

NEW GRIFFIN CLAW
22,408 TOTAL SF
F-1/S-1 22,239 SF
 (Includes Canopy Areas)

EXISTING CLUBHOUSE BFD
5,438 SF
 (Includes Canopy Areas)

H-2
144 SF

H-3
256 SF

DISTILLING
256 SF

CODE DATA:

ZONING: BUSINESS: B-4 FREEWAY SERVICE

CONSTRUCTION TYPE: SEPARATED MIXED OCCUPANCY
 EXISTING WEST AREA (CLUBHOUSE BFD) V B
 EXISTING EAST AREA (EASTSIDE MARIO'S) EXPANSION V B

USE GROUP
 EXISTING WEST AREA (CLUBHOUSE BFD) ASSEMBLY A-2 (EXISTING: NO CHANGE)
 EXISTING EAST AREA (EASTSIDE MARIO'S) EXPANSION F-1/S-1 FACTORY AND STORAGE
 HAZARD H-2 HAZARD
 HAZARD H-3 HAZARD

MIXED USE SEPARATED (SECTION 508.3)
 BUILDING AREA WITH CANOPY 27,848 SF
 ALLOWABLE BUILDING AREA (SECTION 508.3)
 SUM OF THE RATIOS OF THE ACTUAL BUILDING AREAS (ALLOWABLE BUILDING AREA OF EACH OCCUPANCY <1)

A (ACT)	AT1	INCREASE FACTOR
A-2 5,438	5,000	4.75 = .19
F-1/S-1 22,239	8,900	4.75 = .55
H-2 144	3,000	1.75 = .03
H-3 256	5,000	1.75 = .03

COMPLIANT

- CURRENT CODES:**
- 2012 MICHIGAN BUILDING CODE
 - 2009 ICC/ANSI A 117.1 MICHIGAN BARRIER FREE DESIGN LAW
 - 2012 MICHIGAN PLUMBING CODE
 - 2012 MICHIGAN MECHANICAL CODE
 - 2011 MICHIGAN ELECTRICAL CODE
 - MICHIGAN ENERGY CODE, ANSI/ASHRAE/IESNA STANDARD 90.1-2007
 - INTERNATIONAL FIRE CODE 2012
- DESIGN PROFESSIONAL IN RESPONSIBLE CHARGE -
 ROMAN BONISLAWSKI, R.A. LICENSE #: 37397

Parking Requirement Calculations -

Existing Clubhouse 59 (A-2 use)
 = 195 occupants / 2 parking spaces per = 97.5 spaces

New Warehouse, Brewing, Milling & Distilling (F-1, S-1, H-2 & H-3 use)
 = 22,639 square feet / 500 s.f. per space = 45.3 spaces

= 97.5 + 45.3
 = 143 parking spaces required
 152 parking spaces provided

RonandRoman
 architects et al.
 275 E. Frank St. Birmingham, MI 48009
 (248) 723-5790 (248) 723-5795

Project:
GRIFFIN CLAW
 2272 Crooks Road
 Rochester Hills, Michigan

Seal:

Issue Date:	
REVIEW	5/5/2016
SPA SUBMITTAL	5/13/2016
REVIEW	6/29/2016
SPA RESUBMITTAL	7/6/2016
SPA RESUBMITTAL	7/29/2016
SPA RESUBMITTAL	8/10/2016

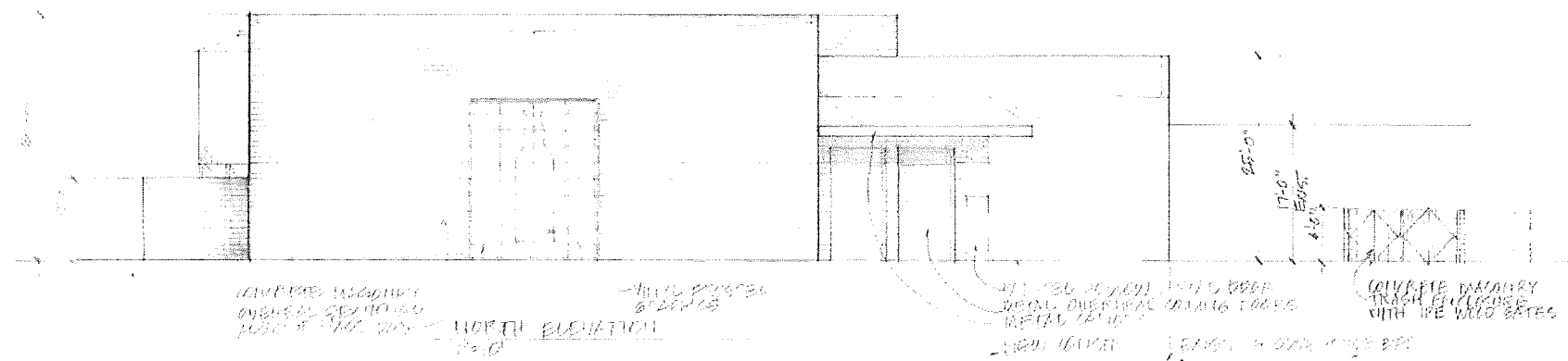
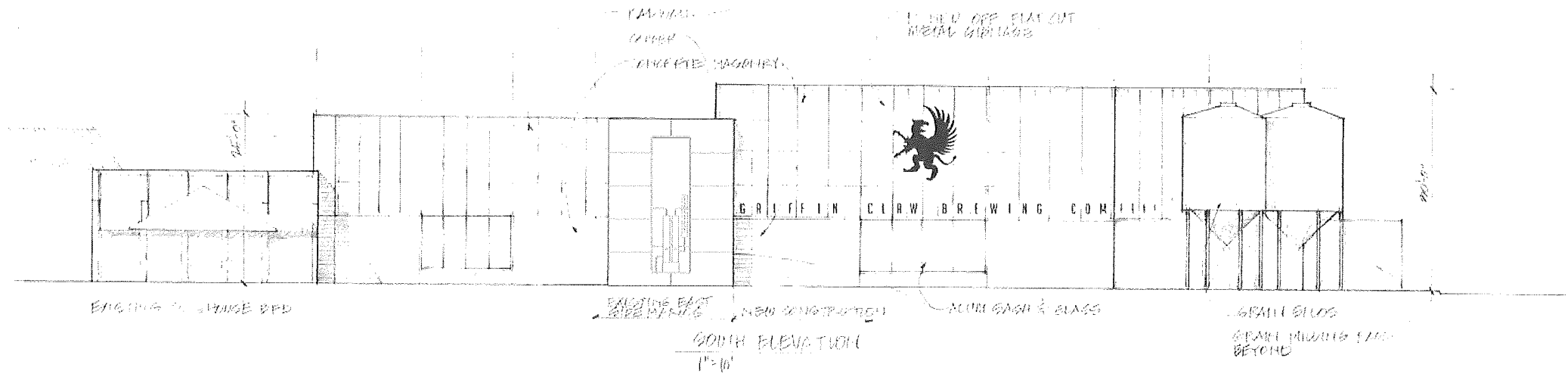
Sheet Title:

PRELIMINARY FLOOR PLAN

Sheet Number:

PRELIMINARY FLOOR PLAN
 scale: 1/8" = 1'-0"

A101



RonandRoman
 architects et al.
 275 E. Frank St. Birmingham, MI 48009
 o) 248.723.5790 f) 248.723.5795

Project:

GRIFFIN CLAW
 2272 Crooks Road
 Rochester Hills, Michigan

Seal:

Issue Date:

