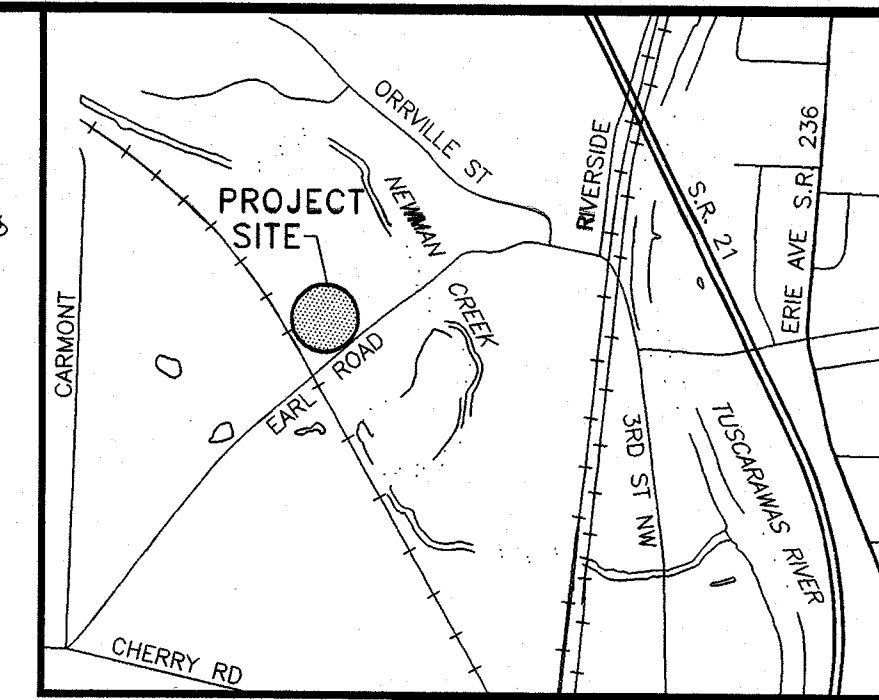


SITE DATA:
 30.61 ACRES±
 ZONED I-1 (LIGHT INDUSTRIAL)
SETBACKS
 60' FRONT SETBACK
 50' SIDE SETBACK (ADJACENT TO RESIDENTIAL)
 50' REAR SETBACK (ADJACENT TO RESIDENTIAL)



LOCATION MAP

ZONED I-1
 CITY OF MASSILLON

FULCRUM ENTERPRISES, LLC
 PARCEL #0500218
 30.61 ACRES±

PAUL K DOERING
 PARCEL #4700432
 1.00 ACRES±

THE SIGHT DISTANCE FOR THIS DRIVE DOES NOT MEET CURRENT ODOT SIGHT DISTANCE REQUIREMENTS. THE DRIVE IS LOCATED AS FAR WEST AS POSSIBLE TO MAXIMIZE THE SIGHT DISTANCE.

EARL LAKE INC.
 PARCEL #4700430
 14.07 ACRES±

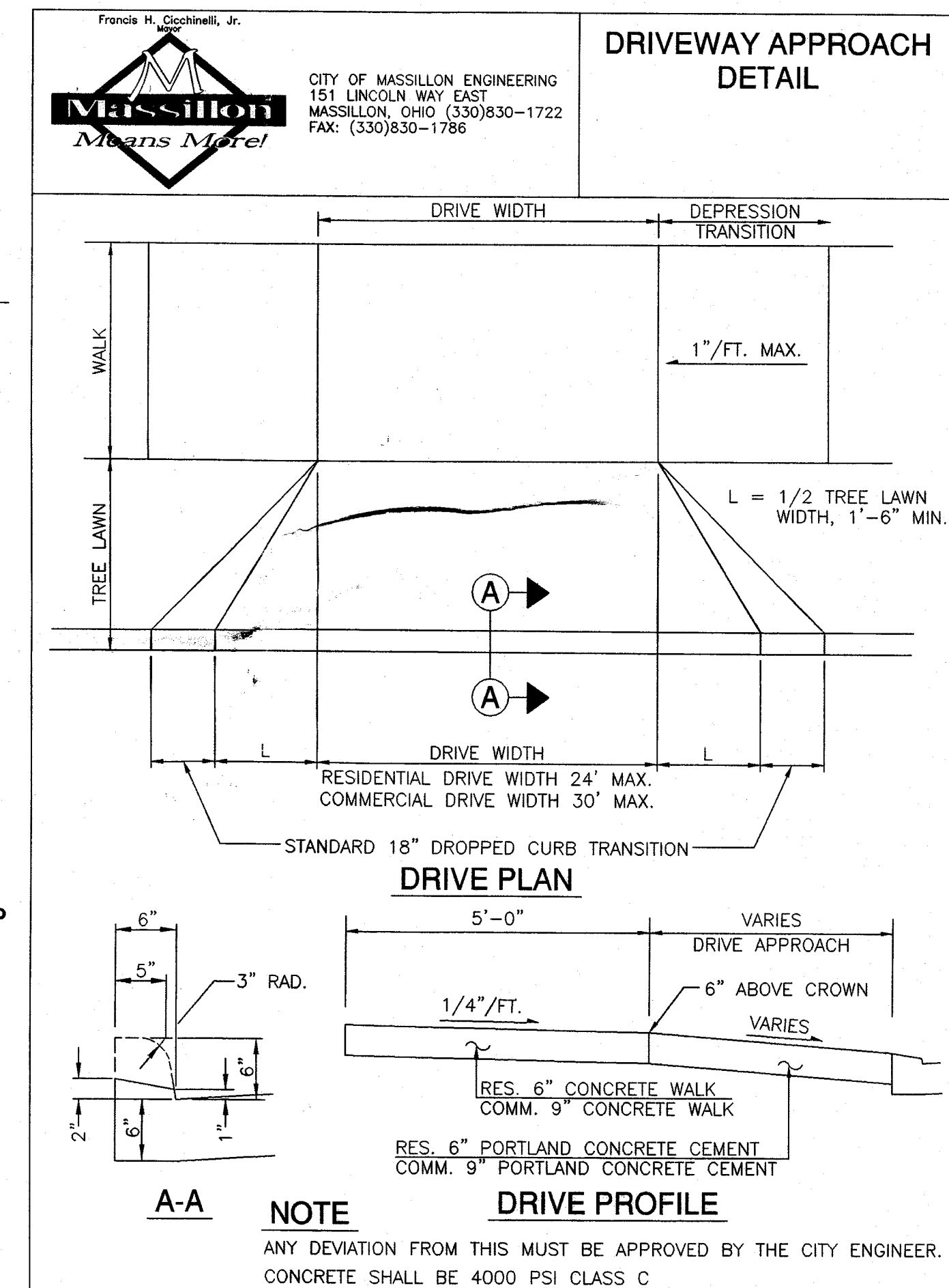
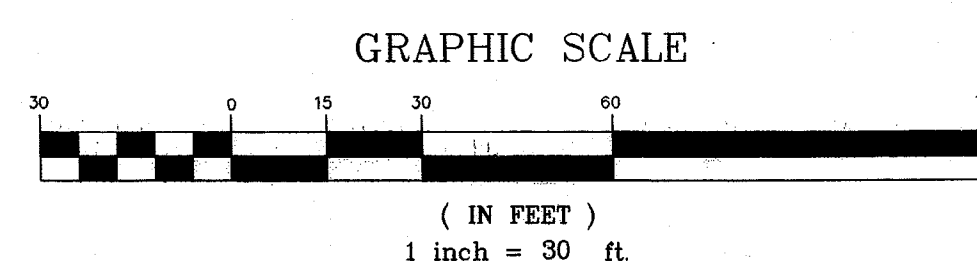
AMVETS POST 12
 PARCEL #4700150
 1.70 ACRES±

PERRY TOWNSHIP
ZONED R-3

NORFOLK SOUTHERN RAILWAY COMPANY
 PARCEL #4799007
 15.22 ACRES±

WILLIAM J HOUCK
 PARCEL #4700386
 10.21 ACRES±

BOUNDARY AND TOPOGRAPHIC SURVEY
 PERFORMED BY BUCKEYE SURVEYING
 SERVICES, INC. ACCURACY OF INFORMATION
 IS THE SOLE RESPONSIBILITY OF BUCKEYE
 SURVEYING SERVICES, INC. SURVEY DATA
 WAS SUPPLEMENTED WITH STARK COUNTY
 TAX MAP DATA.



