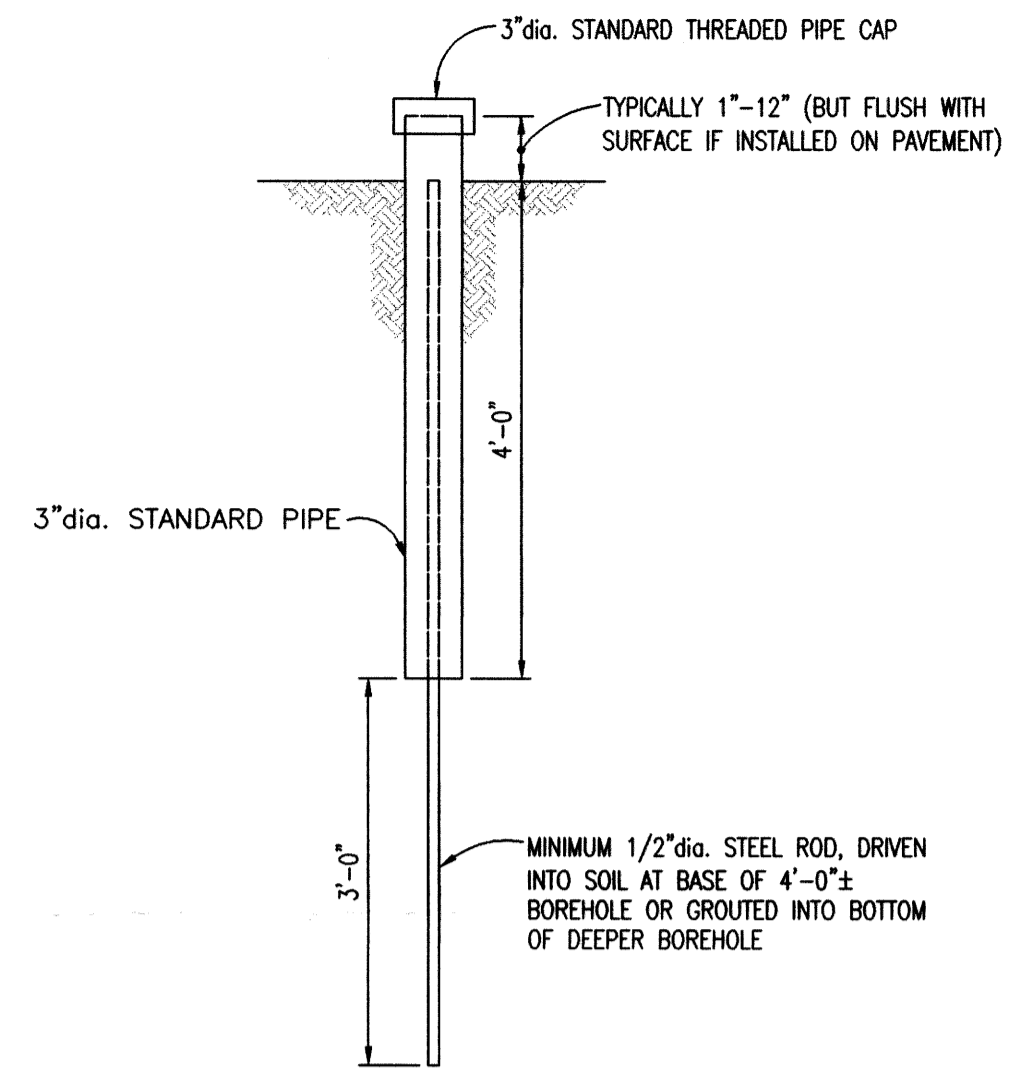
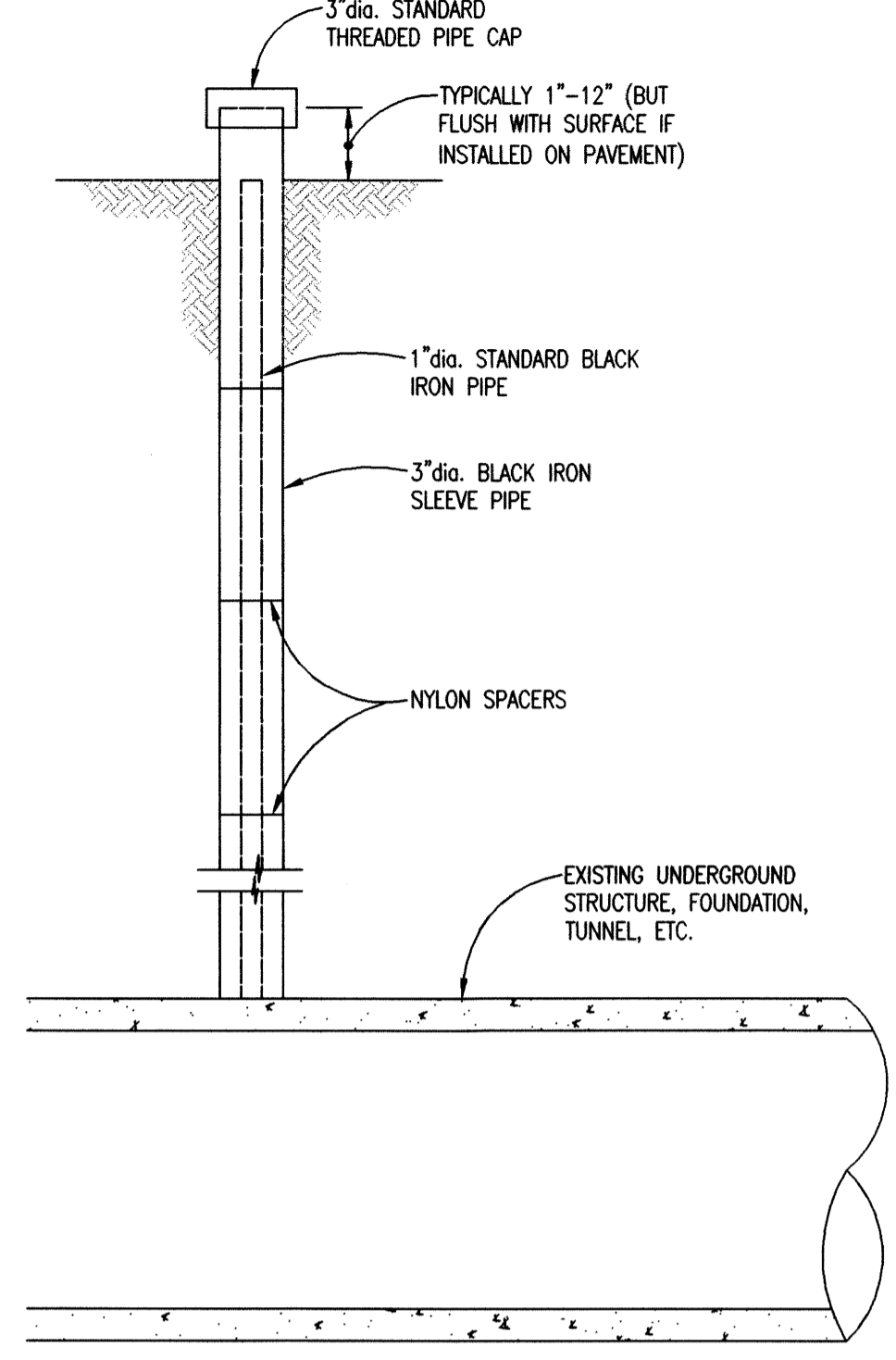