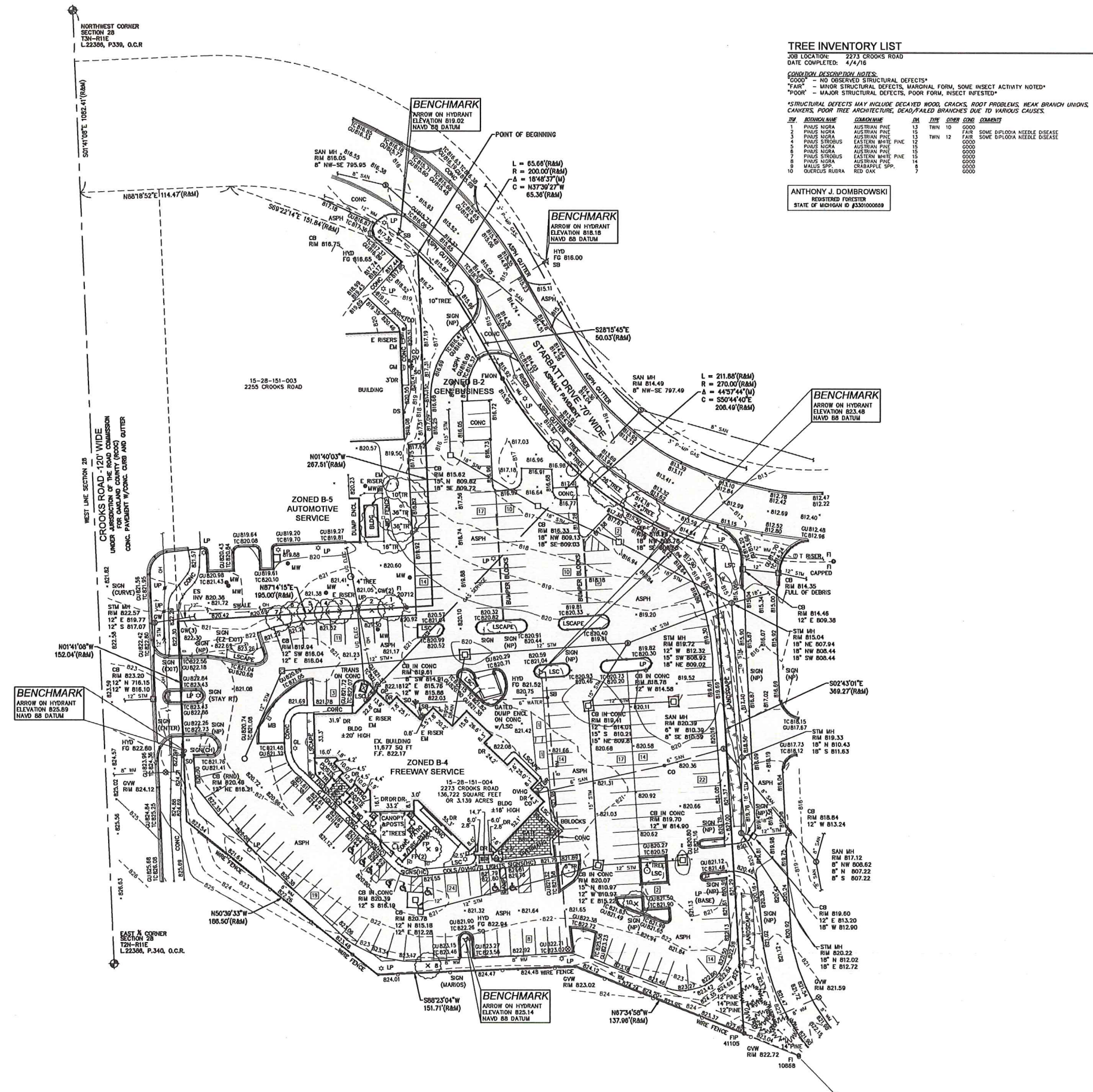
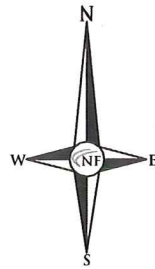
REVIEW	5/5/2016
SPA SUBMITTAL	5/13/2016
REVIEW	6/29/2016
SPA RESUBMITTAL	7/6/2016
SPA RESUBMITTAL	7/28/2016

Sheet Title:

EXTERIOR ELEVATIONS

Sheet Number:

A201



TREE INVENTORY LIST

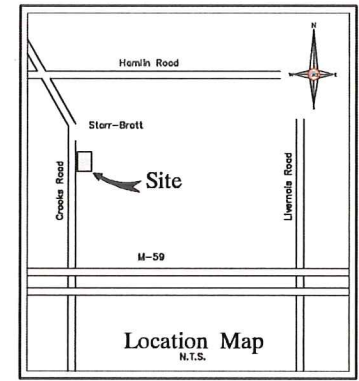
JOB LOCATION: 2273 CROOKS ROAD
DATE COMPLETED: 4/4/16

CONDITION DESCRIPTION NOTES:
 "GOOD" - NO OBSERVED STRUCTURAL DEFECTS*
 "FAIR" - MINOR STRUCTURAL DEFECTS, WOUNDING, 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.

ID#	COMMON NAME	COMMON NAME	DBH	TYPE	OTHER	COND	COMMENTS
1	PAUIS NIGRA	AUSTRIAN PINE	13	TWN	10	GOOD	
2	PAUIS NIGRA	AUSTRIAN PINE	13	TWN	10	GOOD	SOME EPIDIOA NEEDLE DISEASE
3	PAUIS NIGRA	AUSTRIAN PINE	12	TWN	12	GOOD	SOME EPIDIOA NEEDLE DISEASE
4	PAUIS STROBUS	EASTERN WHITE PINE	12			GOOD	
5	PAUIS NIGRA	AUSTRIAN PINE	12			GOOD	
6	PAUIS NIGRA	AUSTRIAN PINE	12			GOOD	
7	PAUIS STROBUS	EASTERN WHITE PINE	14			GOOD	
8	PAUIS NIGRA	AUSTRIAN PINE	14			GOOD	
9	QUERCUS SP.	CRAPPLE SPP.	14			GOOD	
10	QUERCUS RUBRA	RED OAK	9			GOOD	

ANTHONY J. DOMBROWSKI
REGISTERED FORESTER
STATE OF MICHIGAN ID #330100069



LEGEND

- CLEAN-OUT MANHOLE
- HYDRANT GATE VALVE
- INLET RYCB MANHOLE
- UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING SANITARY SEWER
- EXISTING WATER MAIN
- EXISTING STORM SEWER
- EXISTING BURIED CABLES
- EXISTING GAS MAIN
- EXISTING OVERHEAD LINES
- PR. SANITARY SEWER
- PROPOSED WATER MAIN
- PROPOSED STORM SEWER
- PR. SAND BACKFILL
- UTILITY CROSSING
- PR. TOP OF CURB ELEVATION
- PROPOSED CUTTER ELEVATION
- PR. TOP OF WALK ELEVATION
- PR. TOP OF PAVEMENT ELEV.
- PROPOSED FINISH GRADE
- PROPOSED CONTOUR
- PROPOSED SWALE
- PR. DRAINAGE DIRECTION
- PROPOSED INLET FILTER
- DRAINAGE AREA LIMITS
- PROPOSED SILT FENCE
- LIMITS OF SOIL DISRUPTION

LEGAL DESCRIPTION

THE LAND REFERRED TO IN THIS SURVEY IS LOCATED IN THE CITY OF ROCHESTER HILLS, COUNTY OF OAKLAND, STATE OF MICHIGAN AND MORE PARTICULARLY DESCRIBED AS FOLLOWS:

T3M, R11E, SECTION 28, PART OF NORTHWEST 1/4, BEGINNING AT A POINT DISTANT S01°41'08"E, 1082.41 FEET AND N88°18'52"E, 114.47 FEET AND S69°22'14"E, 151.84 FEET FROM THE NORTHWEST SECTION CORNER; THENCE ALONG A CURVE TO THE RIGHT (RADIUS 200.00 FEET, CHORD BEARS S37°39'27"E, 65.36 FEET, DISTANCE OF 85.86 FEET); THENCE S28°15'45"E, 50.03 FEET; THENCE ALONG A CURVE TO THE LEFT (RADIUS 270.00 FEET, CHORD BEARS S50°44'40"E, 208.49 FEET, DISTANCE OF 211.88 FEET); THENCE S02°43'01"E, 369.27 FEET; THENCE N87°34'58"W, 137.96 FEET; THENCE S88°23'04"W, 151.71 FEET; THENCE N50°39'33"W, 155.50 FEET; THENCE N01°41'08"W, 152.04 FEET; THENCE N87°14'15"E, 195.00 FEET; THENCE N01°40'03"W, 287.51 FEET TO THE POINT OF BEGINNING.