OWNER/DEVELOPER:
 FULCRUM ENTERPRISES, LLC
 2953 CARIE HILL CIRCLE NW
 MASSILLON, OHIO 44646
 330-830-6607

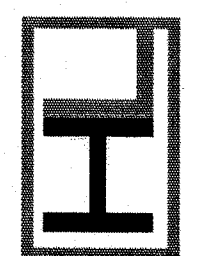
SURVEYING SERVICES BY:
 BUCKEYE SURVEYING SERVICES, INC.
 2223 FULTON DRIVE
 CANTON, OHIO 44708
 330-453-8339

PRELIMINARY
 Not for Construction

JUN 01 2004

SITE PLAN

Hettler, Largent
 Engineering LLC
 Civil & Construction Consultants
 1225 North Main Street • Suite A • North Canton, OH 44720
 PH: 330-966-1776 • FX: 330-966-7911 • hettlereng@hettlereng.com



FULCRUM ENTERPRISES, LLC
 STORAGE BUILDINGS
 CITY OF MASSILLON
 STARK COUNTY, OHIO

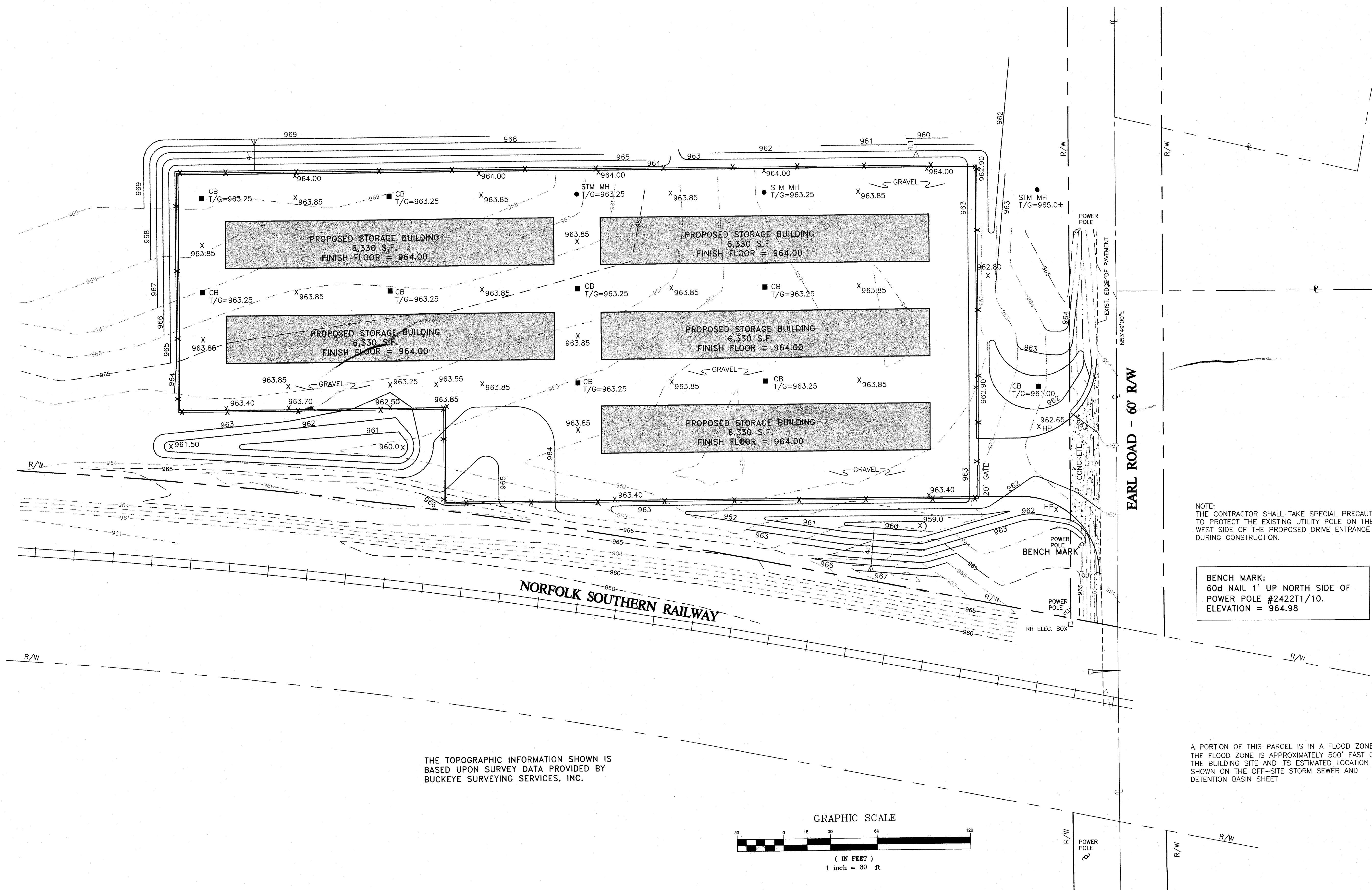
NO	DATE	DESCRIPTION	BY

GRADING PLAN

Hettler Largent
Engineering LLC
Civil & Construction Consultants
1225 North Main Street • Suite A • North Canton, OH 44720
PH: 330-966-1776 • FX: 330-966-7911 • hettlereng@neor.com



FULCRUM ENTERPRISES, LLC
STORAGE BUILDINGS
CITY OF MASSILLON
STARK COUNTY, OHIO

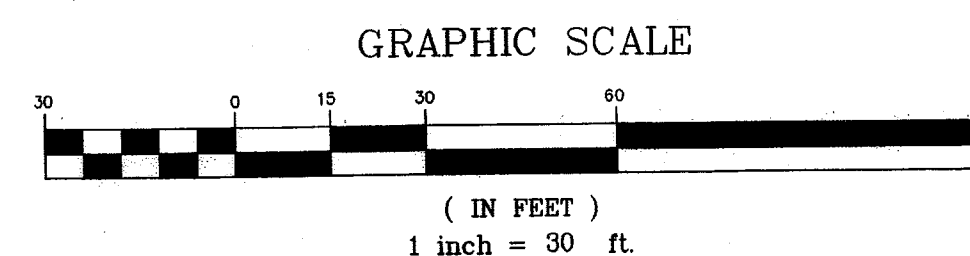


NOTE:
THE CONTRACTOR SHALL TAKE SPECIAL PRECAUTIONS
TO PROTECT THE EXISTING UTILITY POLE ON THE
WEST SIDE OF THE PROPOSED DRIVE ENTRANCE
DURING CONSTRUCTION.

BENCH MARK:
60d NAIL 1' UP NORTH SIDE OF
POWER POLE #2422T1/10.
ELEVATION = 964.98

A PORTION OF THIS PARCEL IS IN A FLOOD ZONE.
THE FLOOD ZONE IS APPROXIMATELY 500' EAST OF
THE BUILDING SITE AND ITS ESTIMATED LOCATION
SHOWN ON THE OFF-SITE STORM SEWER AND
DETENTION BASIN SHEET.

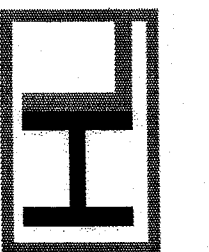
THE TOPOGRAPHIC INFORMATION SHOWN IS
BASED UPON SURVEY DATA PROVIDED BY
BUCKEYE SURVEYING SERVICES, INC.



