

SOIL EROSION AND SEDIMENTATION CONTROL MEASURES

KEY	DETAIL	CHARACTERISTICS
1		Topsoil may be stockpiled above borrow areas to act as a diversion. Stockpile should be temporarily seeded.
6		Facilitates establishment of vegetation cover. Effective for drainage areas with low velocity. Easily placed in small quantities by inexperienced personnel. Should include prepared topsoil bed.
7		Effective on large areas. Mow existing sward used to provide immediate protection until grass is rooted. Should include prepared topsoil bed.
13		Used where vegetation is not easily established. Effective for high velocities or high concentrations. Permits runoff to infiltrate and dissipates energy flow at system outlets.
15		Protects areas which cannot otherwise be protected, but increases runoff volume and velocity. Improper surface will trap silt velocity.
16		Keeps high velocity runoff on paved areas from leaving paved surface. Collects and conducts runoff to enclosed drainage system or enclosed drainage way.
35		System removes collected runoff from site, particularly from paved areas. Can accept large concentrations of runoff. Conducts runoff to municipal sewer system or stabilized out-fall location. Use catch basins to collect sediment.
54		Use geotextile and posts or poles. May be constructed or prepackaged. Easy to construct and locate as necessary.

XX TEMPORARY MEASURE

⊕ PERMANENT MEASURE

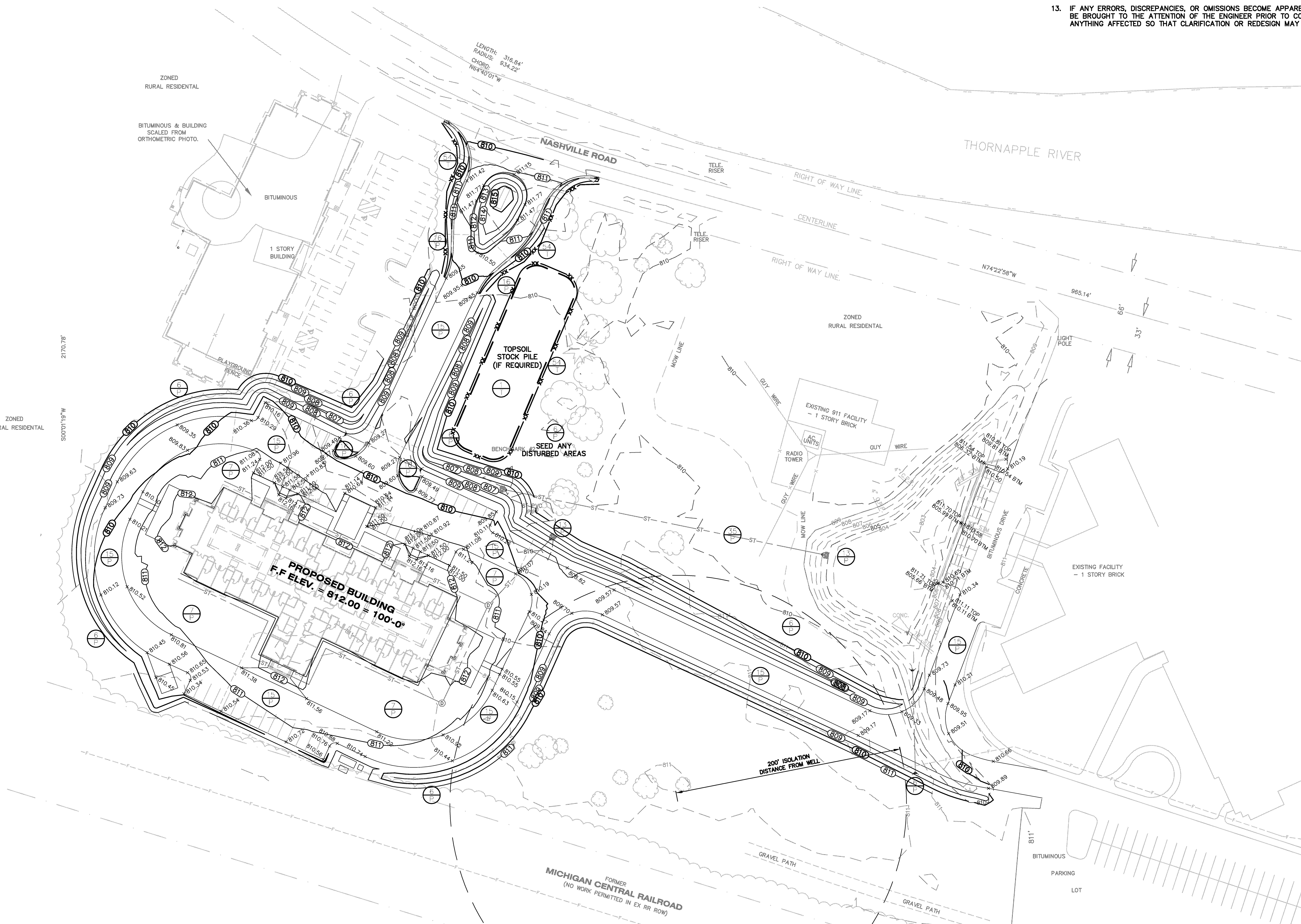
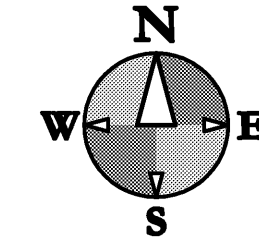
SESC NOTES

