - 3000 P.S.I. @ 28 DAYS, TYPE II CONCRETE, 6 BAGS.
3. CLEAN, COMPACTED, GRANULAR FILL SHALL BE PLACED IN 12" LIFTS AND COMPACTED TO 95% OF MODIFIED PROCTOR DENSITY IN ACCORDANCE WITH ASTM D1557

CONCRETE NOTES:

1. ALL CONCRETE WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE'S BUILDING CODE REQUIREMENTS (ACI 318) AND HOT WEATHER CONCRETING REQUIREMENTS (ACI 305).

CONCRETE NOTES CONT.:

2. MATERIALS SPECIFICATIONS:
   CEMENT - ASTM C150 TYPE.
   AGGREGATE - ASTM C33
   WATER - CLEAN, POTABLE WITH NO DELETIOUS MATERIALS
   REINFORCING STEEL - ASTM A615 GRADE 60.
   WELDED WIRE FABRIC - ASTM A185
   STRUCTURAL STEEL PLATES - ASTM A36
   ANCHOR BOLTS - ASTM A36 OR A307
   CONCRETE SHALL BE READY MIXED AND DELIVERED IN ACCORDANCE WITH ASTM C34.
3. CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 P.S.I. AT 28 DAYS U.N.O..
4. THE MAXIMUM WATER TO CONCRETE RATIO BY WEIGHT IS 0.58 NO WATER SHALL BE ADDED ON-STIE
5. CONCRETE STRENGTH TESTS ARE RECOMMENDED BUT NOT REQUIRED WHEN EVIDENCE OF SATISFACTORY STRENGTH IS SUBMITTED AND APPROVED PER THE BUILDING CODE.
6. CONCRETE COVER OF REINFORCING STEEL SPECIFICATIONS (U.N.O.):
   A. FOOTINGS: 3" BOTTOM AND SIDES, 2" TOP
   B. BEAMS: 1 1/2" BOTTOM, SIDES AND TOP TO STIRRUPS
   C. COLUMNS: 1 1/2" ALL SIDES TO TIES
   D. SLAB ON GRADE: 3" BOTTOM, 1" TOP
   E. OTHER CONDITIONS AS DICTATED BY ACI.
7. ALL CONTINUOUS VERTICAL AND HORIZONTAL STEEL IN FOOTINGS, BEAMS AND COLUMNS SHALL BE PRESENT AND SPLICED A MINIMUM OF 48 BAR DIAMETERS. LONGITUDINAL BARS IN FOOTING, WALLS, BEAMS AND SLABS ARE CONTINUOUS U.N.O.
8. DOWEL ALL WALLS AND COLUMNS TO FOOTING WITH BAR SIZE AND SPACING VERTICAL REINFORCING U.N.O. PROVIDE 8" HOOK BEND IN VERTICAL STEEL INTO FOOTING AND TIE BEAM.
9. FLOOR SLABS - 2500 P.S.I.@ 28 DAYS (4" CONCRETE ON 6 MIL POLYETHYLENE VAPOR BARRIER ON 4" SAND FILL) MAX. SLUMP = 4", TYPE II CONCRETE 6-BAGS.
10. PROVIDE CONSTRUCTION JOINTS @ 400 SSQ. FT. MAX. IN SLABS
11. WALKS & DRIVES - 2500 P.S.I. @ 28 DAYS, TYPE II CONCRETE, 6 BAGS WITH AIR ENTRAINMENT.
12. REFER TO ADDITIONAL STRUCTURAL NOTES AND SPECIFICATIONS ON FOUNDATION PLAN.

MASONRY NOTES CONT.:

1. ALL REINFORCED CONCRETE MASONRY CONSTRUCTION TO CONFORM TO ACI 530/ACSE 5/TMS 4002 'SPECIFICATIONS FOR MASONRY CONSTRUCTION' LATEST EDITION. ALL REINFORCED CONCRETE MASONRY SHALL ALSO CONFORM TO NCMA 'SPECIFICATIONS FOR DESIGN AND CONSTRUCTION OF LOAD BEARING CONCRETE MASONRY', LATEST EDITION.
2. PROVIDE STANDARD WEIGHT CONCRETE MASONRY UNITS CONFORMING TO ASTM C90 AND HAVING A MINIMUM COMPRESSIVE STRENGTH OF 1,000 P.S.I. BASED ON GROSS AREA AND 2,000 P.S.I. BASED ON NET AREA EQUAL TO 50% OF GROSS AREA.
3. MORTAR SHALL BE TYPE 'M', FRESHLY PREPARED, CONFORMING TO ASTM C270 AND HAVING A MINIMYM OMPRESSIVE STRENGTH OF 2500 P.S.I. AT 28 DAYS
4. FILL ALL CELLS CONTAINING REINFORCING STEEL WITH CONCRETE GROUT HAVING A SLUMP OF 8" TO 11" AND A MINIMUM COMPRESSIVE STRENGTH OF 3000 P.S.I. AT 28 DAYS.
5. MAXIMUM ALLOWABLE HEIGHT OF GROUT POUR IS 4 FEET UNLESS A CLEAN OUT OPENING IS PROVIDED AT THE BOTTOM OF CELLS TO BE FILLED.
6. ALL WALLS TO BE LAID IN RUNNING BOND WITH DURO-WALL TRUSS OR LADDER TYPE JOINT REINFORCEMENT, (9) GAUGE, AT 16" O.C. VERTICAL SPACING.
7. REFER TO ADDITIONAL STRUCTURAL NOTES AND SPECIFICATIONS ON FOUNDATION PLAN.

WOOD NOTES:

1. ALL WOOD SHALL BE FURNISHED AND INSTALLED IN STRICT COMPLIANCE WITH THE MICHIGAN BUILDING CODE
2. STRUCTURAL LUMBER SHALL BE SOUTHERN YELLOW PINE #2. FRAMING LUMBER SHALL BE SPRUCE/PINE/FIR #3 OR BETTER.
3. LUMBER EXPOSED TO WEATHER OR IN CONTACT WITH THE GROUND, CONCRETE OR MASONRY SHALL BE PRESSURE TREATED. NON-CORROSIVE NAILS SHALL BE USED IN ALL PRESSURE TREATED LUMBER.
4. PLYWOOD SHEATHING SHALL BE 5/8" FOR ROOF, 15/32" FOR WALLS, EXPOSURE I, WITH SPAN RATING 32/16. FASTEN SHEATHING AS SPECIFIED IN SHEATHING SCHEDULE.
5. ROOF SHEATHING SHALL BE INSTALLED LONG DIMENSION PERPENDICULAR TO FRAMING AND END JOINTS SHALL BE STRAGGERED.
6. PRE-FABRICATED TRUSSES (ROOF AND FLOOR) SHALL BE DESIGNED, SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER. SHOP DRAWINGS SHALL BE SEALED BY A P.E.. TRUSS MANUF. SHALL SUBMIT SHOP DRAWINGS TO THE CONTRACTOR AND ENGINEER FOR REVIEW AND APPROVAL PRIOR TO TRUSS FABRICATION.
7. WALL STUDS SHALL BE CAPPED WITH A DOUBLE PLATE INSTALLED TO PROVIDE A MIN. 48" LAP, OVERLAPPING AT CORNERS AND AT INTERSECTIONS WITH THE BEARING PARTITIONS

WOOD NOTES CONT.:

1. PRE-FABRICATED TRUSSES (ROOF AND FLOOR) SHALL BE DESIGNED, SIGNED AND SEALED BY A REGISTERED PROFESSIONAL ENGINEER. SHOP DRAWINGS SHALL BE SEALED BY A P.E.. TRUSS MANUF. SHALL SUBMIT SHOP DRAWINGS TO THE CONTRACTOR AND ENGINEER FOR REVIEW AND APPROVAL PRIOR TO TRUSS FABRICATION.
2. WALL STUDS SHALL BE CAPPED WITH A DOUBLE PLATE INSTALLED TO PROVIDE A MIN. 48" LAP, OVERLAPPING AT CORNERS AND AT INTERSECTIONS WITH THE BEARING PARTITIONS

ENGINEERED WOOD NOTES:

1. ALL LVL BEAMS SHALL BE 2.0E BY GEORGIA PACIFIC OR ENGINEER APPROVED EQUAL.
2. NAILING OF MULTIPLE LVLS: (MAINTAIN 2" EDGE DISTANCE) LESS THAN 12" DEEP: (2) ROWS OF 16D NAILS AT 12" O.C. 12" OR DEEPER: (3) ROWS OF 16D NAILS AT 12" O.C.
3. ALL LVL LUMBER FOR USE IN COVERED, DRY CONDITIONS ONLY.