CONTAINING 138,722 SQUARE FEET OR 3.139 ACRES OF LAND.

TOPOGRAPHIC SURVEY NOTES

ALL ELEVATIONS ARE EXISTING ELEVATIONS, UNLESS OTHERWISE NOTED.

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

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

SURVEYOR'S CERTIFICATION

WE HEREBY CERTIFY THAT WE HAVE SURVEYED THE PROPERTY HEREIN DESCRIBED.

KEVIN NAVAROLI, P.S. NO. 53503,
WITHIN THE STATE OF MICHIGAN
DATED: 4-21-16

NF ENGINEERS
CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257



PROJECT
Griffin Claw
2273 Crooks Road
Rochester Hills, Michigan

CLIENT
Kelly
Building and Development
2051 Villa, Suite 106
Birmingham, MI 48009

Contact:
John Kelly
Phone: (248) 258-6663
Fax: (248) 258-0917

PROJECT LOCATION

Part of the Northwest 1/4 of Section 28, Town 3 North, Range 11 East, City of Rochester Hills, Oakland County, Michigan

SHEET
Boundary / Topographic and Tree Survey



DATE	ISSUED / REVISED
07-06-16	Per City Review
07-27-16	Per City Review
08-10-16	Per City Review

DRAWN BY:
J. Nelson

DESIGNED BY:

APPROVED BY:
K. Navaroli

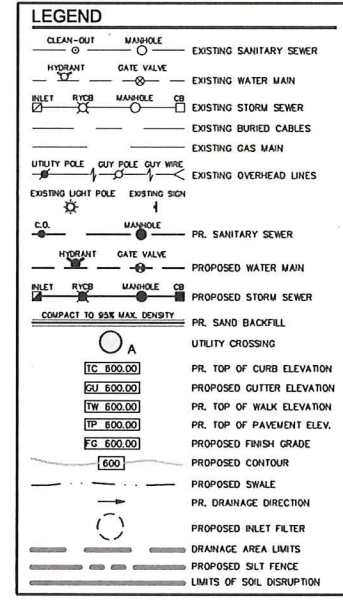
DATE:
May 13, 2016

SCALE:
1" = 40'

NFE JOB NO.
J143

SHEET NO.
SP-1

NOT FOR CONSTRUCTION
City File #16-012



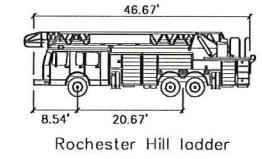
CITY OF ROCHESTER HILLS HYDRANT FLOW TEST

Date: 5/14/16 Time: 7:00 AM Test Performed By: W. BUCKLE, J. V. COPELAND
Location: 2265 CROOKS Calculations Performed By: W. BUCKLE

Number of Hydrants Flowing:	1
Number of Outlets Open:	2
Size of Outlet, D (inches):	2 1/2
Friction Loss Coefficient, C_f :	9
Static Pressure, P_s (psi):	6.5
Residual Pressure, P_r (psi):	4.6
Flow Pressure, P_f (psi):	2.5
Residual Flow, Q_r (GPM):	14.78
Fire Flow at 20 psi, Q_f (GPM):	26.73
Supply Main Size (into hydrant):	6"
Supply Main Size (static hydrant):	8"

Calculations:
 $Q_r = 29.83 \cdot C_f \cdot (P_r)^{0.54} \cdot D^{2.63}$
 $Q_f = Q_r \cdot (P_s - P_r)^{-0.54} \cdot (P_r)^{0.54}$

Drawing of Flow Test Sites (include location of flow & test hydrant):



- ### FIRE DEPARTMENT NOTES
- 1.) A KNOX KEY SYSTEM SHALL BE INSTALLED, IN A LOCATION APPROVED BY THE FIRE CODE OFFICIAL. ORDERING INFORMATION IS AVAILABLE FROM THE ROCHESTER HILLS FIRE DEPARTMENT AT (248) 656-4717.
 - 2.) OPEN BURNING IS NOT PERMITTED INCLUDING THE BURNING OF TRASH, DEBRIS, OR LAND CLEARING MATERIALS. OPEN BURNING FOR WARMING OF SAID AND OR WATER IN THE PREPARATION OF MORTAR SHALL BE WITHIN THE CITY OF ROCHESTER HILLS BURN PERMIT GUIDELINES FIRE PREVENTION ORDINANCE CHAPTER 58, SECTION 307.6.2 & 307.6.2.3.
 - 3.) 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 CONFORM TO THE MICHIGAN MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
 - 4.) CONSTRUCTION SITES SHALL BE SAFEGUARDED IN ACCORDANCE WITH FC 2006 CHAPTER 14.
 - 5.) PROVIDE A "NO PARKING FIRE DEPARTMENT CONNECTION" SIGN OVER THE FIRE DEPARTMENT CONNECTION.
 - 6.) EXIST DOORS SHALL REMAIN FREE OF OBSTRUCTIONS AT ALL TIMES. GUARD POSTS SHALL PROTECT EXIST DOORS OPENING ONTO DRIVES AND PARKING AREAS.
 - 7.) CONSTRUCTION TYPE IS 5B.

SOIL DATA

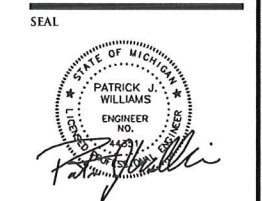
THIS SITE CONSISTS OF:
100% SPINKS LOAMY SAND (15B), 0 TO 6 PERCENT SLOPES
PER U.S.D.A. N.R.C.S. WEB SOIL SURVEY.

PARKING REQUIREMENT CALCS

EXISTING CLUBHOUSE 59 (A-2 USE)
= 155 OCCUPANTS / 2 PARKING SPACES PER OCCUPANT
PARKING REQUIRED: 98 SPACES

NEW WAREHOUSE, BREWING, MILLING & DISTILLING (F-1, S-1, H-2 & H-3 USE)
= 22,639 SQUARE FEET / 500 S.F. PER SPACE
PARKING REQUIRED: 45 SPACES

TOTAL PARKING SPACES REQUIRED = 144
TOTAL PARKING SPACES PROVIDED = 152



PROJECT
Griffin Claw
2273 Crooks Road
Rochester Hills, Michigan

CLIENT
Kelly
Building and Development
2051 Villa, Suite 106
Birmingham, MI 48009

Contact:
John Kelly
Phone: (248) 258-6663
Fax: (248) 258-0917

PROJECT LOCATION
Part of the Northwest 1/4 of
Section 28, Town 3 North,
Range 11 East,
City of Rochester Hills,
Oakland County, Michigan