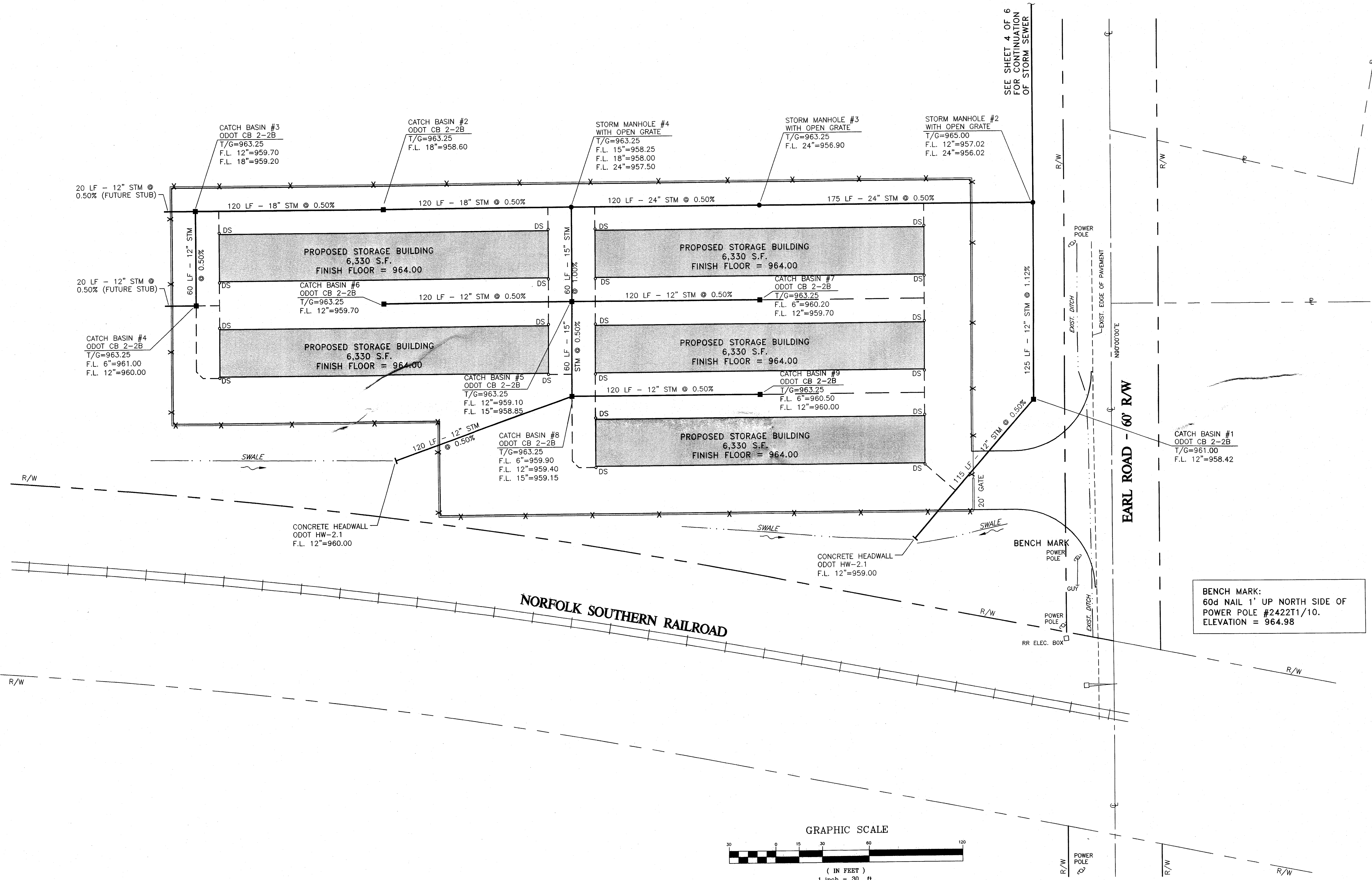
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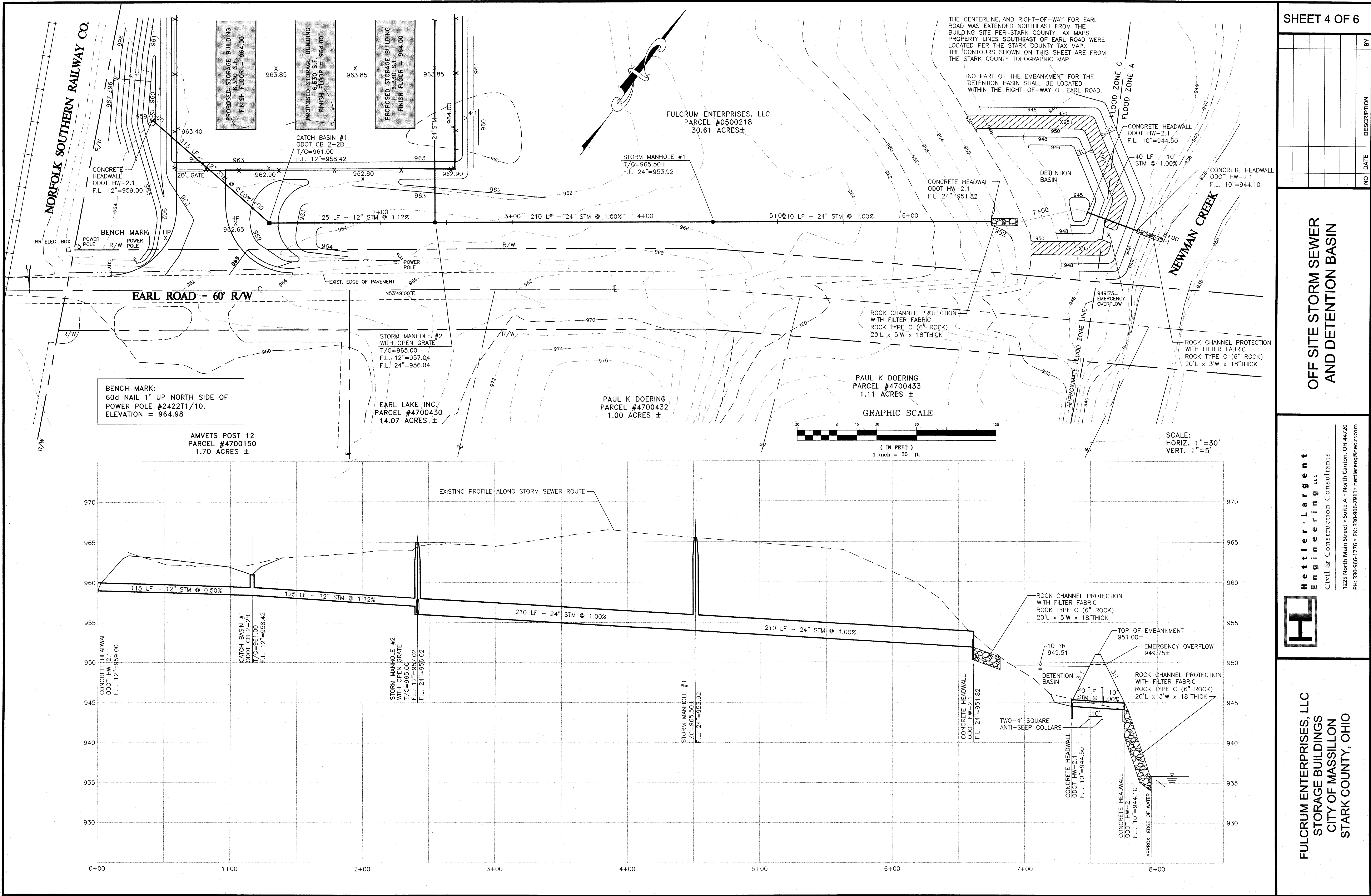
UTILITY PLAN

Hettler Largent
Engineering LLC
Civil & Construction Consultants
1225 North Main Street • Suite A • North Canton, OH 44720
PH: 330-966-1776 • FX: 330-966-7911 • hettlereng@neo.rr.com



FULCRUM ENTERPRISES, LLC
STORAGE BUILDINGS
CITY OF MASSILLON
STARK COUNTY, OHIO

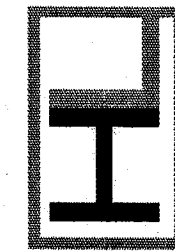




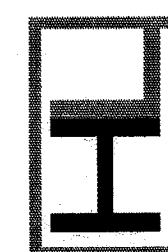
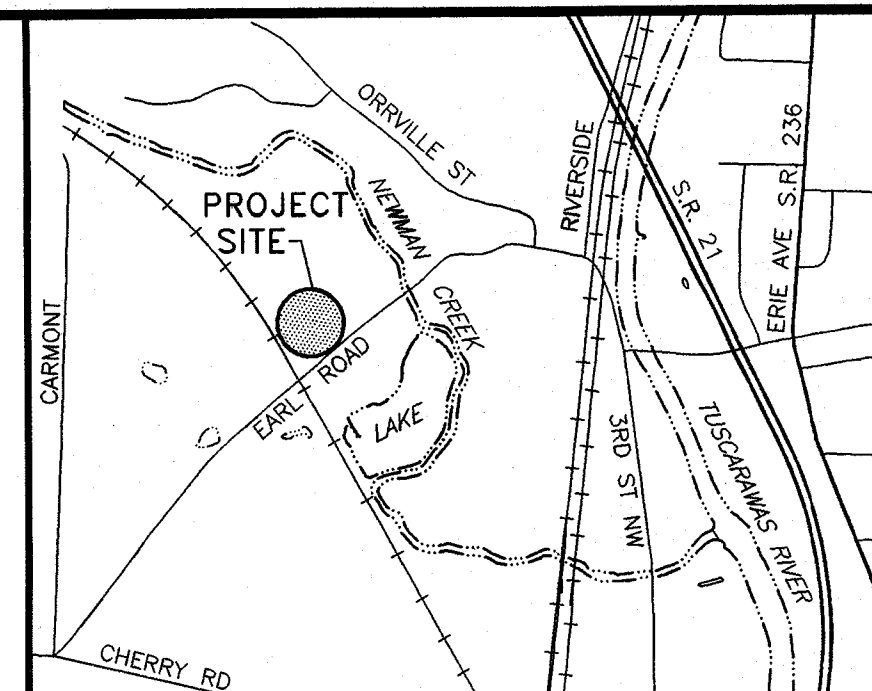
NO	DATE	DESCRIPTION	BY

OFF SITE STORM SEWER
AND DETENTION BASIN

Hettler Largent
Engineering LLC
Civil & Construction Consultants
1225 North Main Street • Suite A • North Canton, OH 44720
PH: 330-966-1776 • FX: 330-966-7911 • hettlereng@rec.rr.com



FULCRUM ENTERPRISES, LLC
STORAGE BUILDINGS
CITY OF MASSILLON
STARK COUNTY, OHIO

STORMWATER POLLUTION
PREVENTION PLANHettler, Largent
Engineering, LLC
Civil & Construction Consultants1225 North Main Street • Suite A • North Canton, OH 44720
PH: 330-966-1776 • FX: 330-966-7911 • hettlereng@neo.rr.comFULCRUM ENTERPRISES, LLC
STORAGE BUILDINGS
CITY OF MASSILLON
STARK COUNTY, OHIO

LOCATION MAP

SPECIAL NOTE (NEWMAN CREEK):
THE PROPOSED STORM WATER DETENTION BASIN SHALL BE CONSTRUCTED WITH LITTLE TO NO DISTURBANCE TO NEWMAN CREEK. SILT FENCE SHALL BE INSTALLED PRIOR TO BEGINNING EXCAVATION. THE DISTURBED AREA NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED DETENTION BASIN SHALL BE STABILIZED/SEEDED (PER ODOT 659) WITHIN 2 DAYS OF FINAL GRADING.