DOORS:

1. DOORS TO BE PROVIDED AS FOLLOWS:
   A. WOOD FLUSH DOORS TO BE 1 3/4" THICK.
   B. WOOD PANEL DOORS TO BE 1 3/4" THICK WITH PANELS FABRICATED FROM MATERIALS NOT LESS THAN 3/8" THICK, PROVIDED ALL SHAPED PORTIONS IN THE PANELS ARE NOT LESS THAN 1/4" THICK.
   C. FERROUS MTL. DOORS OF SOLID OR HOLLOW CORE CONSTRUCTION SHALL HAVE SURFACES NOT LESS THAN 24 GAUGE IN THICKNESS.
   D. MTL. DOOR SURFACES SHALL NOT BE LESS THAN THE EQUIVALENT OF 16 GAUGE SHEET MTL. (0.006").
2. HINGES:
   PIN-TYPE HINGES WHICH ARE ACCESSABLE FROM OUTSIDE THE SECURED AREA WHEN DOOR IS CLOSED SHALL MEET ONE OR MORE OF THE FOLLOWING CRITERIA:
   A. NON-REMOVABLE HINGE PINS
   B. HINGES SHAPED TO PREVENT REMOVAL OF DOOR
   C. TOP AND BOTTOM HINGES SHALL HAVE 1/4" STEEL JAMB STUDS WHICH PROTECT TO A MINIMUM OF 1/4".
3. DEADBOLTS:
   A. DEADBOLTS TO BE HARDENED OR CONTAIN HARDENED INSERTS.
   B. STRAIGHT DEADBOLTS SHALL HAVE A MIN. THROW OF 1" AND AN EMBEDMENT OF NOT LESS THAN 5/8".
   C. A HOOK SHAPED AND/OR EXPANDING LUG DEADBOLT SHALL HAVE A MIN. THROW OF 3/4".
4. CYLINDER GUARDS SHALL BE INSTALLED ON ALL CYLINDER LOCKS WHENEVER CYLINDER PROJECTS BEYOND THE FACE OF THE DOOR OR IS OTHERWISE ACCESSABLE TO GRIPPING TOOLS.
5. SLIDING DOORS AND WINDOWS SHALL BE PROVIDED WITH A LOCKING DEVICE AND SHALL BE CONSTRUCTED AND INSTALLED OR EQUIPPED WITH A DEVICE SO AS TO PROHIBIT THE RAISING AND REMOVING OF THE MOVING PANEL FROM THE TRACK WHILE IN THE CLOSED POSITION.
6. STRIKE PLATES SHALL BE SECURED TO THE JAMB WITH A MIN. OF TWO SCREWS NOT LESS THAN 1 1/2" LENGTH.
7. UPWARD ACTING DOORS AND SLIDING DOORS OTHER THAN GLASS SHALL BE SECURED WITH A CYLINDER LOCK PADLOCK WITH A HARDENED STEEL SHACKLE AND HARDENED STEEL HASP, MTL. SLIDE BAR OR EQUIVALENT DEVICE UNLESS SECURED BY ELECTRIC POWER OPERATION.

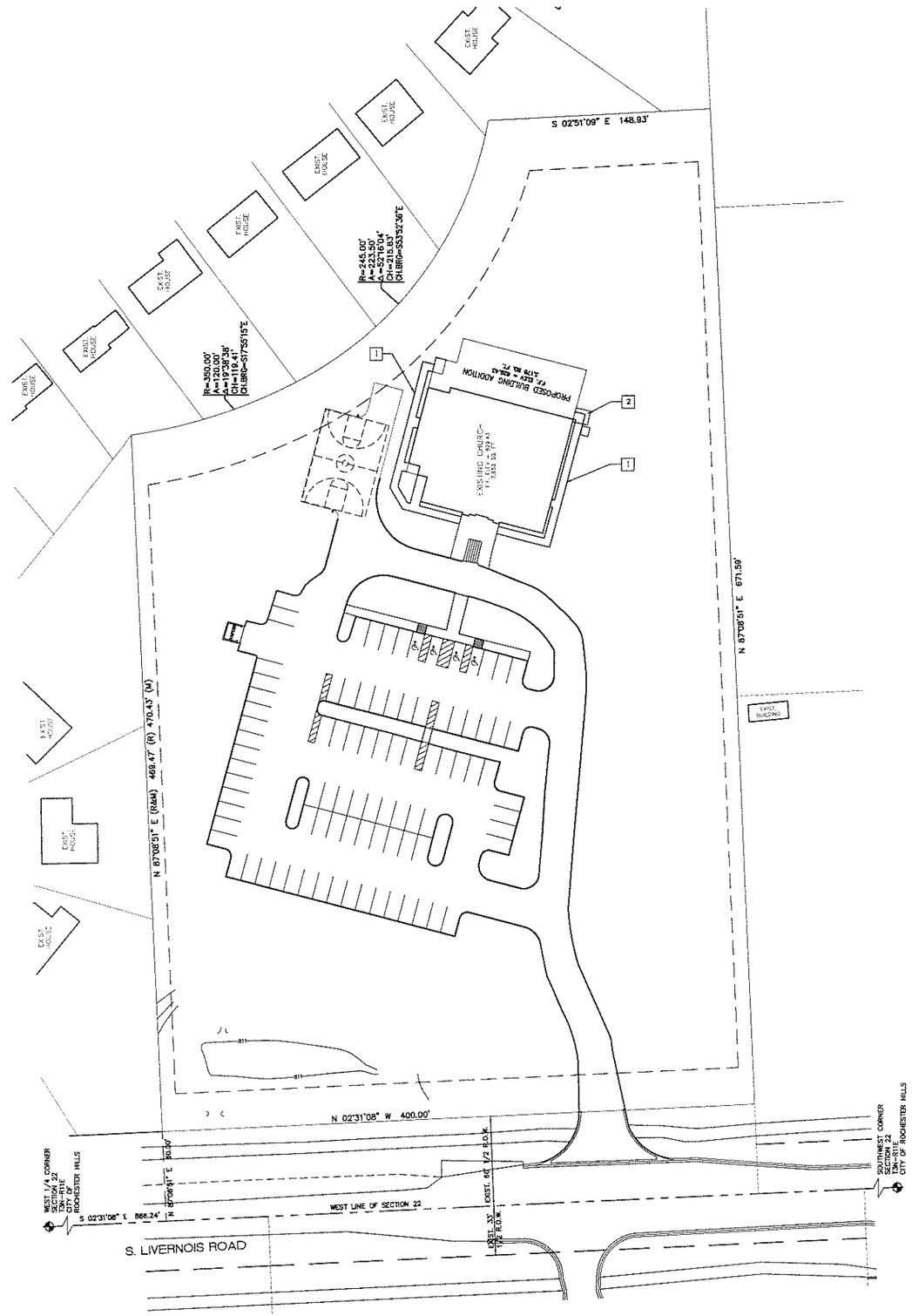
GLASS NOTES:

1. ALL EXTERIOR AND INTERIOR GLAZING TO COMPLY WITH LOCAL CODES.
2. HORIZONTAL WINDOW MUNTINS SHALL BE 1 1/2", 24", 36" ABOVE FLOOR AT ALL WINDOWS WITH SILL BELOW 18" A.F.F.
3. ALL GLAZING (WITH LEAST DIMENSION GREATER THAN 3") IN DOORS AND ADJOINING WINDOWS LESS THAN 40" FROM LOCKING DEVICE TO BE TEMPERED.

STRUCTURAL STEEL NOTES:

1. ALL BOLTS SHALL CONFORM TO ASTM A325 AND ARE 3/4" DIAMETER U.N.O. ANCHOR BOLTS SHALL CONFORM TO ASTM A307 OR A3. ALL MISC. OR STRUCTURAL STEEL AND FASTENERS EXPOSED TO WEATHER SHALL BE GALVINIZED (G90 MIN.) OR STAINLESS STEEL.

SITE PLAN



SITE PLAN
1" = 40'-0"
NORTH

KEY NOTES

1. 4" CONC. WALK OVER 4" COMPACTED SAND
2. CONDENSING UNITS TO BE RELOCATED

architectural studios of
GERALD J. **YURK** ASSOCIATES
incorporated
ARCHITECTURE & INTERIORS
101 Main Street, Suite 400
Rochester, Michigan 48307
Phone 248.656.1881
Fax 248.656.7625
webmaster@geraldjyurk.com

The design concepts and creative forms or systems graphically or literally expressed on this drawing have been generated by the architect for exclusive application to this project. They are the sole property of the architect and can only be used, duplicated, or reproduced at the exclusive discretion of and by written permission of the architect.
© 2006 Architectural Studios of Gerald J. Yurk Associates, Inc.

