

APPROVED FINAL PUD AREA CALCULATIONS

RESIDENTIAL AREA (20 UNITS) = 1.16 ACRES
 COMMERCIAL/RETAIL AREA = 1.47 ACRES
 OPEN SPACE/RECREATION AREA = 3.10 ACRES
TOTAL PUD AREA = 5.73 ACRES

REVISED PUD AREA CALCULATIONS

RESIDENTIAL AREA (30 UNITS) = 4.18 ACRES
 7.2 UNITS / ACRE
 COMMERCIAL/RETAIL AREA = 1.55 ACRES
TOTAL PUD AREA = 5.73 ACRES

PARKING:

RESIDENTIAL:
 2 SPACES / UNIT PROVIDED
 COMMERCIAL:
 UPPER FLOOR NON-MEDICAL OFFICE
 6,000 SFT GROSS * 0.95 = 5,700 SFT USABLE FLOOR AREA
 5,700 * 1 SPACE/200 SFT USABLE FLOOR AREA = 29 SPACES REQUIRED
 32 STANDARD AND 2 BARRIER FREE SPACES PROVIDED

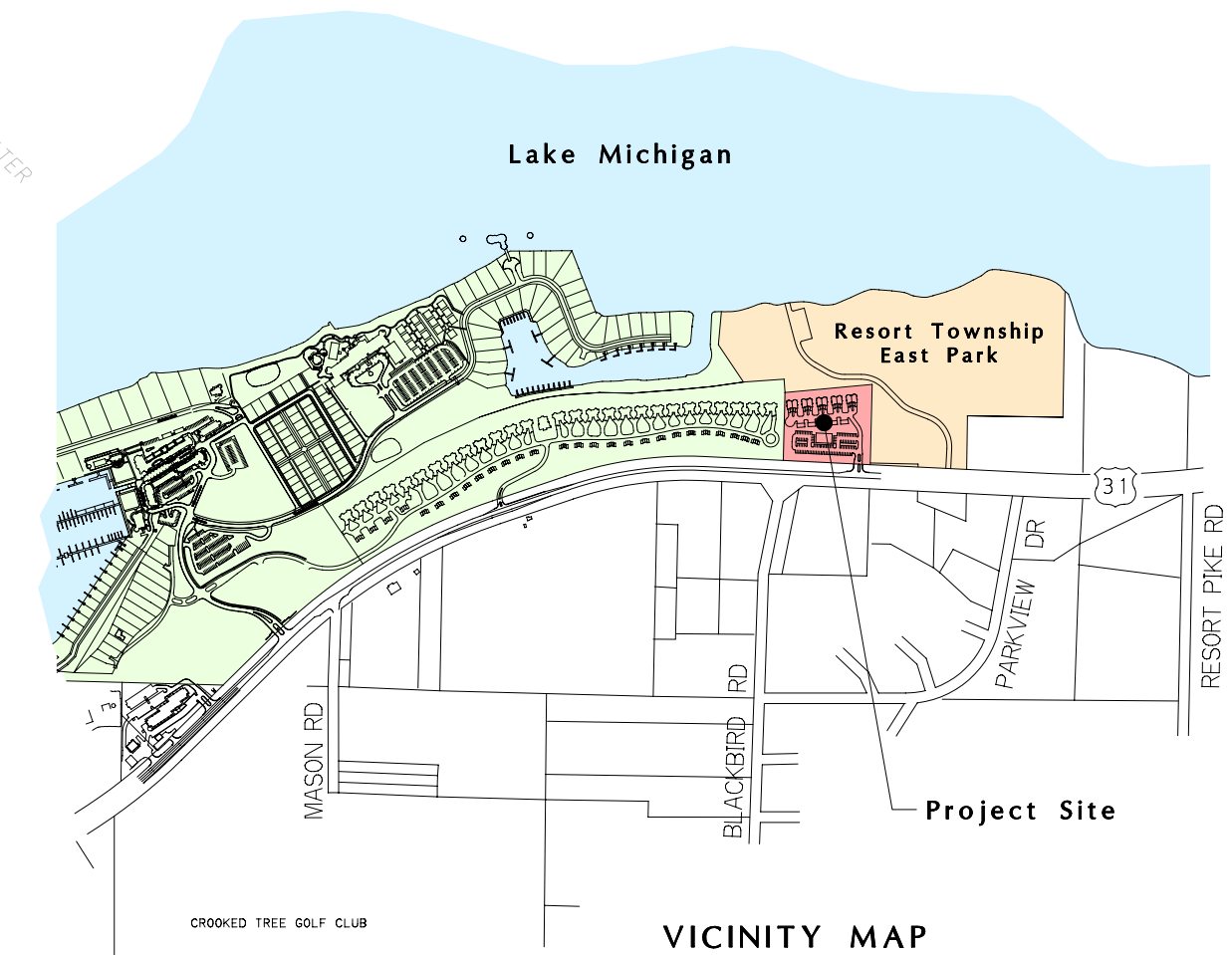
GENERALIZED SOILS ANALYSIS DATA

(Information taken from Emmet County Soil Survey)
 Soils are classified as Albion Sandy Variant (A9B) and consist mostly of well-drained soils formed in sand and gravel deposits. Small pockets of Roscommon soils may occur.