1. AVOID UNNECESSARY DISTURBING OR REMOVING EXISTING VEGETATED TOPSOIL OR EARTH COVER. THESE AREAS ACT AS SEDIMENT FILTERS.
2. CONTRACTOR SHALL APPLY FOR AND COMPLY WITH THE SOIL EROSION CONTROL PERMIT FROM BARRY COUNTY AT ALL TIMES.
3. ALL TEMPORARY SOIL EROSION PROTECTION SHALL REMAIN IN PLACE UNTIL REMOVAL IS REQUIRED FOR FINAL CLEANUP AND APPROVAL.
4. CONTRACTOR TO PROVIDE STRAW BALE DAMS OR SILT FENCES ACROSS ALL DITCHES, SWALES, AND ROUGH CUT ROADS WHICH EXIST FROM THE SITE TO ELIMINATE SEDIMENT RUNOFF. PROVIDE STRAW BALE DAMS, SILT FENCES OR INSTALL FILTER FABRIC UNDER INLETS AT ALL STORM SEWER STRUCTURES DURING CONSTRUCTION.
5. ALL SOIL PILES SHALL BE SURROUNDED BY SILT FENCE IF ALLOWED TO REMAIN IN PLACE FOR MORE THAN 7 DAYS. TOPSOIL PILES SHALL BE SEEDED IF ALLOWED TO REMAIN IN PLACE FOR MORE THAN 20 DAYS. SPOIL PILES SHALL NOT BE PLACED WITHIN 50' FROM ANY TEMPORARY OR PERMANENT WATERCOURSE.
6. THE CONTRACTOR SHALL COMPLY WITH THE WEEKLY RECOMMENDATIONS OF THE CERTIFIED STORM WATER OPERATOR.
7. ALL INLETS IN PAVED AREAS SHALL HAVE SILT SAVER SEDIMENTATION REDUCERS DURING CONSTRUCTION.
8. CLEAN ADJACENT ROADWAYS WHEN NECESSARY.
9. FINAL LANDSCAPING SHALL CONSIST OF MIN. 3" TOPSOIL, 200#/ACRE CLASS A SEEDING, 2T/ACRE MULCH AND 240#/ ACRE CHEMICAL FERTILIZER NUTRIENT.
10. COORDINATE TOPSOIL STOCKPILE WITH OWNER.
11. PLACE TRACK MATS AT THE ENTRANCE TO REDUCE MATERIAL TRACKED OFF SITE.
12. COORDINATE THE CLEARING LIMITS WITH THE OWNER PRIOR TO COMMENCING WORK.
13. IT IS THE INTENT FOR THE EARTHWORK TO BALANCE AND THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THAT THE EARTHWORK SHOWN BALANCES PRIOR TO BEGINNING WORK.