GENERAL NOTES:

1. TEMPORARY SOIL STABILIZATION (ODOT ITEM 207) SHALL OCCUR WITHIN SEVEN (7) DAYS AFTER ROUGH GRADING IF A DISTURBED AREA WILL REMAIN IDLE LONGER THAN TWENTY ONE (21) DAYS. PERMANENT SOIL STABILIZATION (ODOT ITEM 659) SHALL BE INSTALLED WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE (2 DAYS FOR AREAS WITHIN 50' OF STREAM). PERMANENT VEGETATION IS A GROUND COVER DENSE ENOUGH TO COVER 80% OF THE SOIL SURFACE AND MATURE ENOUGH TO SURVIVE WINTER WEATHER CONDITION.
 2. ALL SEDIMENT AND EROSION CONTROLS SHALL BE INSPECTED ONCE EVERY 7 DAYS AND WITHIN 24 HOURS OF A 0.5" OR GREATER RAINFALL. A WRITTEN LOG OF THESE INSPECTIONS MUST BE KEPT. (DATES OF INSPECTION, WEATHER CONDITIONS, OBSERVATIONS, ACTIONS TAKEN TO CORRECT PROBLEM, AND DATE INFORMATION WAS TAKEN. WHEN SEDIMENT AND EROSION CONTROL STRUCTURES/DEVICES NEED REPAIRED/ALTERED, THE WORK SHALL BE COMPLETED WITHIN THREE (3) DAYS OF INSPECTION (SEDIMENT PONDS - REPAIR WITHIN 10 DAYS). NO SOLID OR LIQUID WASTE SHALL BE DISCHARGED INTO STORM WATER RUNOFF.
 3. CONSTRUCTION VEHICLES ARE LIMITED TO THE CONSTRUCTION ACCESS ROAD NOTED ON THE PLAN. (STABILIZED CONSTRUCTION ENTRANCE).
 4. OTHER EROSION CONTROL ITEMS MAY BE NECESSARY DUE TO ENVIRONMENTAL CONDITIONS.
 5. THE SOIL EROSION FOR THE SITE WILL BE CONTROLLED WITH THE USE OF A SEDIMENT BASIN, SILT FENCE, AND INLET PROTECTION.
 6. APPROXIMATE DISTURBED AREA = 3.75± ACRES.
TOTAL SITE AREA = 30.60± ACRES
THIS PHASE OF PROJECT = 3.75± ACRES
- CONSTRUCTION SEQUENCE:
1. INSTALL ALL SEDIMENT CONTROL DEVICES (SEDIMENT BASINS, SILT FENCE, INLET PROTECTION, ETC.) AS PER THE OHIO STANDARDS FOR STORM WATER MANAGEMENT LAND DEVELOPMENT AND URBAN STREAM PROTECTION, RAINWATER AND LAND DEVELOPMENT MANUAL.
 2. THE STARK SOIL AND WATER CONSERVATION DISTRICT MUST INSPECT AND APPROVE ALL SEDIMENT CONTROL DEVICES PRIOR TO ANY EARTH MOVING ACTIVITY. PRECONSTRUCTION MEETING IS REQUIRED.
 3. CLEAR AND GRADE THE SITE - CONSTRUCT PROPOSED IMPROVEMENTS AND ALL UTILITIES.
 4. PERMANENTLY STABILIZE ALL DISTURBED AREAS (ODOT 659). THE STARK SOIL AND WATER CONSERVATION DISTRICT MUST APPROVE ALL STABILIZATION PRIOR TO THE REMOVAL OF ANY SEDIMENT CONTROL DEVICES.
 5. REMOVE STANDPIPE IN SEDIMENT BASIN.

SEED, MULCH, FERTILIZE AND LIME REQUIREMENTS SHALL MEET THE OHIO DEPARTMENT OF TRANSPORTATION - CONSTRUCTION MATERIAL SPECIFICATIONS - ITEM 207 TEMPORARY SEDIMENT AND EROSION CONTROLS AND ITEM 659 SEEDING AND MULCHING. SEEDING METHODS SHALL BE PER ODOT 659.12 (INCLUDING SEEDING SCHEDULE INFORMATION).

DISPOSAL OF SOLID, SANITARY AND TOXIC WASTE
SOLID, SANITARY AND TOXIC WASTE MUST BE DISPOSED OF IN A PROPER MANNER IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. IT IS PROHIBITED TO BURN, BURY OR POUR OUT ONTO THE GROUND OR INTO STORM SEWERS ANY SOLVENTS, PAINTS, STAINS, GASOLINE, DIESEL FUEL, USED MOTOR OIL, HYDRAULIC FLUID, ANTIFREEZE, CEMENT CURING COMPOUNDS AND OTHER SUCH TOXIC OR HAZARDOUS WASTES. WASH OUT OF CEMENT TRUCKS SHOULD OCCUR IN A DIKED, DESIGNATED AREA WHERE THE WASTE CAN BE COLLECTED AND DISPOSED OF PROPERLY WHEN THEY HARDEN. STORAGE TANKS SHOULD BE LOCATED IN DIKED AREAS AWAY FROM DRAINAGE CHANNELS. THE DIKED AREA SHOULD HOLD A VOLUME 110% OF THE LARGEST TANK.

CONTACT INFORMATION

FULCRUM ENTERPRISES
2953 CARIE HILL CIRCLE NW
MASSILLON, OHIO 44646
330-830-6607 PHONE
ATTN: DAVID DAUGHERTY

COOPERMITEE CONTACT INFORMATION

H & W CONTRACTORS, INC.
P.O. BOX 876
MASSILLON, OHIO 44648
330-833-0982
ATTN: MIKE WATKINS

PROJECT DESCRIPTION

PROJECT CONSISTS OF 5 STORAGE BUILDINGS (GRADING OPERATIONS AND UTILITY CONSTRUCTION). EROSION AND SEDIMENT CONTROL WILL BE HANDLED WITH SEDIMENT BASINS, SILT FENCE, STABILIZED CONSTRUCTION ENTRANCE, AND INLET PROTECTION.

SOIL TYPES

WhA - WEINBACH SILT LOAM
CoC2 - CHILLI GRAVELLY LOAM

POST CONSTRUCTION BMP

A PERMANENT (POST CONSTRUCTION) STORM WATER DETENTION BASIN IS BEING CONSTRUCTED FOR THIS PROJECT (SEE SHEET 4 OF 6). REFER TO DRAINAGE CALCULATIONS FOR RUNOFF COEFFICIENTS, ETC. GRASS SWALES/DITCHES (GRASS FILTER STRIPS) ARE BEING UTILIZED ALONG THE WEST SIDE OF THE PROJECT SITE TO COLLECT STORM WATER RUNOFF.

FULCRUM ENTERPRISES WILL BE RESPONSIBLE FOR LONG TERM MAINTENANCE. TWO OR THREE TIMES A YEAR A VISUAL INSPECTION OF THE STORM WATER DETENTION BASIN WILL BE REQUIRED TO DETERMINE THE STATUS OF THE BASIN. ANY IMPROVEMENTS/REPAIRS WILL BE COMPLETED BASED ON THE RESULTS OF THESE INSPECTIONS.

450 LF± TO A PROPOSED, PERMANENT DETENTION BASIN FOR THIS PROJECT AND NEWMAN CREEK. (SEE SHEET 4 OF 6)

LIMITS OF EARTH DISTURBING ACTIVITY (3.75 AC ±) EXCLUDING PROPOSED DETENTION BASIN CONSTRUCTION LOCATED 450 FT. ± TO THE EAST. REFER TO DRAINAGE AREA MAP INCLUDED WITH DRAINAGE COMPUTATIONS FOR DRAINAGE DIVIDES.

240 LF SILT FENCE

TOP SOIL STOCKPILE AREA

EXISTING TREE LINE (APPROXIMATE LOCATION)

EARL ROAD - 60' R/W

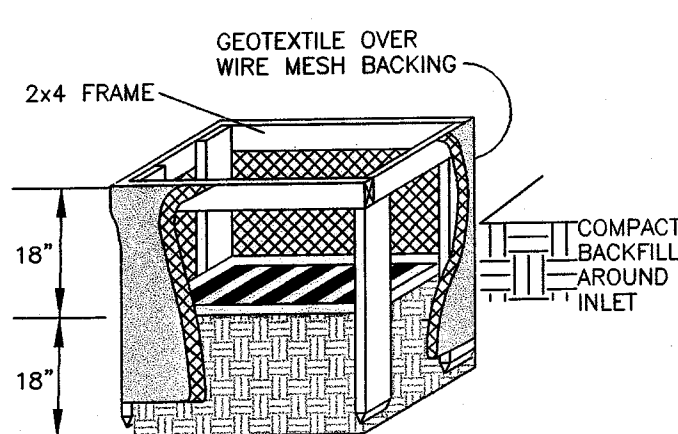
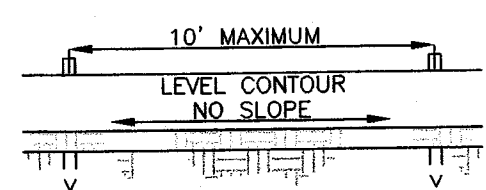
STABILIZED CONSTRUCTION ENTRANCE 50'L x 20'W