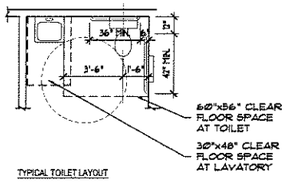
SHEET TITLE:
SPECIFICATIONS & SITE PLAN

DATE:	ISSUED FOR:
09.07.06	BIDS & PERMITS
09.18.06	BULLETIN #1

PROPOSED ADDITION FOR:
HAN-BIT CHURCH ADDITION
1849 S. LIVERNOIS RD
ROCHESTER HILLS, MI 48307

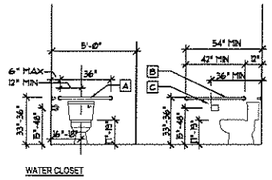
DRAWN BY: TA, JPS
CHECKED BY: JPS
COMMISSION: 06-009

SHEET NUMBER: A000



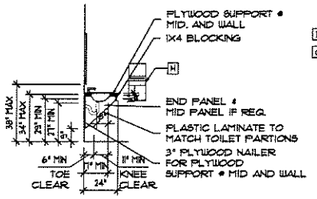
TYPICAL TOILET LAYOUT

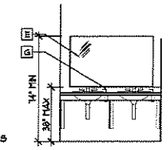
BARRIER FREE TOILET ROOM - PLAN DETAILS



WATER CLOSET

BARRIER FREE TOILET ROOM - ELEVATIONS

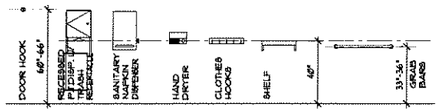




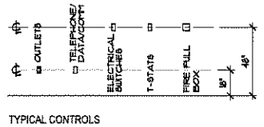
VANITY

TOILET ROOM ACCESSORY SCHEDULE

MARK	DESCRIPTION	MANUF.	MANUF. #	STYLE	COLOR	NOTES
A	GRAB BAR	BOBRICK	B-5806X36"	-	SATIN	-
B	GRAB BAR	BOBRICK	B-5806X42"	-	SATIN	-
C	TOILET TISSUE DISP.	BOBRICK	B-4288	CONTURA	ST. STL.	MULTI-ROLL, SURFACE MOUNTED
D	MIRROR	BOBRICK	B-292 2436	-	ST. STL.	24"X36" W/ SHELF
E	MIRROR	BOBRICK	B-290 6036	-	ST. STL.	60"X36"
F	SOAP DISPENSER	BOBRICK	B-4112	CONTURA	ST. STL.	SURFACE MOUNTED
G	SOAP DISPENSER	BOBRICK	B-822	CONTURA	ST. STL.	RECESSED IN VANITY
H	P.T. DISP. & RECEPT.	BOBRICK	B-43949	CONTURA	ST. STL.	SURFACE MOUNTED
J	SAN. NAPKIN DISP.	BOBRICK	B-2710	CONTURA	ST. STL.	SURFACE MOUNTED
K	HOOK	BOBRICK	B-2116	-	SATIN	LOCATE @ DR. 4/or EA. STALL DR.
L	TOILET PARTITIONS	BOBRICK	1541	CLASSIC	PEBBLE	FLOOR-ANCHORED
M	URINAL SCREENS	BOBRICK	1545	CLASSIC	PEBBLE	WALL-HUNG

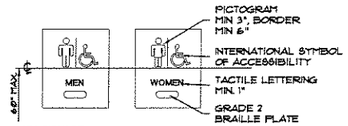


TOILET ROOM ACCESSORIES



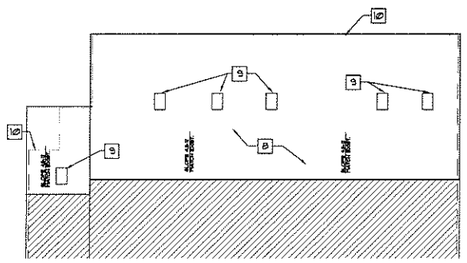
TYPICAL CONTROLS

NOT TO SCALE



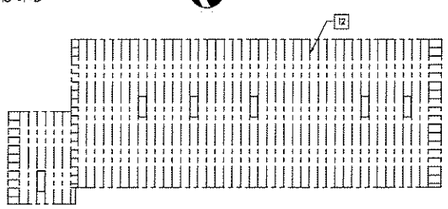
ADA SIGNAGE

NOT TO SCALE



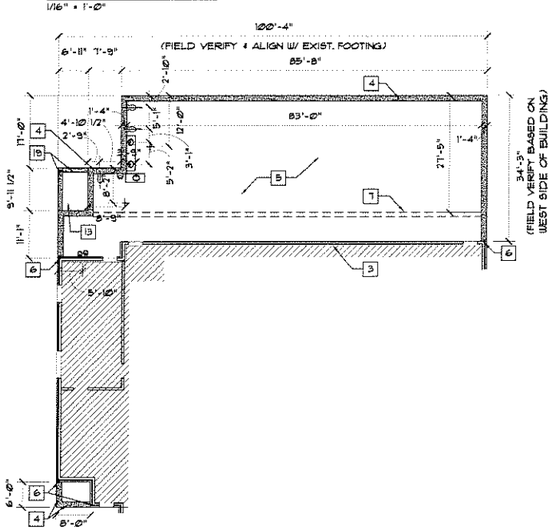
ROOF PLAN

1/16" = 1'-0"



ROOF FRAMING

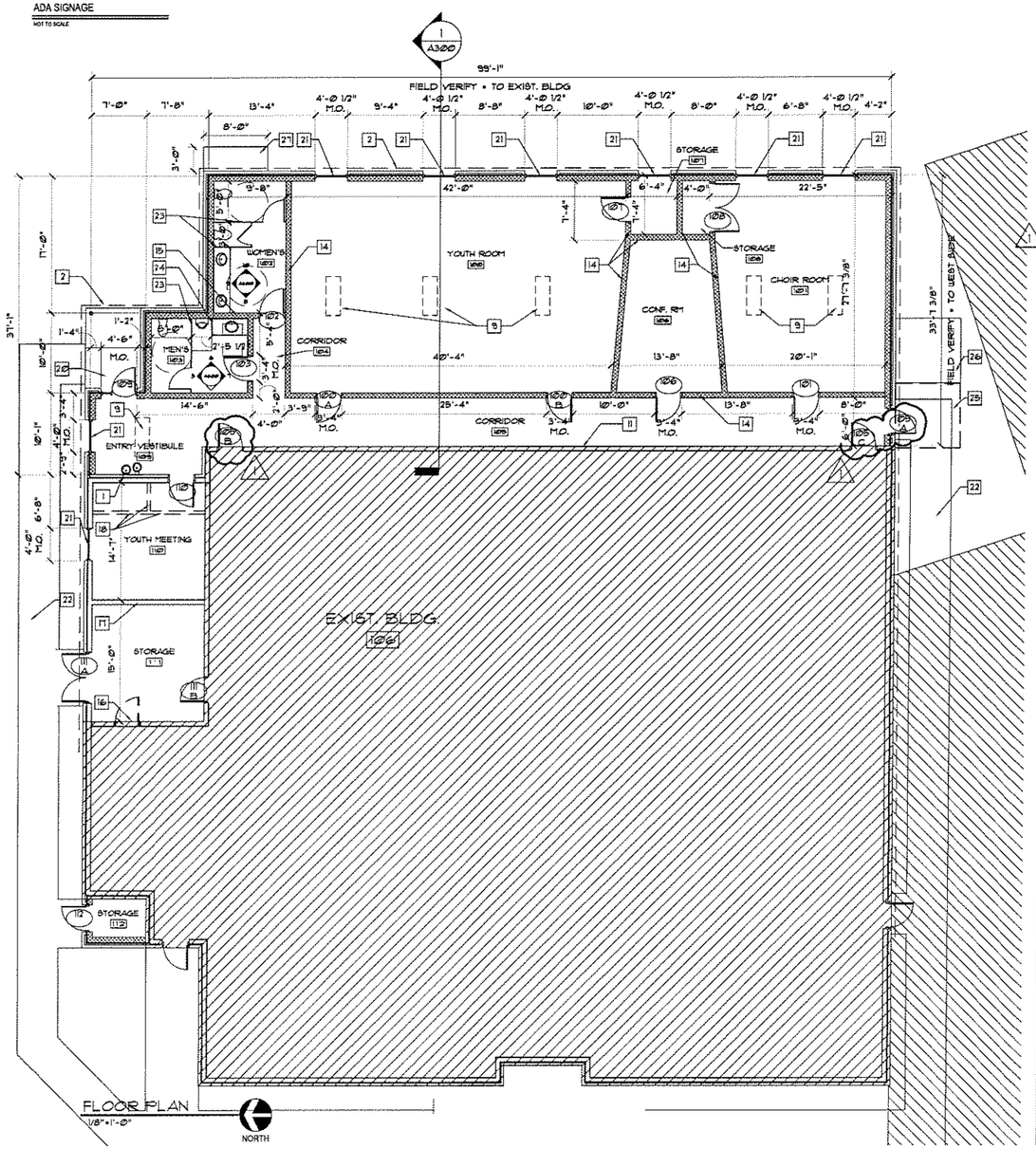
1/16" = 1'-0"



FOUNDATION PLAN

1/16" = 1'-0"

NORTH



FLOOR PLAN

1/8" = 1'-0"