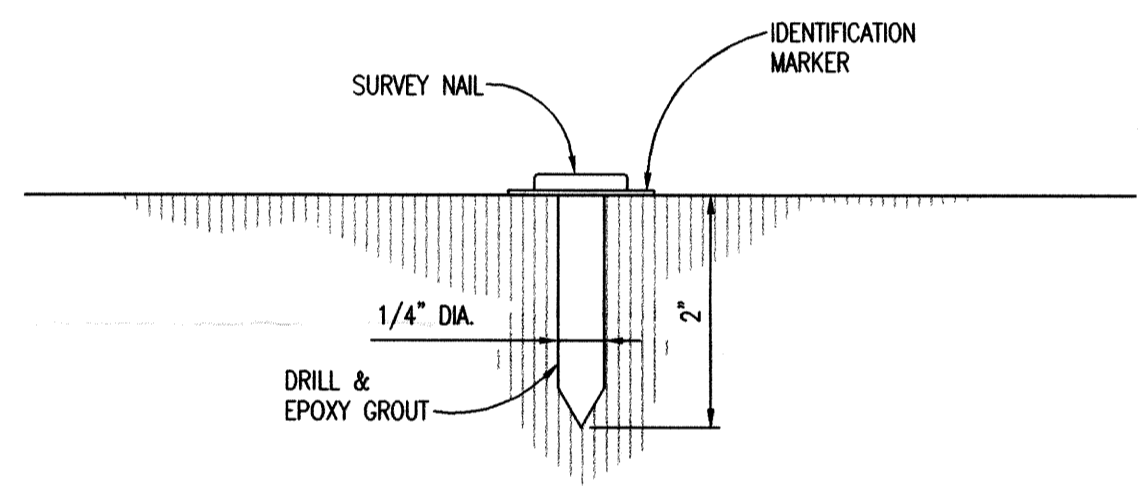
GEOTECHNICAL INSTRUMENTATION PLAN
SCALE: 1" = 50'