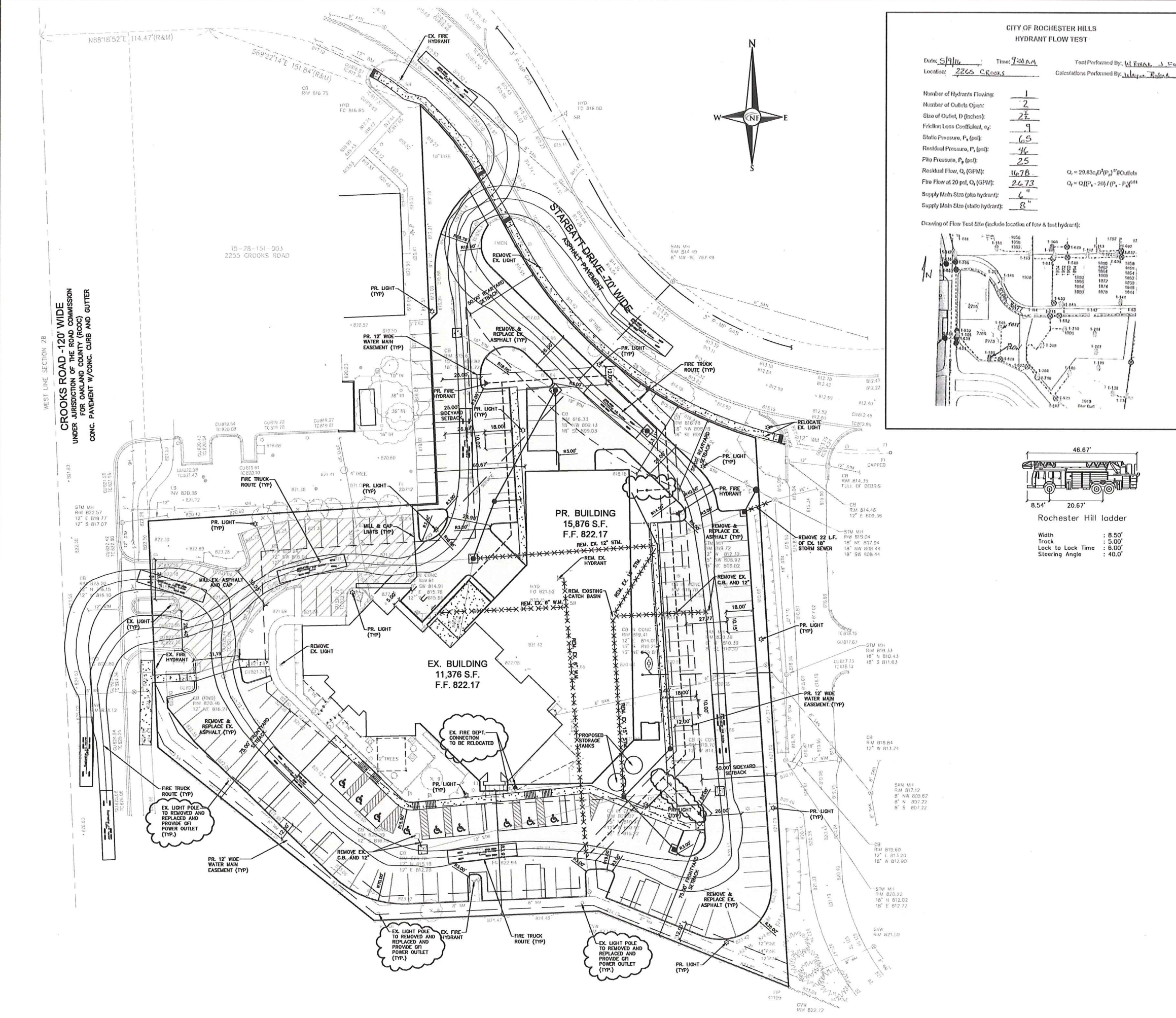
SHEET
Preliminary Site and
Demolition Plan



DATE	ISSUED / REVISED
06-21-16	Per City Review
07-06-16	Per City Review
07-27-16	Per City Review
08-10-16	Per City Review

DRAWN BY:
A. Wiseman
DESIGNED BY:
A. Wiseman
APPROVED BY:
P. Williams
DATE:
May 13, 2016
SCALE:
1" = 30'

NOT FOR CONSTRUCTION
City File #16-012



WEST LINE SECTION 28
CROOKS ROAD - 120' WIDE
UNDER JURISDICTION OF THE ROAD COMMISSION
FOR OAKLAND COUNTY (R&M)
CONC. PAVEMENT W/ CONC. CURB AND GUTTER

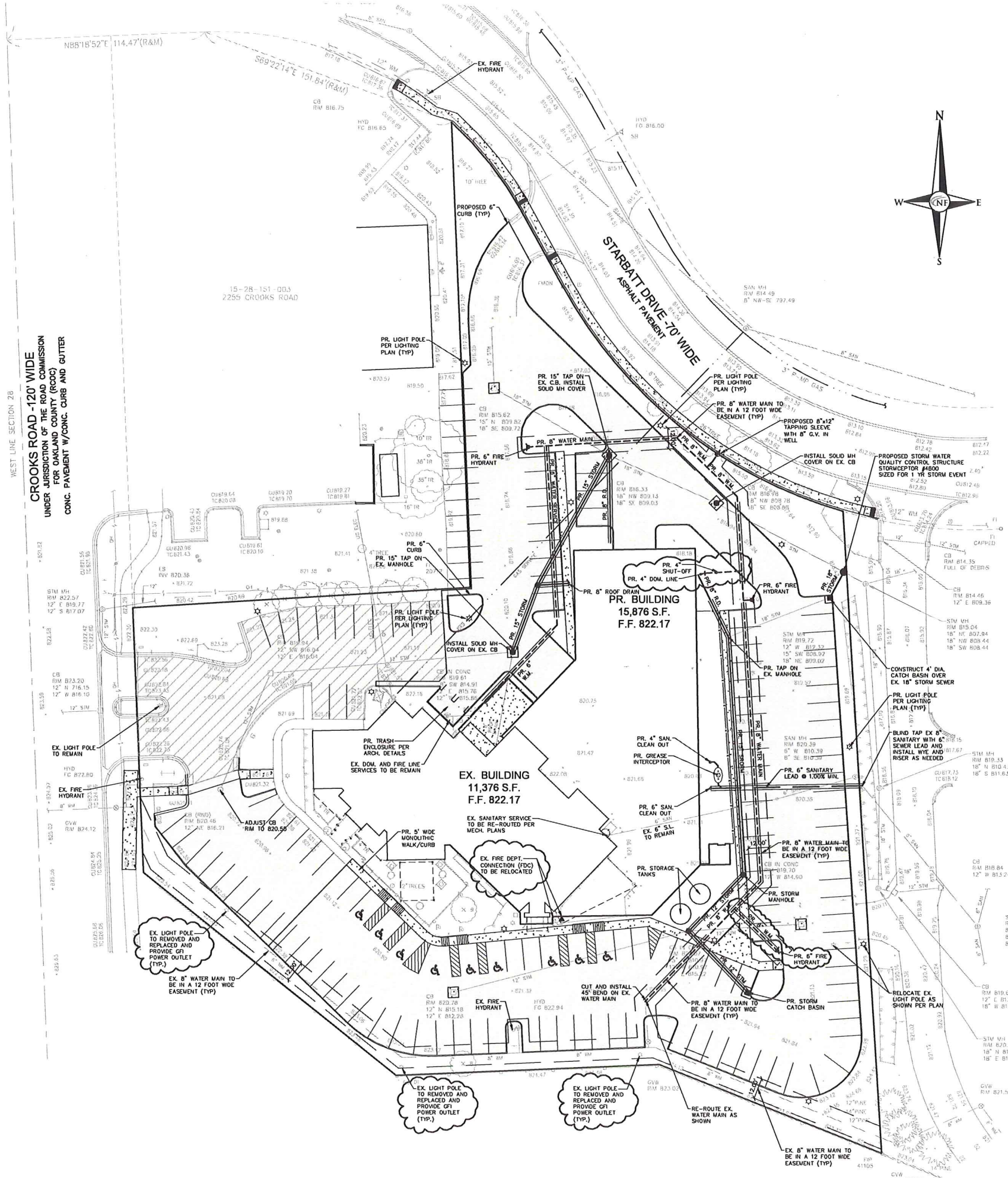
15-28-151-003
2255 CROOKS ROAD

PR. BUILDING
15,876 S.F.
F.F. 822.17

EX. BUILDING
11,376 S.F.
F.F. 822.17

NOT FOR CONSTRUCTION
City File #16-012

WEST LINE SECTION 28
CROOKS ROAD - 120' WIDE
 UNDER JURISDICTION OF THE ROAD COMMISSION
 FOR OAKLAND COUNTY (R&M)
 CONC. PAVEMENT W/ CONC. CURB AND GUTTER