GRADING NOTES

1. MATCH EXISTING GRADES AROUND PERIMETER WITH SLOPES AS SHOWN. MATCH AT 1 ON 3 IF NOT LABELED.
2. THE CONTRACTOR SHALL INSTALL PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVERNIGHT AS REQUIRED.
3. ALL SPOT ELEVATIONS ARE TOP OF PAVEMENT GRADES AT EDGE OF METAL (EOM) UNLESS OTHERWISE NOTED.
4. ALL SOIL EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO MASS GRADING.
5. ALL EXCAVATION SHALL BE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATIONS AND GEOTECHNICAL REPORT.
6. ALL EXISTING ELEVATIONS ARE TO BE VERIFIED AND ACCEPTED AS SHOWN PRIOR TO COMMENCEMENT OF WORK.
7. REMOVE AND REPLACE WITH CONTROLLED FILL ANY AREAS THAT HAVE BEEN SOFTENED BY RAINS, FREEZING, CONSTRUCTION EQUIPMENT, ETC.
8. ALL REQUIRED FILL FOR THIS PROJECT SHALL BE SELECTED EXCAVATED MATERIAL FROM THE SITE APPROVED BY THE ENGINEER OR CLASS II GRANULAR MATERIAL FROM BORROW AND SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
9. ALL GRANULAR FILL UNDER THE INFLUENCE OF THE ROADWAY AND PROCESSED ROAD GRAVEL SHALL BE COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
10. ALL COMPACTION SHALL BE ACCOMPLISHED BY PLACING THE FILL IN 12" LOOSE LIFTS AND MECHANICALLY COMPACTING EACH LIFT TO AT LEAST THE SPECIFIED MINIMUM DRY DENSITY. FIELD DENSITY TESTS SHOULD BE PERFORMED ON EACH LIFT AS NECESSARY TO ENSURE THAT ADEQUATE MOISTURE CONDITIONS AND COMPACTION ARE BEING ACHIEVED.
11. SITE CONTRACTOR SHALL REMOVE AND STOCKPILE ALL TOPSOIL AND BLACK ORGANIC SOILS ON-SITE TO BE USED IN THE REGRADING OF LANDSCAPE AREAS. THIS MATERIAL IS NOT TO BE USED FOR FILL OR PAVEMENT SUBBASE. REMOVAL OF ANY EXCESS SOIL OFF-SITE SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
12. CONTRACTOR RESPONSIBLE FOR VERIFYING EARTHWORK CALCULATIONS PRIOR TO COMMENCING WORK. NO EXTRA EARTHWORK WILL BE PAID FOR ONCE EARTHWORK HAS BEGUN. ANY DISCREPANCIES WITH THE EARTHWORK CALCULATIONS SHALL BE REVIEWED WITH THE OWNER AND ENGINEER PRIOR TO CONSTRUCTION.
13. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS BECOME APPARENT, THESE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION OF ANYTHING AFFECTED SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.

0 20 40 80
1 inch = 40 ft.



THE COTTAGE at THORNAPPLE

Hastings, MI

PROJ. NO.: 2011-11-021

9/20/11 SCHEMATIC DESIGN MEETING 1.3
9/21/11 100% SCHEMATIC DESIGN
1/30/12 100% DESIGN DEVELOPMENT
2/08/12 100% CD QA REVIEW
2/21/12 ISSUED FOR BIDS

CONSTRUCTION MANAGER
CM CONTRACTING
CIVIL ENGINEER
HURLEY & STEWART
STRUCTURAL ENGINEER
JDH ENGINEERING
MEP ENGINEER
E2W ENGINEERING
2000 SERVICE CONSULTANT
MILLIS & ASSOCIATES



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GRADING PLAN

C202



Know what's below.
Call before you dig.