NORTH

KEY NOTES

1. NEW DRINKING FOUNTAINS. HAWS CORPORATION MODEL 1011
2. ROOF OVERHANG ABOVE
3. EXISTING TRENCH FOOTING
4. NEW 16" TRENCH FTG. @ MIN. 42" DEEP. SEE SHEET A300 FOR DETAILS
5. NEW 4" CONC. SLAB - SEE SECTION 1/A300
6. PIN NEW FOUNDATION TO EXISTING FND. W/ (2) #5 RE-BAR @ 16" O.C. HORIZ. DRILLED & EPOXIED INTO EXISTING FND. 6" MIN. (TYP.)
7. 8" THICKENED SLAB
8. NEW ASPHALT SHINGLES (TO MATCH EXIST.) OVER 30 LB FELT & 5/8" PLYWD DECKING. PROVIDE MIN 24" ICE & WATER SHIELD @ EAVES
9. NEW VELUX FS 1028 SKYLIGHT
10. LINE OF WALL BELOW
11. REMOVE EXIST. BRICK & SHEATHING. INSTALL NEW 5/8" GYP.
12. 16" TJIs (SERIES 560) @ 24" O.C.
13. 4" SUPPORTED SLAB
14. EXTEND WALL TO UNDERSIDE OF DECKING
15. EXTEND WALL TO 6" ABOVE LAY-IN CEILING
16. REMOVE EXISTING DOOR & INFILL OPENING
17. NEW 6" MTL STUD WALL W/ R-19 BATT INSULATION & 5/8" GYP. BD. ON BOTH SIDES
18. EXISTING WALLS TO BE REMOVED
19. 12"x MIN. 42" DEEP TRENCH FTG FOR SUPPORT SLAB W/ (2) #5s MIN. 3" FROM BOT. & SIDE
20. NEW 4" CONC. SUPPORTED SLAB
21. NEW 4'-0" x 8'-0" KAWNEER TRIFAB 400 STOREFRONT WINDOW W/ 48"x18" KAWNEER GLASSVENT WINDOW. GLASS TO BE INSULATED
22. NEW 4" CONC. WALK W/ 6x6x1.4 WWF OVER 4" COMP. SAND
23. BOBRICK 1541 CLASSIC SERIES TOILET PARTITIONS - COLOR: PEBBLE
24. BOBRICK 1545 CLASSIC SERIES URINAL SCREENS - COLOR: PEBBLE
25. COND. UNITS TO BE RELOCATED & CONC PAD REMOVED
26. RELOCATED CONC. PAD & COND. UNITS
27. NEW 3'-0"x8'-0"x4" CONC. PAD FOR NEW COND. UNITS

architectural studios of
GERALD J. **YURK** ASSOCIATES
Incorporated

ARCHITECTURE & INTERIORS
101 Main Street, Suite 400
Rochester, Michigan 48307
Phone 248.656.1881
Fax 248.656.7625
webmaster@geraldjyurk.com

The design concepts and creative forms or systems graphically or literally expressed on this drawing have been generated by the architect for exclusive application to this project. They are the sole property of the architect and can only be used, duplicated, or reproduced at the exclusive discretion of and by written permission of the architect.
© 2006 Architectural Studios of Gerald J. Yurk Associates, Inc.

SHEET TITLE:

FLOOR PLAN, FOUNDATION PLAN, ROOF FRAMING, & ROOF PLAN

DATE:	ISSUED FOR:
09.07.06	BIDS & PERMITS
09.18.06	BULLETIN #1

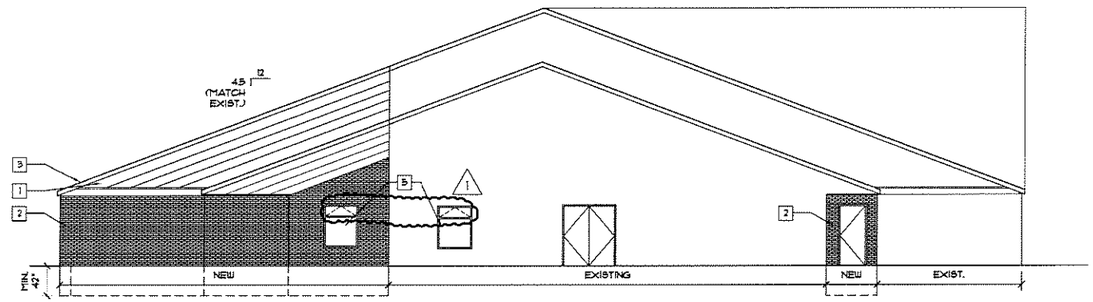
PROPOSED ADDITION FOR:

HAN-BIT CHURCH ADDITION

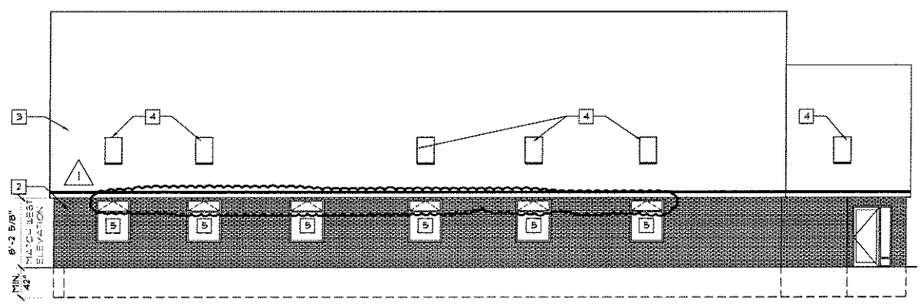
1849 S. LIVERNOIS RD
ROCHESTER HILLS, MI 48307

DRAWN BY: TA
CHECKED BY: JPS
COMMISSION: 06-009

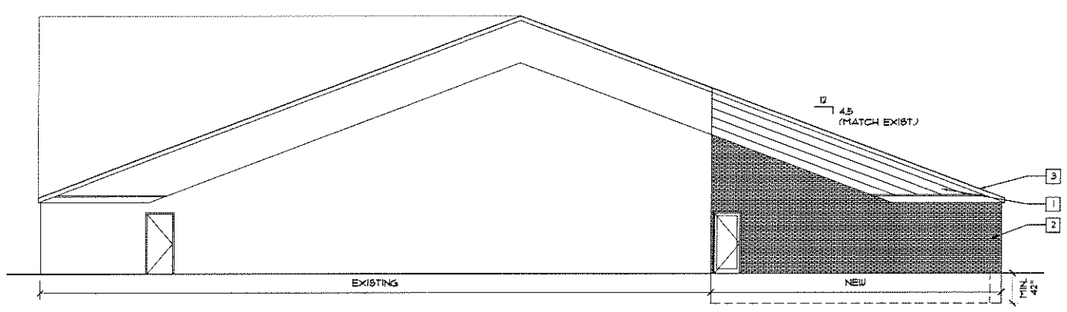
SHEET NUMBER: A100



NORTH ELEVATION
1/8" = 1'-0"



EAST ELEVATION
1/8" = 1'-0"



SOUTH ELEVATION
1/8" = 1'-0"

KEY NOTES

1. SIDING TO MATCH EXISTING
2. BRICK TO MATCH EXISTING
3. NEW ASPHALT SHINGLED ROOF TO MATCH EXISTING
4. NEW VELUX FS 1028 SKYLIGHT
5. 4'-0" x 5'-0" KAWNEER TRIFAB 400 STOREFRONT WINDOW W/ 48"x18" KAWNEER GLASSVENT WINDOW. GLASS TO BE INSULATED

1

architectural studios of
GERALD J. **YURK** ASSOCIATES
Incorporated

ARCHITECTURE & INTERIORS
101 Main Street, Suite 400
Rochester, Michigan 48307
Phone 248.656.1881
Fax 248.656.7625
webmaster@geraldjyurk.com

The design concepts and creative forms or systems graphically or literally expressed on this drawing have been generated by the architect for exclusive application to this project. They are the sole property of the architect and can only be used, duplicated, or reproduced at the exclusive discretion of and by written permission of the architect. © 2006 Architectural Studios of Gerald J. Yurk Associates, Inc.

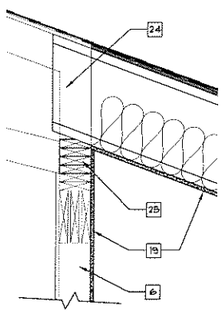
SHEET TITLE:
EXTERIOR ELEVATIONS

DATE:	ISSUED FOR:
09.07.06	BIDS & PERMITS
09.18.06	BULLETIN #1

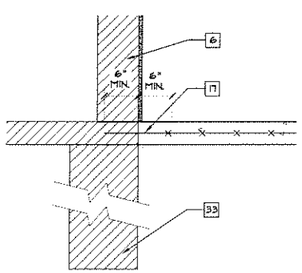
PROPOSED ADDITION FOR:
HAN-BIT CHURCH ADDITION
1849 S. LIVERNOIS RD
ROCHESTER HILLS, MI 48307