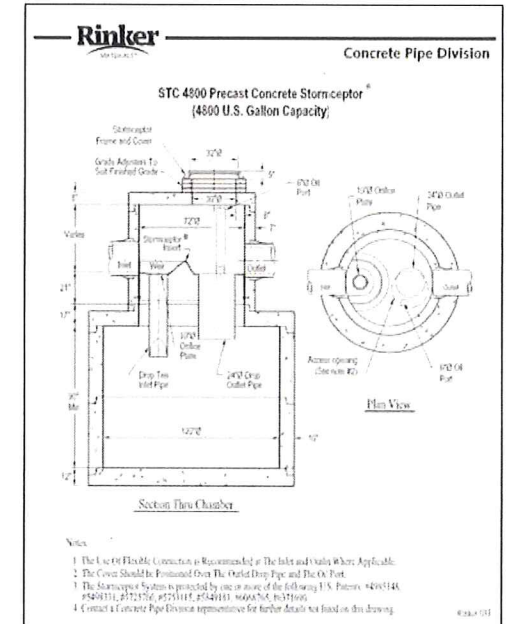


Weighted Run-off Coefficient Calculation "C"

Contributing Area:	136,722.00 S.F. or 3.139 Acres
1 Pavement / Building	106,283.00 S.F. or 2.440 Acres 78%
2 Lawn	30,439.00 S.F. or 0.699 Acres 22%
Sum of Individual Areas	136,722.00 S.F. or 3.139 Acres 100%
Area No. 1 - Coefficient	0.95
Area No. 2 - Coefficient	0.20
"C" (Average) =	$\frac{\text{Area 1} \cdot C_1 + \text{Area 2} \cdot C_2}{\text{Area 1} + \text{Area 2}}$
"C" (Average) =	0.78

1 YR. STORM REQUIREMENTS

Contributing Acreage A	3.139 Acres
Site Runoff Coefficient C	0.78 Impermeousness
Intensity (1yr) I	1.80 Inches/hr
Design Outflow (1yr) Q	4.41 CFS



LEGEND

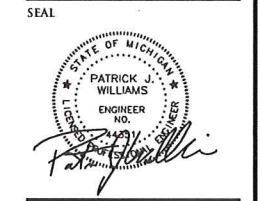
CLEAN-OUT	MANHOLE	EXISTING SANITARY SEWER
HYDRANT	GATE VALVE	EXISTING WATER MAIN
INLET	RIVER	EXISTING STORM SEWER
UTILITY POLE	GUY POLE	EXISTING BURIED CABLES
EXISTING LIGHT POLE	EXISTING SIGN	EXISTING GAS MAIN
C.O.	MANHOLE	PR. SANITARY SEWER
HYDRANT	GATE VALVE	PROPOSED WATER MAIN
INLET	RIVER	PROPOSED STORM SEWER
UTILITY POLE	GUY POLE	PR. SAND BACKFILL
EXISTING LIGHT POLE	EXISTING SIGN	UTILITY CROSSING
C.O.	MANHOLE	PR. TOP OF CURB ELEVATION
HYDRANT	GATE VALVE	PROPOSED STRUCTURE ELEVATION
INLET	RIVER	PR. TOP OF WALK ELEVATION
UTILITY POLE	GUY POLE	PR. TOP OF PAVEMENT ELEV.
EXISTING LIGHT POLE	EXISTING SIGN	PROPOSED FINISH GRADE
C.O.	MANHOLE	PROPOSED CONTOUR
HYDRANT	GATE VALVE	PROPOSED SWALE
INLET	RIVER	PR. DRAINAGE DIRECTION
UTILITY POLE	GUY POLE	PROPOSED INLET FILTER
EXISTING LIGHT POLE	EXISTING SIGN	DRAINAGE AREA LIMITS
C.O.	MANHOLE	PROPOSED SILT FENCE
HYDRANT	GATE VALVE	LIMITS OF SOIL DISRUPTION

SANITARY SEWER BASIS OF DESIGN

Shop / Warehouse	=	15,876 Total Square Footage
Unit Factor	=	0.31 Per 1,000 sf
Total REU Units in district	=	4.92 Units
Equivalent Population	=	3.50 People Per Unit
Total Population	=	17.23 People
Average Flow	=	100 Gal/Per/Day * Population = 1,723 GPD
Average Flow	=	7.48'60"/24 = 0.003 CFS
Peak Flow	=	18 * (# of Persons/1000) * 0.50 = 4.245 CFS
Peak Flow	=	4 * (# of Persons/1000) * 0.50 = 2.004 CFS
Peak Flow	=	0.012 CFS
Available Capacity (Existing)	=	6 in Dia @ 1.59 % = 1.524 CFS
Waste Generated	=	0.003 CFS * 646,272 (Gallons/Day)/CFS = 1,723 GPD - Average
	=	0.012 CFS * 646,272 (Gallons/Day)/CFS = 7,560 GPD - Peak

NF ENGINEERS
 CIVIL ENGINEERS
 LAND SURVEYORS
 LAND PLANNERS

NOWAK & FRAUS ENGINEERS
 46777 WOODWARD AVE.
 PONTIAC, MI 48342-5032
 TEL. (248) 332-7931
 FAX. (248) 332-8257



PROJECT
 Griffin Claw
 2273 Crooks Road
 Rochester Hills, Michigan

CLIENT
 Kelly
 Building and Development
 2051 Villa, Suite 106
 Birmingham, MI 48009

Contact:
 John Kelly
 Phone: (248) 258-6663
 Fax: (248) 258-0917

PROJECT LOCATION
 Part of the Northwest 1/4 of
 Section 28, Town 3 North,
 Range 11 East,
 City of Rochester Hills,
 Oakland County, Michigan

SHEET
 Preliminary Utility Plan



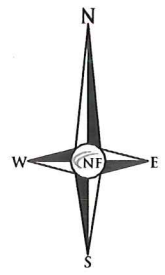
DATE	ISSUED / REVISION
06-21-16	Per City Review
07-06-16	Per City Review
07-27-16	Per City Review
08-10-16	Per City Review

DRAWN BY:
 A. Wiseman
DESIGNED BY:
 A. Wiseman
APPROVED BY:
 P. Williams

DATE:
 May 13, 2016
SCALE:
 1" = 30'

NFE JOB NO. SHEET NO.
 J143 SP-3

NOT FOR CONSTRUCTION
 City File #16-012



GENERAL PAVING NOTES

PAVEMENT SHALL BE OF THE TYPE, THICKNESS AND CROSS SECTION AS INDICATED ON THE PLANS AND AS FOLLOWS:

CONCRETE: PORTLAND CEMENT TYPE IA (AIR-ENTRAINED) WITH A MINIMUM CEMENT CONTENT OF 525 BAGS PER CUBIC YARD, MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3,500 PSI AND A SLUMP OF 1 1/2 TO 3 INCHES.

ASPHALT: BASE COURSE - MODIFIED BITUMINOUS MIXTURE NO. 1100L, 20AA; SURFACE COURSE - MODIFIED BITUMINOUS MIXTURE NO. 1100L, 20AA; ASPHALT CEMENT PENETRATION GRADE 85-100, ROAD COAT - MODIFIED SS-H EMULSION AT 0.10 GALLON PER SQUARE YARD; MAXIMUM 2 INCH LIFT.

PAVEMENT BASE SHALL BE COMPACTED TO 95% OF THE MAXIMUM DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT. EXISTING SUB-BASE SHALL BE PROOF-ROLLED IN THE PRESENCE OF THE ENGINEER TO DETERMINE STABILITY.

ALL CONCRETE PAVEMENT, DRIVEWAYS, CURB & GUTTER, ETC., SHALL BE SPRAY CURED WITH WHITE MEMBRANE CURING COMPOUND IMMEDIATELY FOLLOWING FINISHING OPERATION.

