

4677 Woodward Avenue
Pontiac, Michigan 48342
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PROJECT
Lot 20 & 21
Heartpeace Hills No. 2

CLIENT
Ms. Kathryn Gruits
1331 New Love Lane
Rochester Hills, MI 48309

PROJECT LOCATION
Part of the S.E. 1/4 of
Section 9, T. 3 North,
R. 11 East, City of
Rochester Hills, Oakland
County, Michigan

FILL BELOW FLOOD PLAIN LIMITS
Lot 20 and 21
100-yr flood plain elevation 805.30 (NAVD 88)
Cut = 15 yards Fill = 257 yards
Net = 257 - 15 = 242 yards FILL

CUT & FILL ANALYSIS IN THE 100-YEAR FLOOD PLAIN
100-YEAR FLOOD PLAIN ELEVATION PER FEMA MAP (NAVD 88) 805.30
CUT & FILL IN THE 100-YEAR FLOOD PLAIN AREA BELOW THE FLOOD PLAIN ELEVATION:
PROPOSED CUT FOR LOT 20 & 21 PARCEL 15 CY
PROPOSED FILL FOR LOT 20 & 21 PARCEL 242 CY
TOTAL FILL IN 100-YEAR FLOOD PLAIN FOR LOT 20 & 21 PARCEL 242 CY
PROPOSED EARTHWORK ON LOT 20 & 21 PARCEL GENERATES 242 CY OF FILL IN THE 100-YEAR FLOOD PLAIN.
THE DEPTH OF CUT & FILL SHOWN ON THE SITE PLAN DRAWING IS REFERENCED TO THE 100-YEAR FLOODPLAIN ELEVATION 805.30 (NAVD 88). FILL ABOVE THIS LEVEL HAS NOT BEEN ACCOUNTED FOR SINCE IT HAS NO RELEVANCE TO THE FLOOD PLAIN STORAGE.
THE MAXIMUM SLOPE OF PROPOSED GRADE WITHIN CUT AND FILL AREAS SHALL NOT EXCEED SLOPE OF 1 VERTICAL ON THREE HORIZONTAL (1:3) OR 33 %.
EARTHWORK TO BE DONE IN CONJUNCTION WITH WORK UNDERTAKEN BY ADJACENT PROPERTY OWNERS.

BENCHMARKS
OFF-SITE BENCHMARKS
NEO 416: A standard U.S. Corps of Engineers bronze tablet stamped "760.166 D 32 1938" at Rochester, Oakland County, at the Southwest Corner of the intersection of Main and Fourth Streets, at the First National Bank, at the Northeast corner of the building, in the concrete ledge at the base of the window, and 3.4 feet above the sidewalk. Elevation 759.73
NEO 398: A standard U.S. Corps of Engineers bronze tablet stamped "78 107 1934" at Rochester, Oakland County, 147 yards East of the Southeast corner of the Grand Trunk Western Railway Station, in the top of an old concrete bridge seat, 1 foot East of the West end, 7 Feet South of the South rail. Elevation 728.42
ON-SITE BENCHMARKS:
Arrow on Fire Hydrant located on the North side of New Love Lane across from the Northwest corner of lot 20. N.A.V.D. 88 Datum 806.54
Arrow on Fire Hydrant located on the North side of New Love Lane across from the Northeast corner of lot 21. N.A.V.D. 88 Datum 807.10
ALL ELEVATIONS ARE BASED ON FEMA N.A.V.D. 88.

BEARING REFERENCE
Bearings are based upon the East line of section 9 being Due South as established in "Heartpeace Hills No. 2" plat recorded in Liber 129, Page 7.

TOPO NOTES
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.
All elevations are existing elevations as surveyed in 1992 by Reichert Surveying (survey dated 03-02-92, Job No. 92-012), Buckerfield Engineering (survey dated 03-25-88, Job No. 1-503) and as supplemented by N&F survey data.
This survey may not show all easements of record unless an updated title policy is furnished to the surveyor by the owners

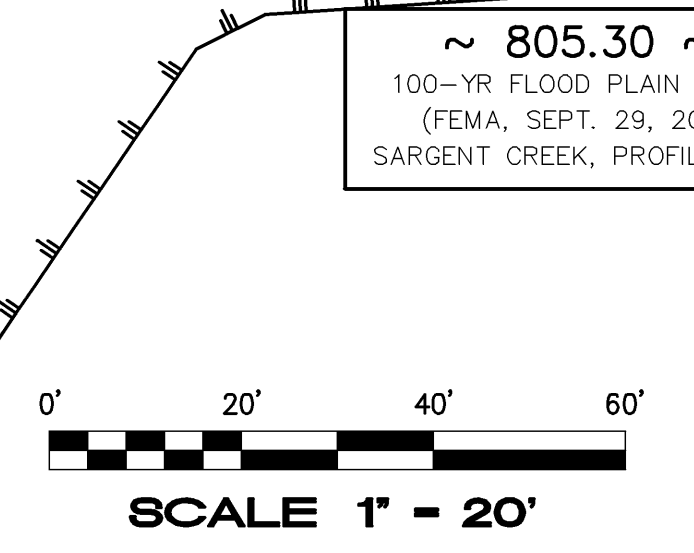
FLOODPLAIN NOTES
Estimated elevations are per FEMA Flood Insurance Rate Maps, Oakland County, Michigan, panel 391 & 392, community panel numbers 26125C0391F & 26125C0392F dated September 29, 2006.

SOIL EROSION LEGEND
PROPOSED SILT FENCE

LEGEND
MANHOLE
HYDRANT
GATE VALVE
EXISTING SANITARY SEWER
EXISTING SAN. CLEAN OUT
EXISTING WATERMAIN
EXISTING STORM SEWER
MANHOLE CATCH BASIN
EX. R. Y. CATCH BASIN
EXISTING BURIED CABLES
UTILITY POLE
GUY POLE
OVERHEAD LINES
GUY WIRE
LIGHT POLE
SIGN
EXISTING GAS MAIN

CUT & FILL AREA LEGEND
PROPOSED CUT AREA IN FLOOD PLAIN
PROPOSED FILL AREA IN FLOOD PLAIN
SURFACE LEGEND
EXISTING WETLAND
100-YR FLOOD PLAIN AREA PER REICHERT'S SURVEY
PROPOSED WATER POOL

PROPERTY OWNER
Ms. Kathryn J. Gruits
1350 New Love Lane
Rochester Hills, MI 48309



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

DATE/REVISION
07-26-07 Per MDEQ
SHEET
Cut & Fill Analysis
DRAWN BY: PK
DESIGNED BY: PK
APPROVED BY: J. Huhta
DATE: 06-20-07
SCALE: 1" = 20'
N/F JOB NO.
E823-01
SHEET NO. 2 of 2