DRAWN BY: TA
CHECKED BY: JPS
COMMISSION: 06-009

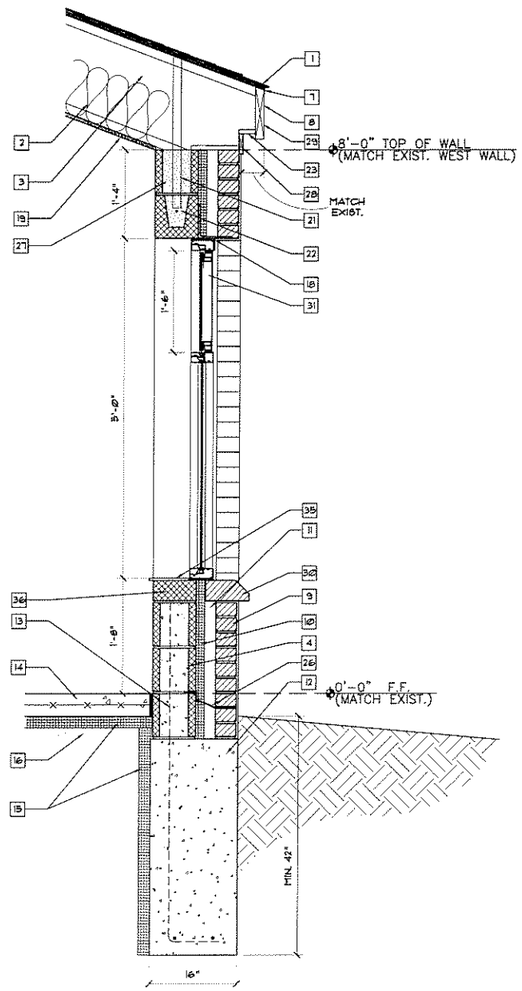
SHEET NUMBER: A200



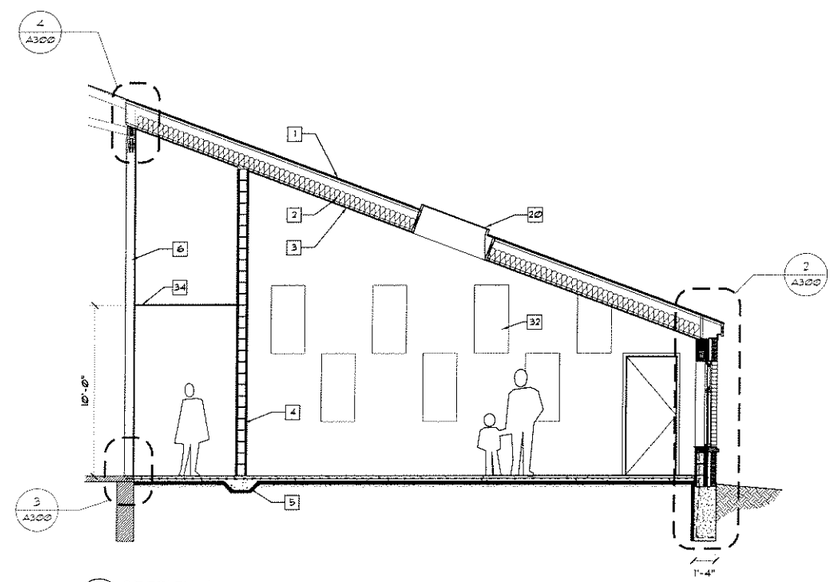
4 DETAIL
1" = 1'-0"



3 DETAIL
1" = 1'-0"



2 WALL SECTION
1" = 1'-0"



1 SECTION A
1/4" = 1'-0"

KEY NOTES

1. NEW ASPHALT SHINGLES (TO MATCH EXIST.) OVER 30 LB FELT & 5/8" PLYWD DECKING. PROVIDE MIN 24" (FROM FACE OF WALL) ICE & WATER SHIELD @ EAVES
2. R-30 BATT INSULATION
3. 16" TJIs (SERIES 230) @ 16" O.C. OR 16" TJIs (SERIES 560) @ 24" O.C.
4. 8" CONC BLOCK
5. 8" THICKENED SLAB W/ (2) #4s MIN. 3" FROM SIDES & BOT.
6. EXISTING WALL. REMOVE EXIST. BRICK & SHEATHING. INSTALL NEW 5/8" GYP.
7. ALUM. DRIP EDGE
8. 2x10 P.T. FASCIA BD.
9. 4" BRICK TO MATCH EXIST.
10. 1 1/2" RIGID INSULATION
11. 1 1/2" AIRSPACE
12. NEW 16" TRENCH FOOTING W/ (2) #5s MIN. 3" FROM BOT. & SIDES
13. #5 VERT. REIN. @ 4' O.C., GROUT CELLS SOLID
14. 4" CONC. SLAB W/ 6x6x1.4 W.W.F OVER 6 MIL VAPOR BARRIER
15. 2" RIGID INSULATION
16. 4" COMPACTED SAND
17. PIN NEW SLAB TO EXISTING SLAB W/ #5 RE-BAR @ 16" O.C. HORIZ. DRILLED & EPOXIED INTO EXISTING FND. 6" MIN. (TYP.)
18. 6x6x1/4" GALV. ANG. ATTACHED TO CONC. LINTEL W/ 1/4" HILTI ANCHORS @ 12" O.C. & MIN. 2" FROM ENDS
19. NEW 5/8" GYP. BD.
20. NEW VELUX FS 108 SKYLIGHT
21. HETA40 SIMPSON STRONG TIE - BASED ON UPLIFT OF 840 PSF
22. 8" PRECAST CONC. LINTEL
23. CONT. ALUM. SOFFIT VENT
24. NAIL TJI TO EXIST. RAFTERS
25. 2x BLOCKING ON EXIST. TOP PLATE
26. FLASHING W/ WEEP HOLES
27. 8" CMU, GROUT CELLS SOLID
28. 1x4 FRIEZE BD.
29. VINYL FASCIA COVERING (MATCH EXIST.)
30. LIMESTONE SILL TO MATCH EXISTING
31. 4'-0" x 5'-0" KAUNEER TRIFAB 400 STOREFRONT WINDOW W/ 48"x18" KAUNEER GLASSVENT WINDOW. GLASS TO BE INSULATED
32. SOUND PANELS - SIZE & LOCATION TO BE SPECIFIED BY MANUF.
33. EXIST. FOOTING
34. 2'x2'x3/4" CEILING GRID - USG, ECLIPSE CLIMAPLUS PEDESTALS & PANELS TRIPLE STEP SCORING W/ CLIMAPLUS PERFORMANCE/DONN BRAND CENTRICITEE SUSPENSION SYSTEM.
35. 3/4" MARBLE SILL
36. 4" SOLID CMU

architectural studios of
GERALD J. **YURK** ASSOCIATES
Incorporated
ARCHITECTURE & INTERIORS
101 Main Street, Suite 400
Rochester, Michigan 48307
Phone 248.656.1881
Fax 248.656.7625
webmaster@geraldjyurk.com

The design concepts and creative forms or systems graphically or literally expressed on this drawing have been generated by the architect for exclusive application to this project. They are the sole property of the architect and can only be used, duplicated, or reproduced at the exclusive discretion of and by written permission of the architect. © 2006 Architectural Studios of Gerald J. Yurk Associates, Inc.

SHEET TITLE:
BUILDING SECTION, WALL SECTION, & DETAILS

DATE:	ISSUED FOR:
09.07.06	BIDS & PERMITS
09.18.06	BULLETIN #1

PROPOSED ADDITION FOR:
HAN-BIT CHURCH ADDITION
1849 S. LIVERNOIS RD
ROCHESTER HILLS, MI 48307

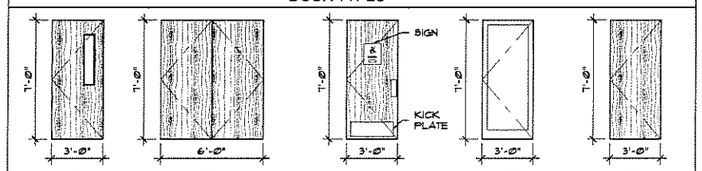
DRAWN BY: TA
CHECKED BY: JPS
COMMISSION: 06-009

SHEET NUMBER: A300

DOOR SCHEDULE

NO.	DOOR SIZE	DOOR THK	DOOR TYPE	DOOR MATERIAL	FRAME TYPE	FRAME MATERIAL	FRAME HEAD	FRAME JAMB	LABEL	LINTEL	HARDWARE	NOTES
100A	3'-0" x 7'-0"	1¾"	A	SC WD	AA	H.M.	1/A600	2/A600	-	-	2	-
100B	3'-0" x 7'-0"	1¾"	A	SC WD	AA	H.M.	1/A600	2/A600			2	
101	3'-0" x 7'-0"	1¾"	A	SC WD	AA	H.M.	1/A600	2/A600			2	
102	3'-0" x 7'-0"	1¾"	C	SC WD	AA	H.M.	1/A600	2/A600			10	
103	3'-0" x 7'-0"	1¾"	C	SC WD	AA	H.M.	1/A600	2/A600			10	
104A	3'-0" x 7'-0"	1¾"	D	ALUM/ GLASS	DD	ALUM.	3/A600	4/A600			9	
104B	3'-0" x 7'-0"	1¾"	E	SC WD	AA	H.M.	1/A600	2/A600	20 MIN		1	1
104C	3'-0" x 7'-0"	1¾"	E	SC WD	AA	H.M.	1/A600	2/A600	20 MIN		1	
106	3'-0" x 7'-0"	1¾"	A	SC WD	AA	H.M.	1/A600	2/A600			2	
107	3'-0" x 7'-0"	1¾"	E	SC WD	AA	H.M.	1/A600	2/A600			4	
108	(2)3'-0"x7'-0"	1¾"	B	SC WD	BB	H.M.	1/A600	2/A600			4	
109	3'-0" x 7'-0"	1¾"	D	ALUM/ GLASS	CC	ALUM.	3/A600	4/A600			9	
110	3'-0" x 7'-0"	1¾"	A	SC WD	AA	H.M.	1/A600	2/A600			2	
111	(2)3'-0"x7'-0"	-	-	-	-	-	-	-			-	EXIST.
112	3'-0" x 7'-0"	1¾"	E	SC WD	AA	H.M.	1/A600	2/A600			3	
113	3'-0" x 7'-0"	1¾"	E	SC WD	AA	H.M.	3/A600	4/A600			3	