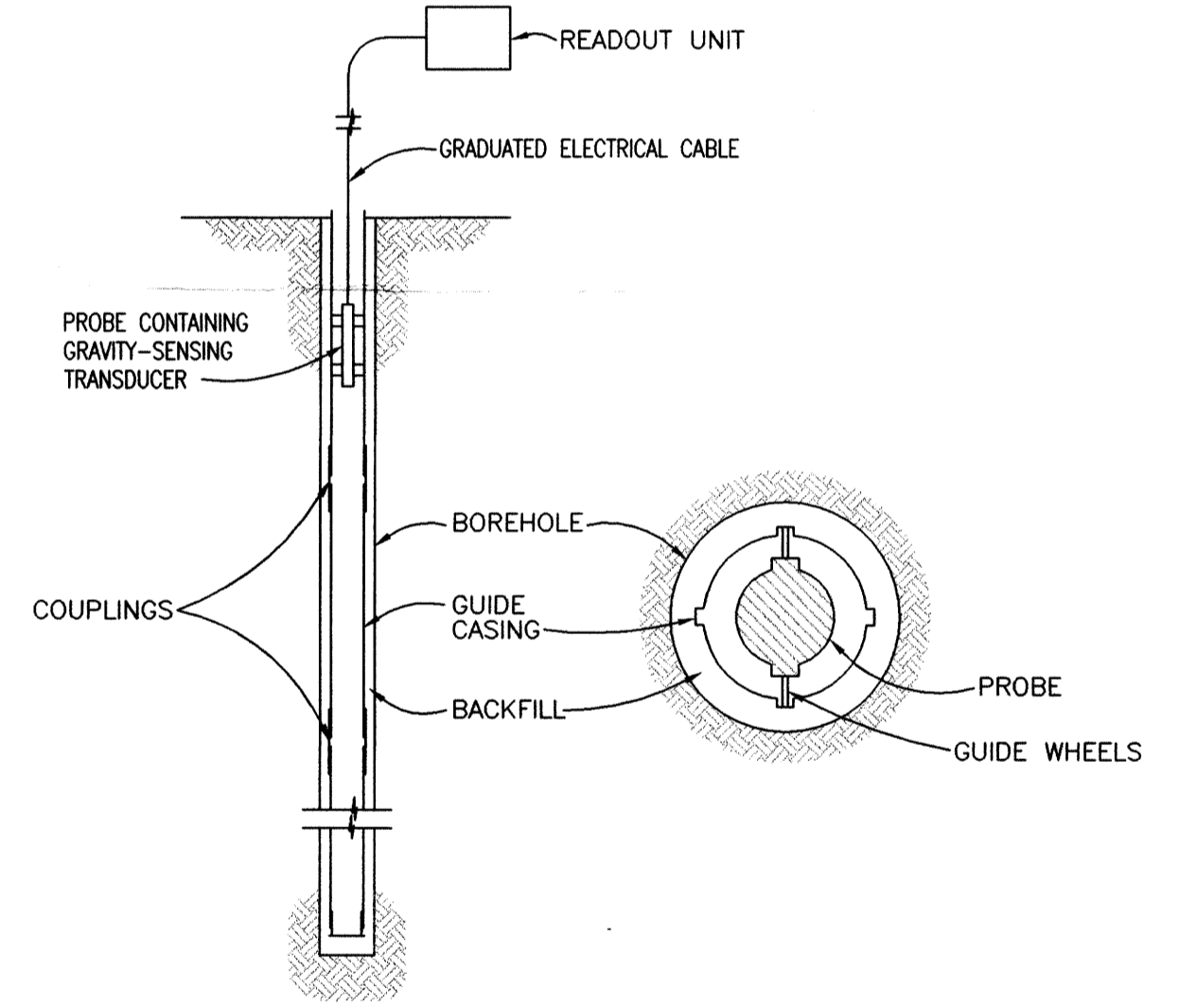
TYPICAL GROUND MONITORING POINT CONFIGURATION (GMPA IN SOIL)
SCALE: NONE



TYPICAL TELLTALE CONFIGURATION
SCALE: NONE



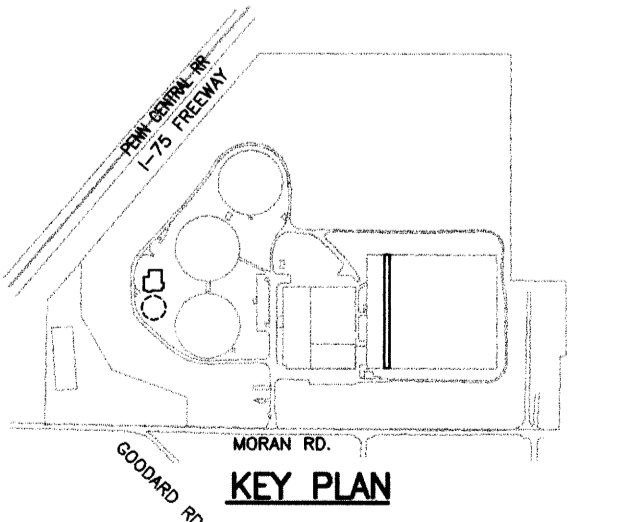
TYPICAL STRUCTURAL/SURFACE MONITORING POINT (GMPA IN PAVEMENT)
SCALE: NONE



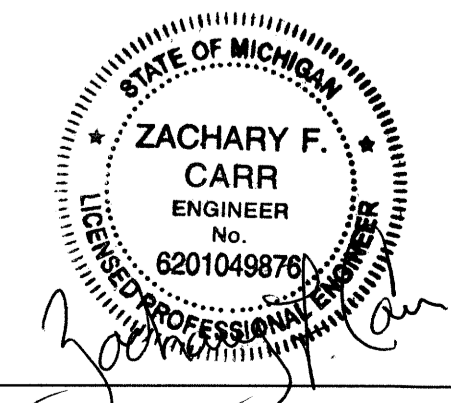
TYPICAL INCLINOMETER CONFIGURATION
SCALE: NONE

- NOTES:
- LIMITS OF EARTH RETENTION SYSTEM IS APPROXIMATE AND SHOWN FOR INFORMATION ONLY.
 - DIMENSIONS SHOWN ON EARTH RETENTION SYSTEM ARE APPROXIMATE.
 - WALL TYPE "A" SHALL BE A STIFF, MULTI-LEVEL, BRACED EXCAVATION RETENTION WALL DESIGNED TO CARRY EARTH LOADS AND A SURCHARGE LIVE LOAD OF 1,500 psf (TANK No. 2) WITH HORIZONTAL DEFLECTION OF THE SOIL AT INCLINOMETER I-1 LESS THAN 1/4-INCH AND VERTICAL SETTLEMENT LESS THAN 1/4-INCH AT ANY POINT ON FINISHED WATER STORAGE TANK No. 2.
 - WALL TYPE "B" SHALL BE A BRACED EXCAVATION RETENTION WALL DESIGNED TO CARRY EARTH LOADS AND A SURCHARGE LIVE LOAD OF 300 psf. HORIZONTAL AND VERTICAL SOIL MOVEMENTS SHALL BE LIMITED IN ACCORDANCE WITH THE INSTRUMENTATION MONITORING DRAWINGS AND SPECIFICATIONS.
 - CONTRACTOR TO VERIFY EXISTING UNDERGROUND UTILITIES PRIOR TO EARTH RETENTION SYSTEM DESIGN IN ORDER TO PROPERLY SELECT THE MOST EFFECTIVE SYSTEM.