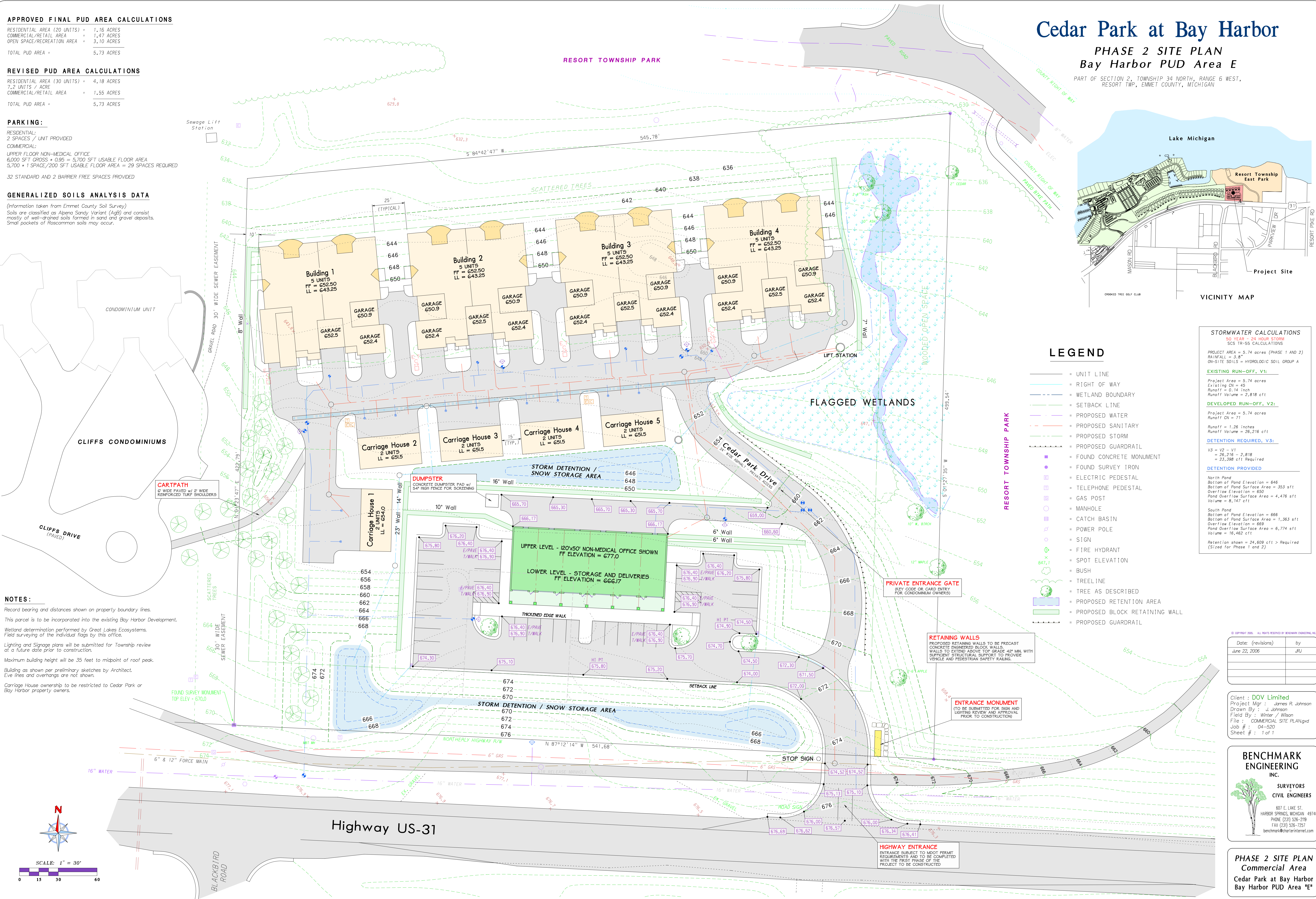
Cedar Park at Bay Harbor

PHASE 2 SITE PLAN Bay Harbor PUD Area E

PART OF SECTION 2, TOWNSHIP 34 NORTH, RANGE 6 WEST,
 RESORT TWP, EMMET COUNTY, MICHIGAN



VICINITY MAP



STORMWATER CALCULATIONS

50 YEAR - 24 HOUR STORM
 SCS TR-55 CALCULATIONS
 PROJECT AREA = 5.74 acres (PHASE 1 AND 2)
 RAINFALL = 3.8"
 ON-SITE SOILS = HYDROLOGIC SOIL GROUP A
EXISTING RUN-OFF, V1:
 Project Area = 5.74 acres
 Existing CN = 45
 Runoff = 0.14 inch
 Runoff Volume = 2,818 cft
DEVELOPED RUN-OFF, V2:
 Project Area = 5.74 acres
 Runoff CN = 71
 Runoff = 1.26 inches
 Runoff Volume = 26,216 cft
DETENTION REQUIRED, V3:
 V3 = V2 - V1
 = 26,216 - 2,818
 = 23,398 cft Required
DETENTION PROVIDED
 North Pond
 Bottom of Pond Elevation = 646
 Bottom of Pond Surface Area = 353 sft
 Overflow Elevation = 650
 Pond Overflow Surface Area = 4,476 sft
 Volume = 8,147 cft
 South Pond
 Bottom of Pond Elevation = 666
 Bottom of Pond Surface Area = 1,363 sft
 Overflow Elevation = 669
 Pond Overflow Surface Area = 6,774 sft
 Volume = 16,462 cft
 Retention shown = 24,609 cft > Required
 (Sized for Phase 1 and 2)

LEGEND

- UNIT LINE
- RIGHT OF WAY
- WETLAND BOUNDARY
- SETBACK LINE
- PROPOSED WATER
- PROPOSED SANITARY
- PROPOSED STORM
- PROPOSED GUARDRAIL