DOOR TYPES



'A' SOLID CORE WOOD VENEER DOORS W/ WINDOW

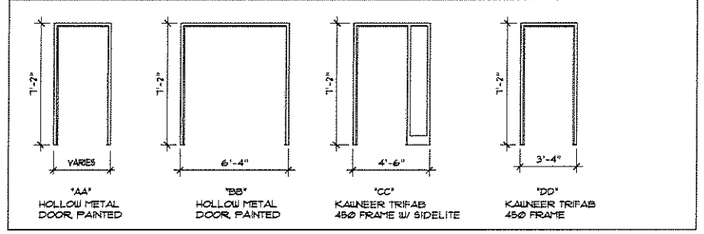
'B' SOLID CORE WOOD VENEER DOORS

'C' SOLID CORE WOOD VENEER DOORS

'D' KALWEER 350 IR ENTRANCE DOOR

'E' SOLID CORE WOOD VENEER DOORS

DOOR FRAME TYPES



'AA' HOLLOW METAL DOOR, PAINTED

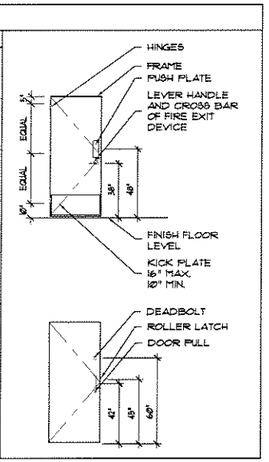
'BB' HOLLOW METAL DOOR, PAINTED

'CC' KALWEER TRIFAB 450 FRAME W/ SIDELITE

'DD' KALWEER TRIFAB 450 FRAME

HARDWARE SCHEDULE

NO.	DESCRIPTION	NO.	DESCRIPTION
1	HINGES 4½"x4½" - FULL MORTISE PASSAGE SET / PANIC KICKPLATE WALL STOP	9	CONTINUOUS HINGE CLOSER LOCK SET PUSH/PULL PANIC
2	HINGES 4½"x4½" - FULL MORTISE CLOSER LOCK SET	10	HINGES 4½"x4½" - FULL MORTISE CLOSER PUSH/ PULL SET KICKPLATE WALL STOP
3	HINGES 4½"x4½" - FULL MORTISE LOCK SET		
4	HINGES 4½"x4½" - FULL MORTISE PASSAGE SET WALL STOP		
5	HINGES 4½"x4½" - FULL MORTISE LOCK SET WALL STOP		
6	HINGES 4½"x4½" - FULL MORTISE PASSAGE SET		
7	HINGES 4½"x4½" - FULL MORTISE CLOSER LOCK SET - CONTINUOUS KICKPLATE	***	SUPPLY CUT SHEETS & FINISH HARDWARE SPEC TO ARCHITECT FOR APPROVAL PRIOR TO ORDERING/ INSTALLATION
8	HINGES 4½"x4½" - FULL MORTISE PRIVACY SET WALL STOP KICKPLATE	***	ALL HARDWARE TO BE YALE "PACIFIC BEACH", BRUSHED STAINLESS STEEL FINISH



ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	FLOOR FINISH	FLOOR BASE	WALLS NORTH	WALLS EAST	WALLS SOUTH	WALLS WEST	CEILING MATERIAL	CEILING HEIGHT	EQUIPMENT	NOTES
100	YOUTH ROOM	F2	B1	W1	W1	W1	W1	C1	CATH.	-	-
101	CHOIR ROOM	F2	B1	W1	W1	W1	W1	C1	CATH.	-	-
102	WOMEN'S	F1	B2	W1/W2/W5	W1/W2/W5	W1/W2/W5	W1/W2/W5	C2	8'-0"	-	-
103	MEN'S	F1	B2	W1/W2/W5	W1/W2/W5	W1/W2/W5	W1/W2/W5	C1	8'-0"	-	-
104	CORRIDOR	F4	B1	W1	W1	W1	W3	C2	10'-0"	-	-
105	CORRIDOR	F4	B1	W1	W1	W1	W3	C2	10'-0"	-	-
106	CONFERENCE ROOM	F2	B1	W1	W1	W1	W1	C1	CATH.	-	-
107	STORAGE	F2	B1	W1	W1	W1	W1	C2	8'-0"	-	-
108	STORAGE	F2	B1	W1	W1	W1	W1	C2	8'-0"	-	-
109	VESTIBULE	F4	B1	W1	W1	W1	W1	C1	8'-0"	-	-
110	YOUTH MEETING	F2	B1	W3	W3	W3	W3	EXIST.	EXIST.	-	-
111	STORAGE	F3	B1	W3	W3	W3	W3	-	EXIST.	-	-
112	STORAGE	F3	B1	W1	W1	W1	W1	C1	8'-0"	-	-

ROOM FINISH LEGEND

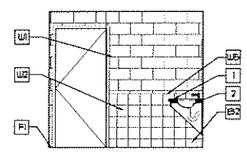
FLOOR
F1 - TILE - VIRGINIA TILE CO. "AMERICAN OLEAN", BONE HAZE UP51 8"x8"
F2 - CARPET - BOLYU "LACROIX" LA133
F3 - SEALED CONCRETE
F4 - SHEET VINYL - ARMSTRONG "IMPRESSIONS COLLECTION" W/ CUSHIONSTEP, 33117 "UNIVERSAL PORCELAIN"

BASE
B1 - 4" VINYL BASE
B2 - "AMERICAN OLEAN" COVE TILE BASE S36B97

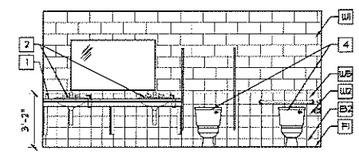
WALLS
W1 - PAINTED BLOCK
W2 - WAINSCOT - TILE - VIRGINIA TILE CO. "AMERICAN OLEAN" BONE HAZE UP51 8"x8"
W3 - PAINTED GYP. BD.
W4 - PAINTED BLOCK W/ MIN. 1" SOUND PANELS. SIZE & LOCATION TO BE SPECIFIED BY MANUF.
W5 - AMERICAN OLEAN BULLNOSE TRIM S-4883, 'BONE HAZE' UP51

CEILING
C1 - 5/8" GYP BD., PTD
C2 - 2'x2'x3/4" CEILING GRID - USG, ECLIPSE CLIMAPLUS PEDESTALS 1 PANELS TRIPLE STEP SCORING W/ CLIMAPLUS PERFORMANCE/DONN BRAND CENTRICITEE SUSPENSION SYSTEM.

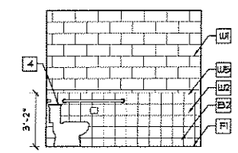
* ALL ROOM FINISHES TO MEET THE 2003 MICHIGAN BUILDING CODE FOR FLAME SPREAD AND SMOKE DEVELOPMENT. CONTRACTOR TO PROVIDE CITY WITH DOCUMENTATION AT COMPLETION OF PROJECT BEFORE FINAL CERTIFICATE OF OCCUPANCY CAN BE ISSUED.