- LEGEND**
- SMP STRUCTURAL/SURFACE MONITORING POINT DRILLED/EPOXYED SURVEY NAIL
 - ▲ I-X INCLINOMETER
 - XXXXX GMPA GROUND MONITORING POINT ARRAY PK NAILS EVENLY SPACED IN LINE WITH CENTER OF EXCAVATION OR, IF NOT IN PAVEMENT, GROUTED IN 1/2" DIA. (MINIMUM) STEEL ROD
 - ⊕ TM TILT METER ATTACHED TO OUTSIDE WALL OF CLARIFIER
 - VMP VIBRATION MONITORING POINT
 - TT TELLTALE



F				DESIGNED BY	K. WARNEMUENDE
E				DRAWN BY	S.H. BRYAN
D				CHECKED BY	Z.F. CARR
C				APPROVED BY	J.B. ALBERTS
B					
A	FINAL DESIGN ISSUED FOR ADVERTISEMENT		12/08		
	DESCRIPTION	CHK'D	APRVD.	DATE	
	REVISIONS				



SOUTHWEST WATER TREATMENT PLANT
WASTE WASHWATER & SLUDGE TREATMENT FACILITY
GEOTECHNICAL INSTRUMENTATION PLAN
SCALE: AS NOTED

CITY OF DETROIT
WATER AND SEWERAGE DEPARTMENT
ENGINEERING DIVISION

TETRA TECH

SIGMA CONSULTING ENGINEERS
Sigma Associates, Inc.

NTH Consultants, Ltd.
Infrastructure Engineering and Environmental Services
480 Ford Plaza, 2000 South Street
Detroit, MI 48224

SECTION MAP: 1 | 3 | - | C | 3 | S | 10 | E | 0 | 0 | 4

TOWN: 13
RANGE: 10
SECTION: 04
PORTION CODE: 00
DRWS NO.: 3466

MDEQ PERMIT NO.	W084275
FED. REF. NO.	
CONTRACT NO.	SW-548
FILE NO.	
	D-07-02-128

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