- FOUND CONCRETE MONUMENT
- FOUND SURVEY IRON
- ELECTRIC PEDESTAL
- TELEPHONE PEDESTAL
- GAS POST
- MANHOLE
- CATCH BASIN
- POWER POLE
- SIGN
- FIRE HYDRANT
- SPOT ELEVATION
- BUSH
- TREELINE
- TREE AS DESCRIBED
- PROPOSED RETENTION AREA
- PROPOSED BLOCK RETAINING WALL
- PROPOSED GUARDRAIL

NOTES:
 Record bearing and distances shown on property boundary lines.
 This parcel is to be incorporated into the existing Bay Harbor Development.
 Wetland determination performed by Great Lakes Ecosystems.
 Field surveying of the individual tags by this office.
 Lighting and Signage plans will be submitted for Township review at a future date prior to construction.
 Maximum building height will be 35 feet to midpoint of roof peak.
 Building as shown per preliminary sketches by Architect.
 Eave lines and overhangs are not shown.
 Carriage House ownership to be restricted to Cedar Park or Bay Harbor property owners.

Date: (revisions)	by
June 22, 2006	JRJ

Client : DOV Limited
 Project Mgr : James R. Johnson
 Drawn By : J. Johnson
 Field By : Winter / Wilson
 File : COMMERCIAL SITE PLAN.dwg
 Job # : 04-520
 Sheet # : 1 of 1

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**PHASE 2 SITE PLAN
 Commercial Area**
 Cedar Park at Bay Harbor
 Bay Harbor PUD Area "E"