DIKED AREA
CONCRETE WASHOUT

TEMPORARY SEDIMENT BASIN #2
DA=2.0 ACRES
134 CY STORAGE REQUIRED
VOLUME PROVIDED = 164 CY ± (960-963)
12" STAND PIPE WITH 1" HOLES WRAPPED IN FILTER FABRIC
DEWATERING ORIFICE SHALL BE 2" Ø
TOP ELEVATION 12" STAND PIPE = 963.00
F.L. 12" (OUT) = 960.00
(REFER TO DETAIL - SHEET 6 OF 6)

NORFOLK SOUTHERN RAILWAY

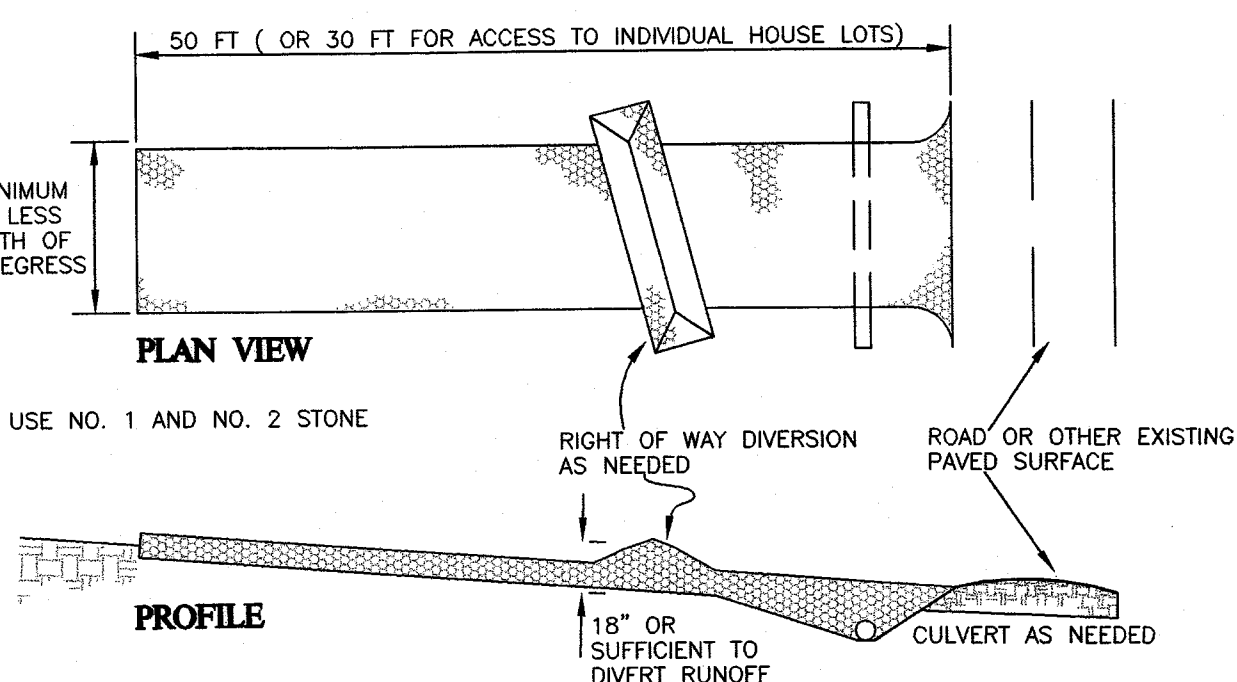
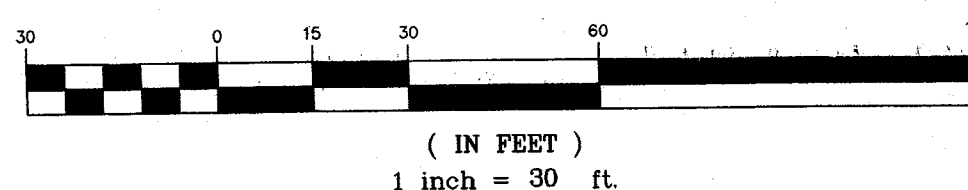
TEMPORARY SEDIMENT BASIN #1
DA=0.75 ACRES (A21)
50 CY STORAGE REQUIRED
VOLUME PROVIDED = 67 CY ± (959-961.50)
12" STAND PIPE WITH 1" HOLES WRAPPED IN FILTER FABRIC
DEWATERING ORIFICE SHALL BE 2" Ø
TOP ELEVATION 12" STAND PIPE = 961.50
F.L. 12" (OUT) = 959.00
(REFER TO DETAIL - SHEET 6 OF 6)

INLET PROTECTION DETAIL
NOT TO SCALESILT FENCE DETAIL
NOT TO SCALE

LEGEND

- INLET PROTECTION
- SILT FENCE
- CONSTRUCTION ENTRANCE

GRAPHIC SCALE

STABILIZED CONSTRUCTION ENTRANCE DETAIL
NOT TO SCALE

PROJECT SPECIFICATIONS

ALL WORK REQUIRED TO COMPLETE THIS IMPROVEMENT SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE DETAILED CONSTRUCTION DRAWINGS, THE 1997 EDITION OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, EXCEPT AS HEREIN AMENDED, AND THE CITY OF MASSILLON CONSTRUCTION SPECIFICATIONS/REQUIREMENTS/STANDARDS. THE CONSTRUCTION DRAWINGS WILL TAKE PRECEDENCE OVER THE OTHER REQUIREMENTS. IN THE CASE OF A CONFLICT BETWEEN CITY OF MASSILLON AND THE OHIO DEPARTMENT OF TRANSPORTATION SPECIFICATIONS/REQUIREMENTS, THE MORE RESTRICTIVE OF THE TWO SPECIFICATIONS WILL GOVERN, AS DETERMINED BY THE ENGINEER. STATE OF OHIO, DEPARTMENT OF TRANSPORTATION STANDARD CONSTRUCTION DRAWINGS SHALL APPLY TO THIS IMPROVEMENT.

PROJECT SAFETY

THE CONTRACTOR SHALL MAINTAIN A SAFE WORKING ENVIRONMENT AT THE PROJECT SITE AT ALL TIMES. THE CONTRACTOR SHALL PROPERLY SUPPORT AND/OR MAINTAIN ALL EXCAVATIONS PER APPLICABLE SAFETY REQUIREMENTS AND COMPLY WITH ALL O.S.H.A. REGULATIONS. THIS SHALL INCLUDE STRICT COMPLIANCE WITH ALL APPLICABLE REGULATIONS/REQUIREMENTS REGARDING TRENCH SAFETY, ADEQUATE BARRICADES, WARNING LIGHTS, SIGNS, FENCING, ETC. SHALL BE ERECTED AROUND THE CONSTRUCTION AREA DURING ALL NON-WORKING HOURS TO ALERT PERSONS OF THE POTENTIAL DANGER ASSOCIATED WITH THE AREA UNDER CONSTRUCTION AS WELL AS TO PREVENT ACCESS BY UNAUTHORIZED PERSONNEL TO THE CONSTRUCTION SITE/AREA. TRENCHES SHALL BE BACKFILLED AT THE END OF EACH WORK DAY OR PROPERLY SECURED AS APPROVED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE THE SAFETY OF THE GENERAL PUBLIC AS WELL AS ALL CONSTRUCTION PERSONNEL. PUBLIC STREETS SHALL BE KEPT CLEAN AND FREE OF DEBRIS (MUD, STONE, ETC.) AT ALL TIMES. THE CONTRACTOR SHALL ALERT ALL LOCAL EMERGENCY AGENCIES (FIRE, POLICE, AMBULANCE, ETC.) OF THE NATURE OF THE PROPOSED PROJECT PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY. ACCESS FOR EMERGENCY VEHICLES SHALL BE MAINTAINED AT ALL TIMES.

AT NO TIME SHALL ANY PERSONNEL ENTER EXISTING STRUCTURES/CHAMBERS WITHOUT PROPER SAFETY EQUIPMENT, INCLUDING BUT NOT LIMITED TO AIR PACKS, AIR MONITORS AND/OR AIR SENSORS, PROTECTIVE CLOTHING, BODY HARNESS WITH POSITIVE MEANS OF REMOVING SPECIFIC STRUCTURES/CHAMBERS OR EQUIPMENT. ALL WORK SHALL BE PERFORMED IN COMPLIANCE WITH APPLICABLE O.S.H.A. REQUIREMENTS INCLUDING THOSE SPECIFIED FOR ENTERING CONFINED SPACES.

UNDERGROUND UTILITIES

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THE PLANS WERE OBTAINED BY FIELD OBSERVATIONS, FROM EXISTING RECORDS, AND/OR FROM THE OWNERS OF THE RESPECTIVE UTILITIES. THE INFORMATION AS SHOWN IS BELIEVED TO BE CORRECT, HOWEVER, THE COMPLETENESS AND ACCURACY OF THIS INFORMATION CANNOT BE GUARANTEED. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT ALL THE VARIOUS UTILITY COMPANIES (PUBLIC AND PRIVATE) TO VERIFY THE EXISTENCE, LIMITS AND/OR LOCATION OF ANY UTILITIES WHICH MAY BE ALONG THE ROUTE OR WITHIN THE VICINITY OF THIS IMPROVEMENT.