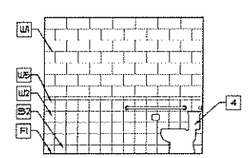
8 WOMEN'S 102
1/4" = 1'-0"



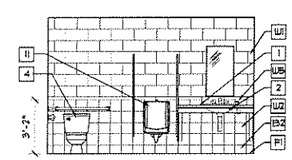
9 WOMEN'S 102
1/4" = 1'-0"



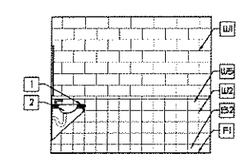
10 WOMEN'S 102
1/4" = 1'-0"



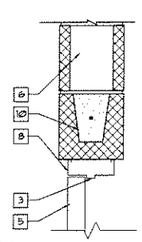
5 MEN'S 103
1/4" = 1'-0"



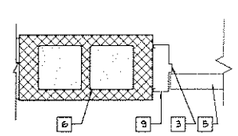
6 MEN'S 103
1/4" = 1'-0"



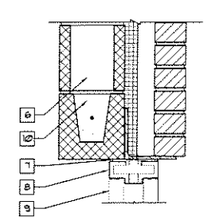
7 MEN'S 103
1/4" = 1'-0"



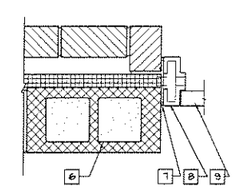
1 INT. DOOR HEADER
1 1/2" = 1'-0"



2 INT. DOOR JAMB
1 1/2" = 1'-0"



3 EXT. DOOR HEADER
1 1/2" = 1'-0"



4 EXT. DOOR JAMB
1 1/2" = 1'-0"

KEY NOTES

1. GRANITE COUNTER TOP & BACKSPLASH
2. UNDER COUNTER MOUNTED BASIN - TOTO MODEL LT581
3. INTEGRAL DOOR STOP
4. FLOOR-MOUNTED TOILET - TOTO MODEL CST784SF
5. 1 3/4" SOLID CORE WOOD DOOR
6. 8x8x16 CMU
7. PROVIDE BACKER ROD CAULK BOTH SIDES AS REQ.
8. HOLLOW MET. FRAME GALV., PRIMED & PAINTED-BLACK
9. KALWEER 350 SERIES SWING DOOR
10. 8" PRECAST CONC. LINTEL
11. URINAL - TOTO MODEL UT447

architectural studios of
GERALD J. **YURK** ASSOCIATES
incorporated

ARCHITECTURE & INTERIORS
101 Main Street, Suite 400
Rochester, Michigan 48307
Phone 248.656.1881
Fax 248.656.7625
webmaster@geraldjyurk.com

The design concepts and creative forms or systems graphically or literally expressed on this drawing have been generated by the architect for exclusive application to this project. They are the sole property of the architect and can only be used, duplicated, or reproduced at the exclusive discretion of and by written permission of the architect. © 2006 Architectural Studios of Gerald J. Yurk Associates, Inc.

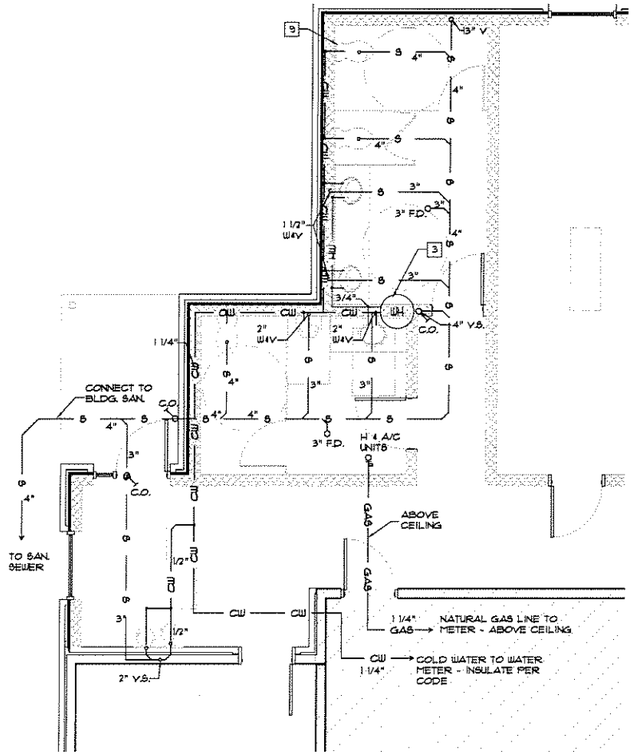
SHEET TITLE:
INTERIOR ELEVATIONS, ROOM FINISH & DOOR SCHEDULES, & DETAILS

DATE:	ISSUED FOR:
09.07.06	BIDS & PERMITS
09.18.06	BULLETIN #1

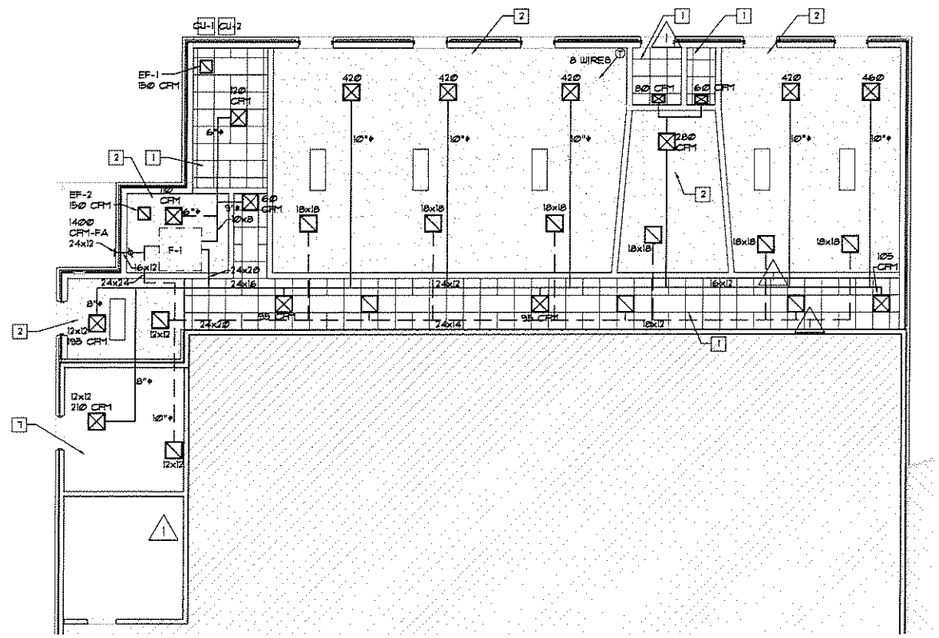
PROPOSED ADDITION FOR:
HAN-BIT CHURCH ADDITION
1849 S. LIVERNOIS RD
ROCHESTER HILLS, MI 48307

DRAWN BY: TA
CHECKED BY: JPS
COMMISSION: 06-009

SHEET NUMBER: A600



PLUMBING PLAN
1/4" = 1'-0"



MECHANICAL PLAN
1/8" = 1'-0"

PLUMBING NOTES

1. ALL PLUMBING SHALL COMPLY WITH THE STATE OF MICHIGAN PLUMBING CODE 2003, AND ALL APPLICABLE LOCAL CODE REQUIREMENTS.
2. INSULATE ALL STORM PIPE ABOVE GRADE WITH 3/4" GLASS FIBER PIPE INSULATION WITH FACTORY-APPLIED, SELF-SEALING "ASJ" VAPOR BARRIER JACKET.
3. MATERIALS SHALL BE AS FOLLOWS:
   A. WATER PIPING - TYPE 'L' COPPER
   B. WASTE PIPING - SCHEDULE 40 PVC
   C. GAS PIPING - SCHEDULE 40 BLACK STEEL PIPE (ASTM A53) ABOVE GRADE
4. PROVIDE CLEANOUTS AS REQUIRED, AND AT THE BASE OF ALL STACKS.
5. PIPING SHALL BE INSTALLED IN ACCORDANCE WITH THE MICHIGAN PLUMBING CODE 2003, SECTION 308
6. PROPERLY REMOVE, DISCONNECT, AND ABANDON ANY UNUSED SYSTEMS OR MATERIALS FROM FORMER USE. VERIFY ALL EXISTING JOB CONDITIONS, LOCATIONS OF PLUMBING, WATER AND WASTE.
7. WHERE THE SPACE ABOVE THE CEILING SERVES AS A RETURN-AIR PLENUM, NO COMBUSTIBLE MATERIALS SHALL BE USED WITHIN THIS SPACE.

KEY NOTES

1. 2'x2'x3/4" CEILING GRID - USG, ECLIPSE CLIMAPLUS PEDESTALS & PANELS TRIPLE STEP SCORING W/ CLIMAPLUS PERFORMANCE/DONN BRAND CENTRICITEE SUSPENSION SYSTEM.
2. GYP. BD. CEILING
3. 6 GAL. WATER HEATER W/ DRAIN PAN ABOVE CEILING. A.O. SMITH MODEL DEL-6. 2 KW = 120/1 W/ T&V RELIEF
4. LITHONIA, 8" SURFACE MOUNT FLUORESCENT DOWNLIGHT CFII-2/42TRT 8ARL-120
5. LITHONIA, EMERGENCY GRID TROFFER, MODEL 2GT-4-32-RU-PG18-120-EL
6. LITHONIA, GRID TROFFER, MODEL 2GT-4-32-RU-PG18-120
7. EXIST. CEILING
8. PROVIDE ELECT. DISC. FOR W.H. ABOVE CEILING
9. WATER CLOSET - TANK TYPE (TYP.). SEE SEE KEYNOTE 4 ON A600