ALL CONCRETE PAVEMENT JOINTS SHALL BE FILLED WITH HOT POURED RUBBERIZED ASPHALT JOINT SEALING COMPOUND IMMEDIATELY AFTER SAWCUT OPERATION. FEDERAL SPECIFICATION SS-5184.

ALL WORKMANSHIP AND MATERIALS SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE MUNICIPALITY AND THE MICHIGAN DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR CONSTRUCTION, CURRENT EDITION.

ALL TOP OF CURB ELEVATIONS, AS SHOWN ON THE PLANS, ARE CALCULATED FOR A 6" CONCRETE CURB UNLESS OTHERWISE NOTED.

ALL SIDEWALK RAMPS, CONFORMING TO PUBLIC ACT NO. 8, 1993, SHALL BE INSTALLED AS INDICATED ON THE PLANS.

CONSTRUCTION OF A NEW OR RECONSTRUCTED DRIVE APPROACH CONNECTING TO AN EXISTING STATE OR COUNTY ROADWAY SHALL BE ALLOWED ONLY AFTER AN APPROVED PERMIT HAS BEEN SECURED FROM THE AGENCY HAVING JURISDICTION OVER SAID ROADWAY.

FOR ANY WORK WITHIN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL PAY FOR AND SECURE ALL NECESSARY PERMITS AND LICENSES AHEAD OF ALL INSPECTIONS.

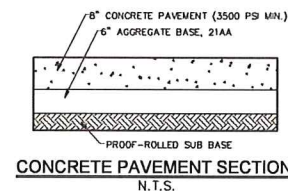
EXISTING TOPSOIL, VEGETATION AND ORGANIC MATERIALS SHALL BE STRIPPED AND REMOVED FROM PROPOSED PAVEMENT AREA PRIOR TO PLACEMENT OF BASE MATERIALS.

EXPANSION JOINTS SHOULD BE INSTALLED AT THE END OF ALL INTERSECTION RADE.

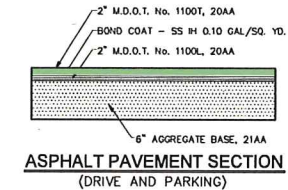
SIDEWALK RAMPS, CONFORMING TO PUBLIC ACT NO. 8, 1973, SHALL BE INSTALLED AS SHOWN AT ALL STREET INTERSECTIONS AND AT ALL BARREER FREE PARKING AREAS AS INDICATED ON THE PLANS.

ALL PAVEMENT AREAS SHALL BE PROOF-ROLLED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF BASE MATERIALS AND PAVING MATERIALS.

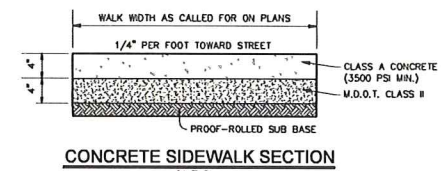
FILL AREAS SHALL BE MACHINE COMPACTED IN UNIFORM LIFTS NOT EXCEEDING 9 INCHES THICK TO 95% OF THE MAXIMUM DENSITY (MODIFIED PROCTOR) PRIOR TO PLACEMENT OF PROPOSED PAVEMENT.



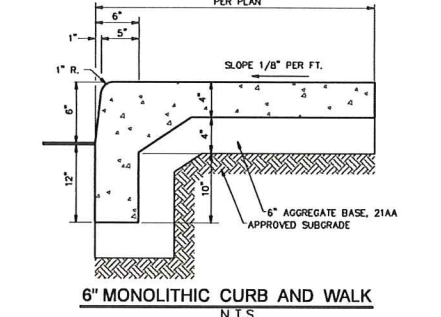
CONCRETE PAVEMENT SECTION
N.T.S.



ASPHALT PAVEMENT SECTION
(DRIVE AND PARKING)



CONCRETE SIDEWALK SECTION
N.T.S.



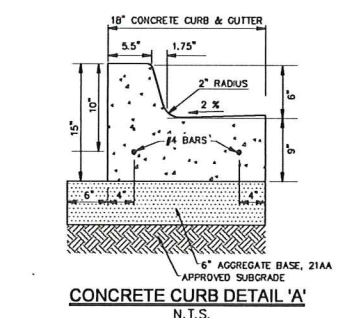
6" MONOLITHIC CURB AND WALK
N.T.S.

LEGEND

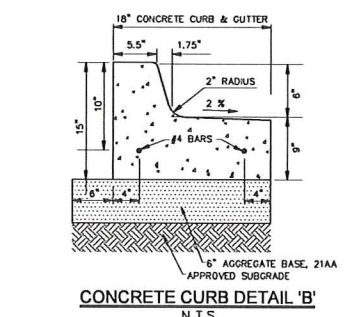
CLEAN-OUT	MANHOLE	EXISTING SANITARY SEWER
HYDRANT	GATE VALVE	EXISTING WATER MAIN
INLET	RISER	EXISTING STORM SEWER
UTILITY POLE	CUT POLE	EXISTING BURIED CABLES
EXISTING LIGHT POLE	EXISTING SIGN	EXISTING GAS MAIN
C.O.	MANHOLE	EXISTING OVERHEAD LINES
HYDRANT	GATE VALVE	PR. SANITARY SEWER
INLET	RISER	PROPOSED WATER MAIN
COMPACT TO 95% MAX. DENSITY	MANHOLE	PROPOSED STORM SEWER
○ A		PR. SAND BACKFILL
TC 600.00		UTILITY CROSSING
CU 600.00		PR. TOP OF CURB ELEVATION
TW 600.00		PROPOSED GUTTER ELEVATION
TP 600.00		PR. TOP OF WALK ELEVATION
FG 600.00		PR. TOP OF PAVEMENT ELEV.
500		PROPOSED FINISH GRADE
		PROPOSED CONTOUR
		PROPOSED SWALE
		PR. DRAINAGE DIRECTION
		PROPOSED INLET FILTER
		DRAINAGE AREA LIMITS
		PROPOSED SILT FENCE
		LIMITS OF SOIL DISRUPTION

PAVING LEGEND

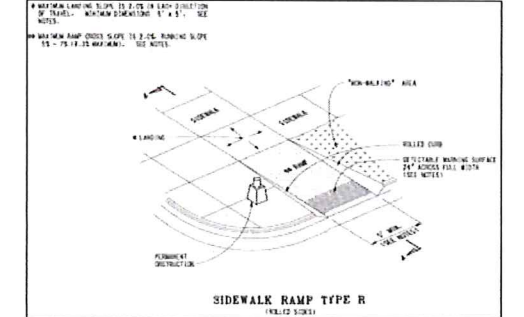
[Pattern]	PROPOSED CONCRETE PAVEMENT
[Pattern]	PROPOSED ASPHALT PAVEMENT
[Pattern]	PROPOSED MILL AND CAP



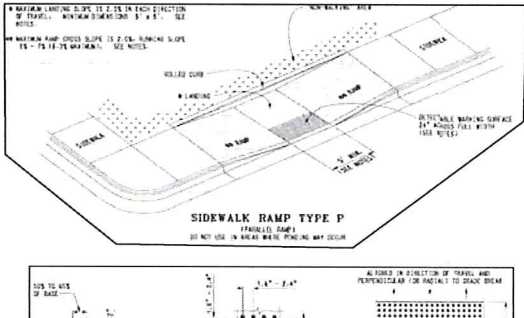
CONCRETE CURB DETAIL 'A'
N.T.S.



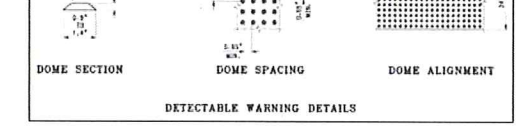
CONCRETE CURB DETAIL 'B'
N.T.S.



SIDEWALK RAMP TYPE R
N.T.S.