UTILITY NOTIFICATION

AT LEAST TWO WORKING DAYS PRIOR TO COMMENCING OPERATIONS ON THIS PROJECT THE CONTRACTOR(S) SHALL NOTIFY THE ENGINEER, THE REGISTERED UTILITY PROTECTION AGENCY/SERVICE, AND THE OWNERS OF ANY OTHER UTILITIES (PUBLIC AND/OR PRIVATE) THAT MAY HAVE UTILITY LINES OR FACILITIES WITHIN THE VICINITY OF THIS PROJECT BUT WHO ARE NOT MEMBERS OF THE REGISTERED UTILITY PROTECTION SERVICE OF HIS/HER INTENTION TO BEGIN CONSTRUCTION ACTIVITY ON THIS PROJECT. THE OWNERS OF ANY UNDERGROUND UTILITY FACILITY SHALL, WITHIN 48 HOURS AFTER NOTICE IS RECEIVED, EXCLUDING SATURDAYS, SUNDAYS, AND OTHER LEGAL HOLIDAYS; STAKE, MARK OR OTHERWISE DESIGNATE THE EXISTENCE AND/OR LOCATION OF THE UNDERGROUND UTILITY FACILITIES IN THE CONSTRUCTION AREA IN SUCH A MANNER AS TO INDICATE THEIR COURSE TOGETHER WITH THE APPROXIMATE DEPTH AT WHICH THEY WERE INSTALLED. THE MARKING AND/OR LOCATING SHALL BE COORDINATED TO STAY APPROXIMATELY TWO WORKING DAYS AHEAD OF THE PLANNED CONSTRUCTION. OHIO UTILITIES PROTECTION SERVICE: 1-800-362-2764 (CONTACT NON-MEMBERS DIRECTLY).

VERIFICATION OF UNDERGROUND UTILITIES

THE CONTRACTOR SHALL BE RESPONSIBLE TO VERIFY THE EXISTENCE AS WELL AS THE ACTUAL LOCATION, ALIGNMENT, AND ELEVATIONS OF ALL EXISTING UTILITIES/FACILITIES WITHIN AND/OR ADJACENT TO THE GENERAL LIMITS OF THESE IMPROVEMENTS INCLUDING WATERLINES, SANITARY AND STORM SEWERS, GAS LINES, COMMUNICATION LINES/BANKS, ELECTRIC LINES, ETC. PRIOR TO ORDERING MATERIALS OR BEGINNING WORK. THE CONTRACTOR SHALL NOT PROCEED WITH ANY WORK UNTIL THE LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES WHICH COULD EFFECT COMPLETION OF THIS IMPROVEMENT HAVE BEEN FIELD CHECKED AND VERIFIED. THIS WILL LIKELY REQUIRE EXPLORATORY EXCAVATIONS TO BE PERFORMED BY THE CONTRACTOR FOR WHICH HE WILL NOT BE DIRECTLY REIMBURSED. THE CONTRACTOR SHALL NOT ASSUME THAT EXISTING UTILITIES/CONDUITS WERE INSTALLED AT TYPICAL/STANDARD DEPTHS OR AT UNIFORM SLOPES/GRADES/DEPTHS BETWEEN ACCESS POINTS (CATCH BASINS, MANHOLES, JUNCTION CHAMBERS, ETC.). WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO INSTALL THE PROPOSED CONDUIT. ANY CONFLICTS AND/OR DISCREPANCIES FROM THE PLAN INFORMATION SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER SO THAT THE APPROPRIATE ADJUSTMENTS IN ALIGNMENT AND/OR GRADE MAY BE MADE PRIOR TO THE START OF CONSTRUCTION. FAILURE BY THE CONTRACTOR TO VERIFY AND/OR DETERMINE EXISTING INFORMATION AS INDICATED/REQUIRED WILL RESULT IN THE CONTRACTOR BEING RESPONSIBLE FOR ANY CHANGES NECESSARY TO COMPLETE THE WORK SPECIFIED WITHOUT ADDITIONAL COMPENSATION.

PROTECTION OF UTILITIES

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS/MEASURES NECESSARY TO PROTECT AND SUPPORT ANY EXISTING UTILITIES/FACILITIES LOCATED ALONG THE ROUTE OF THE PROPOSED IMPROVEMENTS, WITHIN THE GENERAL PROJECT LIMITS, AND/OR ENCOUNTERED DURING THE COMPLETION OF THE PROPOSED IMPROVEMENTS AS DIRECTED/APPROVED BY THE OWNERS OF THE RESPECTIVE UTILITIES AND THE ENGINEER. UTILITIES MUST BE KEPT IN SERVICE AT ALL TIMES.

THE CONTRACTOR SHALL BE RESPONSIBLE TO CLOSELY COORDINATE THEIR WORK WITH ALL UTILITY COMPANIES TO MINIMIZE/AVOID POSSIBLE DELAYS IN THE COMPLETION OF THE REQUIRED IMPROVEMENTS. DELAYS WILL NOT BE THE RESPONSIBILITY OF THE CITY NOR THE ENGINEER.

DISPOSAL OF EXCESS OR UNSUITABLE MATERIALS

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO DISPOSE OF ANY EXCESS, UNSUITABLE AND/OR UNSUABLE MATERIALS RESULTING FROM THE COMPLETION OF THE PROPOSED IMPROVEMENTS THAT ARE NOT OTHERWISE NEEDED/REQUIRED WITHIN THE LIMITS OF THE SCHOOL CAMPUS AREA. THE CONTRACTOR SHALL BE RESPONSIBLE TO OBTAIN WRITTEN PERMISSION FROM ANY PROPERTY OWNER PRIOR TO PLACEMENT OF ANY MATERIALS FROM THIS PROJECT ONTO OTHER PROPERTIES AND SHALL FURNISH THE OWNER/ENGINEER WITH COPIES OF THESE WRITTEN AGREEMENTS. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY AND ALL CLAIMS RESULTING FROM THE PLACEMENT/DISPOSAL OF EXCESS, UNSUITABLE, AND/OR UNSUABLE MATERIALS ONTO OTHER PROPERTIES, INCLUDING BUT NOT LIMITED TO ENVIRONMENTAL ISSUES. NO MATERIAL SHALL BE REMOVED FROM THE OVERALL PROJECT SITE WITHOUT PERMISSION OF THE PROJECT CONSTRUCTION MANAGER.

TEMPORARY SOIL EROSION AND SEDIMENT CONTROL

THE CONTRACTOR SHALL PREVENT AND/OR REDUCE AND CONTROL SOIL EROSION RESULTING FROM THE PROPOSED IMPROVEMENTS. THE USE OF SILT FENCING, JUTE MATING, TEMPORARY SEEDING, SOD, SILT CHECKS, INLET PROTECTION AROUND ALL CATCH BASINS, STABILIZED CONSTRUCTION ENTRANCES(S), ETC. WILL BE REQUIRED. SEDIMENT CONTROL STRUCTURES/DEVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUAL RAINWATER AND LAND DEVELOPMENT - OHIO'S STANDARDS FOR STORMWATER MANAGEMENT LAND DEVELOPMENT AND URBAN STREAM PROTECTION, SECOND EDITION DATED 1996. SEDIMENT CONTROL DEVICES MUST BE INSTALLED PRIOR TO BEGINNING ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTINUED INSPECTION AND MAINTENANCE OF ALL SEDIMENT CONTROL DEVICES. THE CONTRACTOR SHALL FOLLOW THE REQUIREMENTS SET FORTH ON THE APPROVED STORM WATER POLLUTION PREVENTION PLAN IF APPLICABLE, OR ON THE DETAILED CONSTRUCTION PLANS.

MAINTAINING TRAFFIC

THE CONTRACTOR SHALL SAFELY AND PROPERLY MAINTAIN TRAFFIC ADJACENT TO, THROUGH, AND/OR ALONG THE PROJECT ROUTE/SITE AS DESCRIBED BELOW AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE OHIO DEPARTMENT OF TRANSPORTATION MANUAL OF CONSTRUCTION AND MATERIALS SPECIFICATIONS, ITEM 614 MAINTAINING TRAFFIC. THE CONTRACTOR SHALL FURNISH, MAINTAIN, AND REMOVE ALL SIGNS, FLAGMEN, WATCHMEN, BARRICADES, SIGN SUPPORTS, CONES, BARRELS, AND INCIDENTALS IN CONFORMANCE WITH THE MOST RECENT REVISIONS OF THE CURRENT EDITION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS. INTERFERENCE WITH VEHICULAR TRAFFIC SHALL BE KEPT TO A MINIMUM AT ALL TIMES. ALL OPEN TRENCHES AND EXCAVATIONS SHALL BE PROTECTED WITH DRUMS, BARRICADES, BARRIERS, ETC. ACCESS SHALL BE MAINTAINED AT ALL TIMES FOR EMERGENCY AND FIRE DEPARTMENT VEHICLES. ANY TEMPORARY ROADWAY CLOSING MUST BE APPROVED BY THE ENGINEER AND THE PUBLIC AGENCY HAVING JURISDICTION OF THE ROADWAY IN WRITING WITH PRIOR NOTIFICATION GIVEN TO FIRE, POLICE AND OTHER EMERGENCY AGENCIES. EMERGENCY AND LOCAL TRAFFIC MUST BE MAINTAINED AT ALL TIMES IN A SAFE MANNER.