MECHANICAL NOTES

1. ALL DUCTWORK TO COMPLY WITH ASHRAE CONSTRUCTION STANDARDS AND STATE OF MICHIGAN VENTILATION STANDARDS, MICHIGAN MECHANICAL CODE, TABLE 403.3.
2. ALL WORK SHALL COMPLY WITH THE STATE OF MICHIGAN MECHANICAL CODE AND LOCAL CODE REQUIREMENTS, 2003 MICHIGAN MECHANICAL CODE.
3. COORDINATE INSTALLATION IN FIELD WITH ARCHITECTURAL/ELECTRICAL TRADES.
4. VERIFY ALL EXISTING JOB CONDITIONS AND ACCOMMODATE AS REQUIRED FOR A COMPLETE INSTALLATION.
5. DIFFUSERS AND GRILLES TO BE ALUMINUM OR STEEL CONSTRUCTION WITH ADJUSTABLE FLOW AND PATTERN. PRICE FOR APPROVED (MAX. 30 N/C).
6. MOUNT THERMOSTAT AT 48" A.F.F. TO CENTER OF THERMOSTAT. THERMOSTAT TO HAVE "OCCUPIED/UNOCCUPIED" PROGRAM.
7. PROVIDE CURBS, PITCH BOXES, SLEEVES FOR ALL MECHANICAL PENETRATIONS.
8. BY OTHERS: ELECTRICAL POWER WIRING, GAS PIPING, AND FRAMED OPENINGS.
9. PROVIDE SHOP DRAWINGS FOR ALL EQUIPMENT & SYSTEMS BEFORE STARTING ANY WORK.
10. F-1: 3600 CFM @ 1". ESP, DX COIL, CU-1 & CU-2, 5 TON CAPACITY (EA.). FURNACE DUAL CONTROL, 120,000 BTU/HR HEATING (EA.). 92% MIN. EFFICIENCY, PVC VENT @ CAI. PROVIDE VIBRATION ISOLATORS. UNITS CARRIER OR APPROVED. UNIT TO BE HUNG FROM STRUCTURE ABOVE.

    FRESH AIR TO BE OPEN DURING "OCCUPIED" THERMOSTAT MODE
11. DUCTWORK TO CONFORM TO ASHRAE REQUIREMENTS, INSULATE ALL DUCTS. CONDENSATE DRAIN - 3/4 PVC. PIPING - TYPE 'L' COPPER.

ELECTRICAL NOTES

1. ALL NEW WIRING TO CONFORM TO THE NEC 2002 AND MICHIGAN PART 8 CODE RULES.
2. REMOVE AND DISPOSE OF UNUSED LIGHTING FIXTURES, DAMAGED FIXTURES, ELECTRICAL ACCESSORIES, ETC., AND PROPERLY DISPOSE OF MATERIALS.
3. CHECK EXISTING RECEPTACLE CIRCUITS FOR CONTINUITY. EXISTING CIRCUITS MAY REMAIN IN OPERATION.
4. ADD NEW LIGHTING AND RECEPTACLE CIRCUITS, LIGHTING AND ELECTRICAL HARDWARE, AS REQUIRED. ALL NEW WIRING TO BE COPPER, TYPE THW, 12-GAUGE MINIMUM IN 12-INCH CONDUIT. MAXIMUM OF 8 DUPLEX RECEPTACLES AND 1800 WATTS CONNECTED TO ANY BRANCH CIRCUIT, WITH 20 AMP CIRCUIT BREAKERS.
5. LIGHTING FIXTURES TO BE LITHONIA OR APPROVED:
   RECESSED TROFFER - 3 @ 32 WATT T-8 LAMPS
   EMERGENCY FIXTURES - LITHONIA 4P-40B
   EXIT FIXTURES - LITHONIA LXNY-120 VOLT, WITH DIRECTIONAL ARROWS AS REQUIRED.
6. SWITCHES AND SWITCH PLATES AND RECEPTACLES AND PLATES TO MATCH EXISTING TYPE AND COLOR.

ELECTRICAL LEGEND

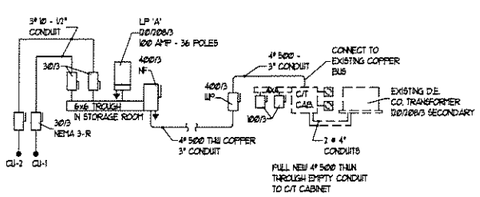
SYMBOL	DESCRIPTION
	DUPLEX RECEPTACLE
	QUAD RECEPTACLE
	DUPLEX SPLIT RECEPTACLE
GFI	GROUND FAULT INTERRUPT CIRCUIT
	220 VOLT RECEPTACLE
WP	WEATHERPROOF RECEPTACLE
	TELEPHONE JACK, WIRING N.I.C.
	CABLE TV JACK, N.I.C.
	COMPUTER NETWORK JACK
S	SPEAKER
	ALARM KEYPAD
	DOORBELL
	SINGLE PHASE MOTOR
	GARAGE DOOR OPENER
	CEILING MOUNTED FIXTURE
	RECESSED FIXTURE
	DIRECTIONAL WALL WASH FIXTURE
	PENDANT, CHAIN OR STEM MOUNTED
	WALL MOUNTED FIXTURE
	EXIT LIGHTING
	FLUORESCENT FIXTURE
	FLUORESCENT STRIP
	TRACK LIGHTING
	ACCENT / DIRECTIONAL ARROWS
M	FLOOD LIGHTS W/ MOTION DETECTOR
	EMERGENCY LIGHTING
$	SINGLE POLE TOGGLE SWITCH
$3	THREE WAY TOGGLE SWITCH
$4	FOUR WAY TOGGLE SWITCH
$D	SINGLE POLE DIMMER SWITCH

MECHANICAL LEGEND

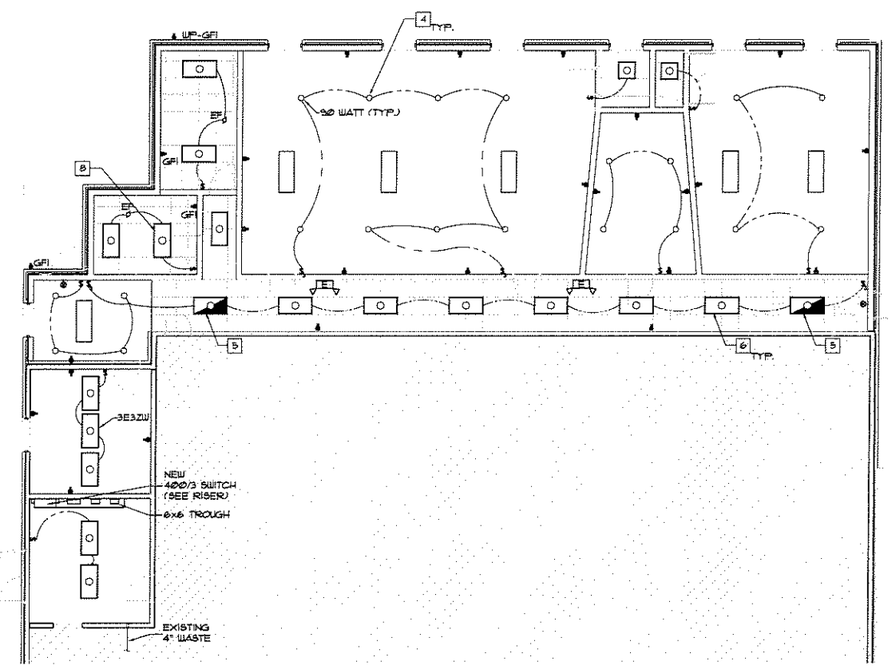
SYMBOL	DESCRIPTION
SIZE	SUPPLY DUCT / SIZE
SIZE	RETURN AIR DUCT
	SUPPLY AIR GRILLE
	RETURN AIR GRILLE
	EXHAUST AIR GRILLE
T	THERMOSTAT
	DAMPER
	EXHAUST FAN

PLUMBING PIPING SYMBOLS

SYMBOL	DESCRIPTION
CW	DOMESTIC COLD WATER (C.W.)
S	SANITARY
HW	DOMESTIC HOT WATER (H.W.)



ELECTRICAL RISER
N.T.S.



ELECTRICAL PLAN
1/8" = 1'-0"

architectural studios of
GERALD J. YURK ASSOCIATES
incorporated
ARCHITECTURE & INTERIORS
101 Main Street, Suite 400
Rochester, Michigan 48307
Phone 248.656.1881
Fax 248.656.7625
webmaster@geraldjyurk.com

The design concepts and creative forms or systems graphically or literally expressed on this drawing have been generated by the architect for exclusive application to this project. They are the sole property of the architect and can only be used, duplicated, or reproduced at the exclusive discretion of and by written permission of the architect. © 2006 Architectural Studios of Gerald J. Yurk Associates, inc.

SHEET TITLE:
MECHANICAL, ELECTRICAL, & PLUMBING PLANS

DATE:	ISSUED FOR:
09.07.06	BIDS & PERMITS
09.18.06	BULLETIN #1
---	---
---	---
---	---
---	---
---	---
---	---
---	---
---	---
---	---
---	---

PROPOSED ADDITION FOR:
HAN-BIT CHURCH ADDITION
1849 S. LIVERNOIS RD
ROCHESTER HILLS, MI 48307

DRAWN BY: TA
CHECKED BY: JPS
COMMISSION: 06-009

SHEET NUMBER:
M100