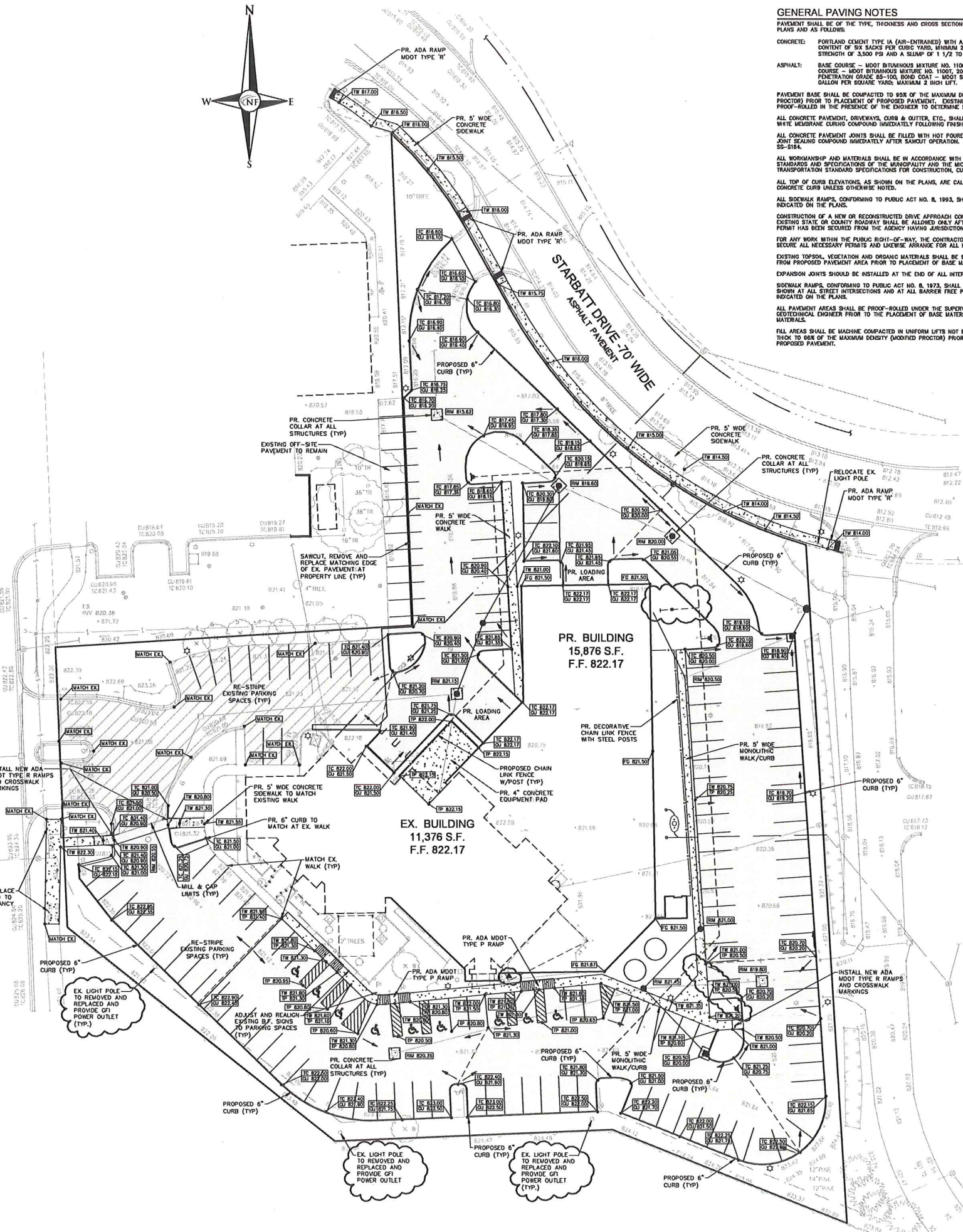
SIDEWALK RAMP TYPE P
N.T.S.



RAMP NOTE
DETECTABLE WARNING DOMES SHALL BE OMITTED ON ALL INTERIOR RAMPS. SHALL BE PLACED WITHIN ROAD RIGHT-OF-WAY ONLY.

NOT FOR CONSTRUCTION
City File #16-012

WEST LINE SECTION 28
CROOKS ROAD - 120' WIDE
UNDER JURISDICTION OF THE ROAD COMMISSION
FOR OAKLAND COUNTY (RCOC)
CONC. PAVEMENT W/CONC. CURB AND GUTTER



NF ENGINEERS
CIVIL ENGINEERS
LAND SURVEYORS
LAND PLANNERS

NOWAK & FRAUS ENGINEERS
46777 WOODWARD AVE.
PONTIAC, MI 48342-5032
TEL. (248) 332-7931
FAX. (248) 332-8257

Location Map
N.T.S.

PROJECT
Griffin Claw
2273 Crooks Road
Rochester Hills, Michigan

CLIENT
Kelly
Building and Development
2051 Villa, Suite 106
Birmingham, MI 48009

Contact:
John Kelly
Phone: (248) 258-6663
Fax: (248) 258-0917

PROJECT LOCATION
Part of the Northwest 1/4 of
Section 28, Town 3 North,
Range 11 East,
City of Rochester Hills,
Oakland County, Michigan

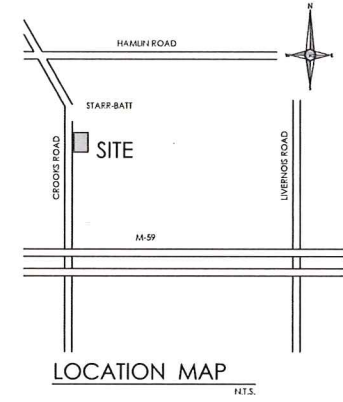
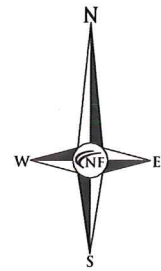
SHEET
Preliminary Paving
and Grading Plan

811
Know what's below
Call before you dig.

DATE	ISSUED / REVISED
06-21-16	Per City Review
07-06-16	Per City Review
07-27-16	Per City Review
08-10-16	Per City Review

DRAWN BY:
A. Wiseman
DESIGNED BY:
A. Wiseman
APPROVED BY:
P. Williams

DATE:
May 13, 2016
SCALE:
1" = 30'
NFE JOB NO. **J143** SHEET NO. **SP-4**

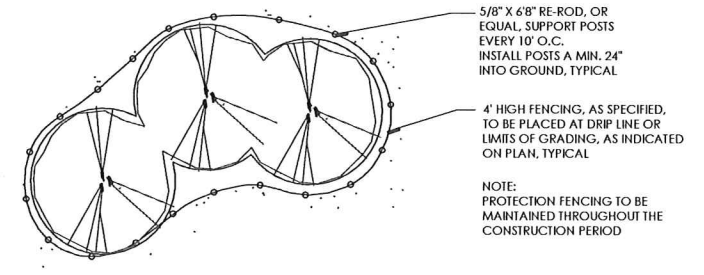


NF ENGINEERS
 CIVIL ENGINEERS
 LAND SURVEYORS
 LAND PLANNERS

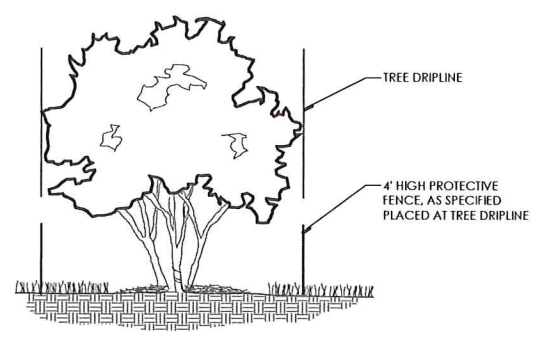
NOWAK & FRAUS ENGINEERS
 46777 WOODWARD AVE.
 PONTIAC, MI 48342-5032
 TEL. (248) 332-7931
 FAX. (248) 332-8257