MAINTENANCE OF UTILITY SERVICES

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN UTILITY SERVICES AT ALL TIMES. WATER SERVICE MAY BE INTERRUPTED FOR LIMITED PERIODS OF TIME (4 HOURS MAXIMUM) DURING CONNECTION BETWEEN EXISTING WATER LINES AND RELOCATED/NEW WATER MAINS WHICH CANNOT BE COMPLETED OTHERWISE. SHUTDOWNS/DISRUPTION OF WATER SERVICE TO BUSINESSES, SCHOOLS, CHURCHES, OR OTHER COMMERCIAL USERS SHALL BE SCHEDULED TO MINIMIZE OR AVOID DISRUPTION DURING OPERATING HOURS OF BUSINESS. NO SHUT DOWN SHALL OCCUR WITHOUT PRIOR WRITTEN PERMISSION OF THE WATERLINE OWNER. PROPERTY OWNERS/BUSINESSES AFFECTED BY THE APPROVED INTERRUPTION OF SERVICE SHALL BE NOTIFIED 48 HOURS IN ADVANCE BY THE CONTRACTOR. STORM AND SANITARY SERVICES SHALL BE MAINTAINED/PROVIDED WITHOUT INTERRUPTION.

RESTORATION OF DISTURBED AREAS

EXISTING DRIVES, BERMS, LAWNS, TELEPHONE/POWER POLES, PAVEMENTS, RETAINING WALLS, CURBS, SIDEWALKS, SIGNS, MAILBOXES, FENCING, PAPER BOXES, LANDSCAPING ITEMS/AREAS OR OTHER APPEARANCES DISTURBED/DAMAGED DURING CONSTRUCTION BUT NOT SPECIFICALLY DESIGNATED FOR REMOVAL AND/OR REPLACEMENT SHALL BE RESTORED TO A CONDITION EQUAL TO THAT WHICH EXISTED PRIOR TO CONSTRUCTION AND TO THE COMPLETE SATISFACTION OF THE ENGINEER/OWNER. COST FOR THE RESTORATION OF THESE ITEMS WILL BE THE RESPONSIBILITY OF THE CONTRACTOR UNLESS SPECIFICALLY NOTED OTHERWISE IN THE PLANS/SPECIFICATIONS.

WORK IN THE RIGHT-OF-WAY

A PERMIT MAY BE REQUIRED FROM THE CITY PRIOR TO ANY WORK BEING PERFORMED INSIDE THE PUBLIC RIGHT-OF-WAY. THE CONTRACTOR MUST NOTIFY THE CITY OFFICE 48 HOURS PRIOR TO ANY CONSTRUCTION INSIDE THE PUBLIC RIGHT-OF-WAY OR WITHIN ANY UTILITY EASEMENTS IN ORDER TO COORDINATE INSPECTION.

EASEMENTS AND RIGHTS-OF-WAY

THE CONTRACTOR SHALL STAY WITHIN THE PROPERTIES, EASEMENTS, AND RIGHTS-OF-WAY PROVIDED AT ALL TIMES. NO MATERIAL SHALL BE STORED NOR ANY WORK PERFORMED ON PRIVATE PROPERTY. DISTURBANCE OF EXISTING FEATURES AND/OR IMPROVEMENTS SHALL BE KEPT TO AN ABSOLUTE MINIMUM AND AS APPROVED BY THE ENGINEER/OWNER.

SUBSURFACE INVESTIGATIONS

SUBSURFACE INVESTIGATIONS HAVE NOT BEEN PERFORMED FOR THIS PROJECT. THE CONTRACTOR MAY PERFORM SUCH SUBSURFACE INVESTIGATIONS AS HE/SHE MAY BELIEVE NECESSARY AT HIS OWN RISK, EXPENSE, AND RESPONSIBILITY. THE CONTRACTOR MUST CONTACT THE ENGINEER AND ALL UTILITY COMPANIES, PUBLIC AND PRIVATE, WHICH MAY HAVE FACILITIES WITHIN/ALONG THE PROJECT LIMITS, 72 HOURS PRIOR TO PERFORMING ANY SUBSURFACE INVESTIGATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER AND COMPLETE RESTORATION OF AREAS DISTURBED BY TEST HOLES OR BORINGS, TO THE SATISFACTION OF THE ENGINEER AND FOR PROPER TRAFFIC CONTROL DURING PERFORMANCE OF THE INVESTIGATIONS.

SUITABILITY OF SITE

THE DESIGN ENGINEER/OWNER WILL NOT BE RESPONSIBLE FOR THE TYPE AND/OR SUITABILITY OF THE MATERIAL UNDERLYING THE PROJECT SITE. THE CONTRACTOR MUST APPRAISE HIMSELF OF ANY EXISTING SITE CONDITIONS WHICH MAY EFFECT HIS/HER BID OR PERFORMANCE OF THE REQUIRED WORK. THE CONTRACTOR SHALL PERFORM WHATEVER INVESTIGATIONS AND/OR TESTING WHICH MAY BE NECESSARY TO ADEQUATELY DETERMINE/ESTIMATE TO THE SATISFACTION OF THE CONTRACTOR HIMSELF ANY AND ALL SITE CONDITIONS WHICH COULD EFFECT THE PERFORMANCE OF THE PROPOSED IMPROVEMENTS. THIS COULD INCLUDE BUT NOT BE LIMITED TO UNSUITABLE AND/OR UNSTABLE SOIL/SUBSURFACE CONDITIONS, ROCK, WATER (PERCHED OR FREE), SPRINGS, ETC. IF THE CONTRACTOR IS UNSURE OR UNABLE TO DETERMINE THE NATURE OF THE SUBSURFACE CONDITIONS, HE SHALL ASSUME THE WORST CASE. NO ADDITIONAL COMPENSATION WILL BE GIVEN FOR UNANTICIPATED AND/OR UNFORESEEN CONDITIONS.

DUST CONTROL

THE CONTRACTOR SHALL BE RESPONSIBLE TO PROPERLY CONTROL DUST FROM THE PROJECT SITE AS NECESSARY/REQUIRED TO MAINTAIN SAFE VISIBILITY WITHIN AND/OR ADJACENT TO THE SITE AND TO AVOID IMPACT ON ADJACENT PROPERTIES. METHODS FOR DUST CONTROL MUST BE APPROVED BY THE ENGINEER.

CLEAN UP AT END OF PROJECT

PRIOR TO FINAL ACCEPTANCE OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE TO ENSURE THAT ALL SWALES, DITCHES, STORM SEWERS, CATCH BASINS, STORM MANHOLES, SANITARY SEWERS, SANITARY MANHOLES, GUTTERS, AND OTHER IMPROVEMENTS ARE CLEAN AND FREE OF ANY AND ALL DEBRIS.

STORM SEWERS

ALL PROPOSED STORM SEWERS SHALL MEET THE REQUIREMENTS OF O.D.O.T. ITEM 603 FOR TYPE B OR TYPE C CONDUITS. STORM SEWERS LOCATED WITHIN THE LIMITS OF OR WITHIN 1 1/2 TO 1 SLOPE OF EXISTING AND/OR PROPOSED ROADWAYS, PARKING AREAS, BUILDINGS, SIDEWALKS, AND/OR DRIVES SHALL BE INSTALLED AS TYPE B CONDUITS. ALL OTHER STORM SEWERS MAY BE INSTALLED AS TYPE C CONDUITS. STORM SEWER PIPE MATERIALS (EXCEPT AS SPECIFICALLY NOTED OTHERWISE) SHALL MEET THE REQUIREMENTS OF O.D.O.T. 706.02 (REINFORCED CONCRETE, CIRCULAR PIPE), OR 707.33 (SMOOTH LINED CORRUGATED POLYETHYLENE). PIPE MEETING 707.33 SHALL BE H-0, SUR-LOK OR APPROVED EQUAL.

ALL DOWNSPOUT LINES AND/OR EXTENSIONS OF INTERIOR ROOF DRAINS/DOWNSPOUT LINES TO THE HEADER LINE OR DRAINAGE STRUCTURES (CATCH BASIN OR MANHOLE) SHALL BE POLYVINYL CHLORIDE PIPE, (PVC) SDR-35 MEETING THE REQUIREMENTS OF O.D.O.T. 707.45. STANDARD BENDS AND FITTINGS SHALL BE USED FOR CHANGES IN DIRECTION AND/OR ELEVATION OF THE DOWNSPOUT/INTERIOR ROOF DRAIN LINES AND FOR THE CONNECTION OF DOWNSPOUT LINES TO THE HEADER LINE.

BEDDING MATERIAL SHALL MEET THE REQUIREMENTS/SPECIFICATIONS OF THE PIPE MANUFACTURER AND SHALL BE AS SPECIFIED.

CATCH BASINS & STORM MANHOLES

ALL STORM SEWER CATCH BASINS AND MANHOLES SHALL MEET THE REQUIREMENTS OF O.D.O.T. ITEM 804. PIPE OPENINGS SHALL BE PRECAST INTO ALL CATCH BASINS AND MANHOLES. KNOCKOUT PANELS/SIDES ARE UNACCEPTABLE. CATCH BASIN SHALL BE CB 2-2B. STORM MANHOLES SHALL BE TYPE MH-3.