GENERAL TREE PROTECTION NOTES

- 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.
- ALL UNDERSTORY VEGETATION WITHIN THE LIMITS OF PROTECTIVE FENCING SHALL BE PRESERVED.
- 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.
- WHERE GROUPINGS OF TREES ARE TO REMAIN, TREE FENCING SHALL BE PLACED AT THE LIMITS OF GRADING LINE.
- DURING CONSTRUCTION, NO PERSON SHALL ATTACH ANY DEVICE OR WIRE TO ANY TREE SCHEDULED TO REMAIN.
- 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.
- SWALES SHALL BE ROUTED TO AVOID THE AREA WITHIN THE DRIP LINES OF PROTECTED TREES.
- TREES LOCATED ON ADJACENT PROPERTIES THAT MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES MUST BE PROTECTED.
- ROOT ZONES OF PROTECTED TREES SHOULD BE SURROUNDED WITH RIGIDLY STAKED FENCING.
- THE PARKING OF IDLE AND RUNNING EQUIPMENT SHALL BE PROHIBITED UNDER THE DRIP LINE OF PROTECTED TREES.
- THE STRIPPING OF TOPSOIL FROM AROUND PROTECTED TREES SHALL BE PROHIBITED.
- ALL TREES TO BE REMOVED SHALL BE CUT AWAY FROM TREES TO REMAIN.
- 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.
- THE CONTRACTOR IS RESPONSIBLE FOR THE REPLACEMENT PER ORDINANCE GUIDELINES, FOR THE DAMAGE OR REMOVAL OF ANY TREE DESIGNATED TO REMAIN. 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.



TREE PROTECTION DETAIL-PLAN



TREE PROTECTION DETAIL-SECTION

TREE PRESERVATION SUMMARY

TREES ≥6" DBH SHALL BE REPLACED AT 1:1

2" CAL. DECIDUOUS =	1 CREDIT
2.5" CAL. DECIDUOUS =	1.5 CREDIT
3" CAL. DECIDUOUS =	2 CREDITS
8" HT. EVERGREEN =	1 CREDIT
10" HT. EVERGREEN =	2 CREDITS

TOTAL TREES SURVEYED:	26
TOTAL DEAD TREES ON-SITE:	0
TOTAL NET REGULATED TREES:	20
TOTAL TREES TO BE SAVED:	18
TOTAL TREES TO BE REMOVED:	7
TOTAL REPLACEMENT CREDITS REQUIRED:	7
TOTAL REPLACEMENT CREDITS PROVIDED:	8 (4 TREES X 2 CREDITS)

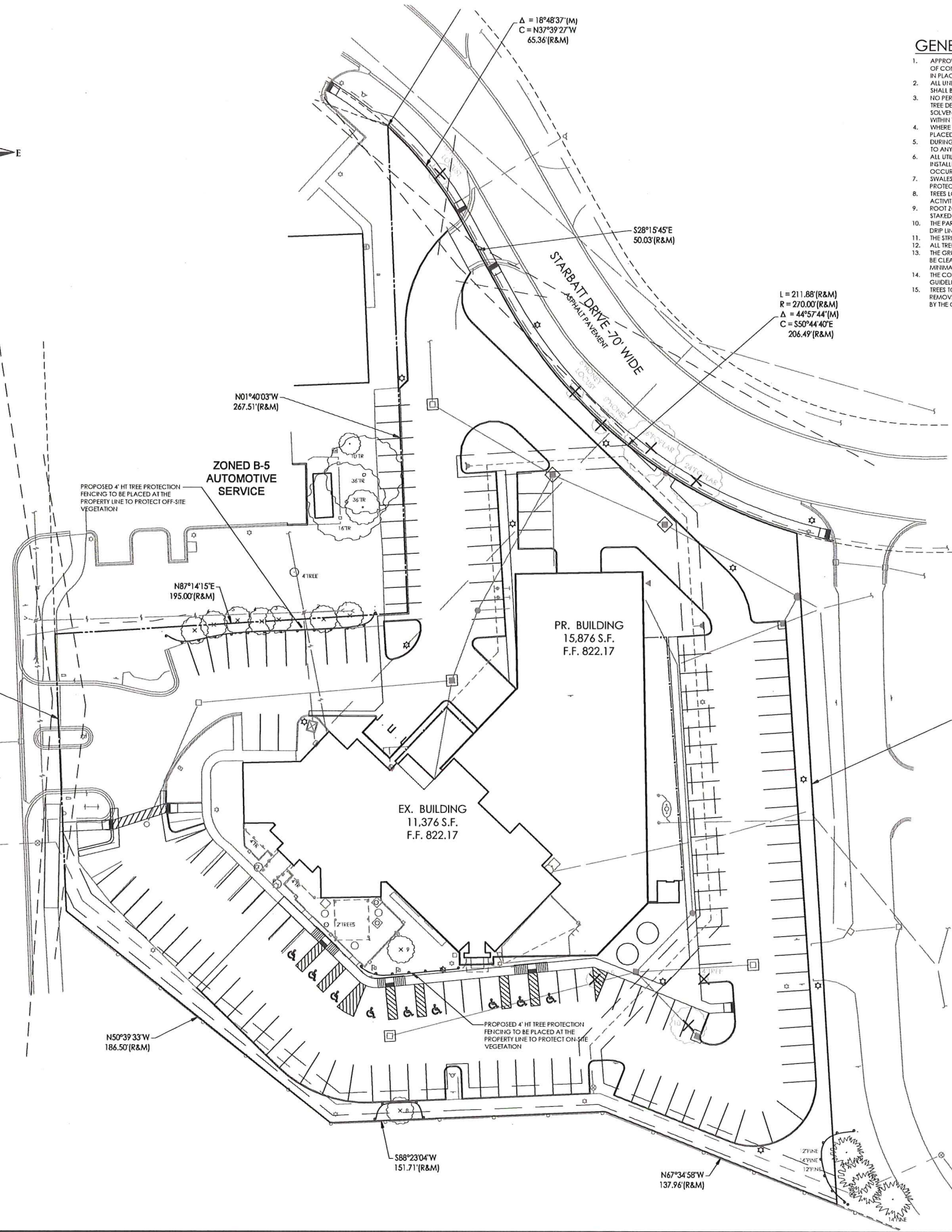
TREE PROTECTION LEGEND

- EXISTING TREES TO REMAIN
- EXISTING TREES TO BE REMOVED
- PROPOSED TREE PROTECTION FENCING

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:
 SEE SHEET L2, LANDSCAPE PLAN FOR PROPOSED TREE REPLACEMENT LOCATIONS

CROOKS ROAD - 120' WIDE
 UNDER JURISDICTION OF THE ROAD COMMISSION
 FOR OAKLAND COUNTY (RCOC)
 CONC. PAVEMENT W/ CONC. CURB AND GUTTER



NOT FOR CONSTRUCTION
 City File #16-012

SEAL

PROJECT
 Griffin Claw
 2273 Crooks Road
 Rochester Hills, Michigan

CLIENT
 Kelly
 Building and Development
 2051 Villa, Suite 106
 Birmingham, MI 48009

Contact:
 John Kelly
 Phone: (248) 258-6663
 Fax: (248) 258-0917

PROJECT LOCATION
 Part of the Northwest ¼ of
 Section 28, Town 3 North,
 Range 11 East,
 City of Rochester Hills,
 Oakland County, Michigan

SHEET
 Tree Preservation Plan



DATE	ISSUED / REVISED
06-21-16	PER CITY REVIEW
07-06-16	PER CITY REVIEW
07-28-16	PER CITY REVIEW

DRAWN BY:
 G. Ostrowski

DESIGNED BY:
 G. Ostrowski

APPROVED BY:
 G. Ostrowski

DATE:
 July 28, 2016

SCALE:
 1" = 30'

NFE JOB NO. SHEET NO.
J143 L1