DAMAGE TO EXISTING UTILITIES/SERVICES

THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ANY DAMAGE AND/OR DISRUPTION TO EXISTING UTILITY LINES/MAINS AND SERVICES. ALL COSTS ASSOCIATED WITH THE REPAIR, REPLACEMENT, AND/OR INTERRUPTION OF SERVICES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. NO ADDITIONAL COMPENSATION WILL BE PROVIDED BY THE CITY OR THE ENGINEER. ALL LIABILITY SHALL BE BORNE BY THE CONTRACTOR.

CONSTRUCTION LAYOUT

THE CONTRACTOR SHALL BE RESPONSIBLE FOR FURNISHING, PLACING, AND MAINTAINING CONSTRUCTION LAYOUT STAKES NECESSARY FOR THE PROPER COMPLETION OF THE WORK ASSOCIATED WITH THIS PROJECT. THE OWNER AND/OR ENGINEER WILL NOT BE RESPONSIBLE FOR HORIZONTAL OR VERTICAL CONTROL. BENCH MARKS WILL BE PROVIDED WITHIN AND/OR ADJACENT TO THE PROJECT SITE. THE CONTRACTOR SHALL BE RESPONSIBLE TO COMPLETE A BENCH CIRCUIT WITHIN AT LEAST TWO (2) SEPARATE BENCH MARKS WHENEVER ELEVATIONS ARE BEING TRANSFERRED AND/OR SET. ANY DISCREPANCIES OUTSIDE NORMAL SURVEYING STANDARDS/LIMITS WITH THE BENCH MARK ELEVATIONS SHOWN SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE ENGINEER.

EXAMINATION OF SITE

THE CONTRACTOR SHALL BE RESPONSIBLE TO CLOSELY EXAMINE THE PROJECT SITE AND ALL ADJACENT AREA(S) AND APPRAISE HIMSELF OF ANY ITEMS AND/OR CONDITIONS THAT COULD AFFECT HIS/HER BID AND/OR ABILITY TO COMPLETE THE PROPOSED IMPROVEMENTS. THIS SITE INSPECTION/EVALUATION SHALL BE COMPLETED PRIOR TO SUBMITTING A PROPOSAL OR BID.

PRECONSTRUCTION MEETING

A PRECONSTRUCTION MEETING WITH THE OWNER, CONTRACTOR, AND THE STARK COUNTY SOIL & WATER CONSERVATION DISTRICT IS REQUIRED FOR THIS PROJECT PRIOR TO THE START OF ANY CONSTRUCTION ACTIVITY. THE CONTRACTOR SHALL CONTACT THE STARK COUNTY SOIL & WATER CONSERVATION DISTRICT SEVENTY-TWO (72) HOURS PRIOR TO THE ANTICIPATED MEETING DATE.

STABILIZATION

ALL AREAS DISTURBED DURING CONSTRUCTION (INCLUDING EXPOSED SURFACES OF THE EMBANKMENT, EXCAVATION, SPOIL AND BORROW AREAS, BERMS, ETC.), SHALL BE STABILIZED BY SEEDING, LIMING, FERTILIZING, MULCHING, ETC. IN ACCORDANCE WITH O.D.O.T. ITEM 659. SEEDING AND MULCHING AND AS SPECIFIED ON THE STORM WATER POLLUTION PREVENTION PLAN. STABILIZATION SHALL OCCUR WITHIN SEVEN (7) DAYS FOLLOWING THE COMPLETION OF THE IMPROVEMENTS.

EARTHWORK

ALL SITE PREPARATION AND EARTHWORK ACTIVITIES INCLUDING THOSE REQUIRED TO COMPLETE THE PROPER CONSTRUCTION OF THE DETENTION BASIN(S) SHALL BE PERFORMED IN STRICT ACCORDANCE WITH THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS, INCLUDING DIVISION 200 EARTHWORK (WHICH INCLUDES ITEMS 201, 202, 203, 205, 206, AND 207) AND THE RECOMMENDATIONS AND REQUIREMENTS OF THE PROJECT GEOTECHNICAL ENGINEER AS OUTLINED IN THE SUBSURFACE INVESTIGATION REPORT. THIS SHALL INCLUDE ALL REMOVALS, CLEARING AND GRUBBING, TOPSOIL REMOVAL/STRIP, PROOF ROLLING, SUBGRADE PREPARATION, SUITABILITY OF MATERIALS, PERFORMANCE OF ALL EXCAVATIONS, PLACEMENT OF EMBANKMENT AND BACKFILL, COMPACTION, SLOPE STABILITY, CORE TRENCH CONSTRUCTION, AND ALL OTHER RELATED AND/OR NECESSARY OPERATIONS/PROCEDURES. ALL EXCAVATION SHALL BE CONSIDERED AS UNCLASSIFIED EXCAVATION. ALL EARTHWORK ACTIVITY SHALL BE PERFORMED IN THE PRESENCE OF A QUALIFIED GEOTECHNICAL REPRESENTATIVE FURNISHED BY THE OWNER WHO WILL BE RESPONSIBLE TO DETERMINE COMPLIANCE WITH O.D.O.T. SPECIFICATIONS AND/OR THE GEOTECHNICAL RECOMMENDATIONS/REQUIREMENTS. IN CASE OF A CONFLICT BETWEEN THE O.D.O.T. SPECIFICATIONS AND THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS/REQUIREMENTS, THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS/REQUIREMENTS SHALL GOVERN.

COMPACTION REQUIREMENTS MAY VARY THROUGHOUT THE PROJECT SITE DEPENDENT UPON THE INTENDED USE/AREA (BUILDING AREA, ROADWAY, LAWN, ETC.).

ROCK CHANNEL PROTECTION

ROCK CHANNEL PROTECTION SHALL MEET THE REQUIREMENTS OF THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS ITEM 601 FILTER FABRIC CLOTH SHALL BE PLACED UNDER ALL ROCK CHANNEL PROTECTION IN ACCORDANCE WITH O.D.O.T. ITEM 712.09 GEOTEXTILE FABRICS, TYPE B (FILTER BLANKETS FOR ROCK CHANNEL PROTECTION).

DETENTION BASIN SPECIFICATIONS/REQUIREMENTS

SITE PREPARATION

SITE PREPARATION AREAS DESIGNATED FOR BORROW AREAS, EMBANKMENT, AND STRUCTURAL WORKS SHALL BE CLEARED, GRUBBED AND STRIPPED OF TOPSOIL. ALL TREES, VEGETATION, ROOTS AND OTHER OBJECTIONABLE MATERIAL SHALL BE REMOVED. CHANNEL BANKS AND SHARP BREAKS SHALL BE SLOPED TO NO STEEPER THAN 2:1.

AREAS COVERED BY THE RESERVOIR WILL BE CLEARED OF ALL TREES, BRUSH, LOGS, FENCES, RUBBISH AND OTHER OBJECTIONABLE MATERIAL UNLESS OTHERWISE DESIGNATED ON THE PLANS. TREES, BRUSH, AND STUMPS SHALL BE CUT APPROXIMATELY LEVEL WITH THE GROUND SURFACE OR REMOVED AS DIRECTED BY THE ENGINEER.

ALL CLEARED AND GRUBBED MATERIAL SHALL BE DISPOSED OF OUTSIDE AND BELOW THE LIMITS OF THE DAM AND RESERVOIR AS DIRECTED BY THE OWNER OR HIS REPRESENTATIVE. WHEN SPECIFIED A SUFFICIENT QUANTITY OF TOPSOIL WILL BE STOCKPILED IN A SUITABLE LOCATION FOR USE ON THE EMBANKMENT AND OTHER DESIGNATED AREAS.

EARTH FILL

MATERIAL - THE FILL MATERIALS SHALL BE TAKEN FROM APPROVED DESIGNATED BORROW AREAS. IT SHALL BE FREE OF ROOTS, STUMPS, WOOD, RUBBISH, STONES GREATER THAN 6", FROZEN, OR OTHER OBJECTIONABLE MATERIALS. FILL MATERIAL FOR THE CENTER OF THE EMBANKMENT AND SLOT CUT TRENCH SHALL CONFORM TO THE UNIFIED SOIL CLASSIFICATION GC, SC, CH, OR CL. CONSIDERATION MAY BE GIVEN TO THE USE OF OTHER MATERIALS IN THE EMBANKMENT IF DESIGN AND CONSTRUCTION ARE SUPERVISED BY A GEOTECHNICAL ENGINEER.

PLACEMENT - AREAS ON WHICH FILL IS TO BE PLACED SHALL BE SCARIFIED PRIOR TO PLACEMENT OF FILL. FILL MATERIALS SHALL BE PLACED IN A MAXIMUM 8 INCH THICK (BEFORE COMPACTION) LAYERS WHICH ARE TO BE CONTINUOUS OVER THE ENTIRE LENGTH OF THE FILL. THE MOST PERMEABLE BORROW MATERIAL SHALL BE PLACED IN THE DOWNSTREAM PORTIONS OF THE EMBANKMENT. THE EMERGENCY LAWN MAY MUST BE INSTALLED CONCURRENTLY WITH FILL PLACEMENT AND NOT EXCAVATED INTO THE EMBANKMENT.

COMPACTION - THE MOVEMENT OF THE HAULING AND SPREADING EQUIPMENT OVER THE FILL SHALL BE CONTROLLED SO THAT THE ENTIRE SURFACE OF EACH LIFT SHALL BE TRAVERSED BY NOT LESS THAN ONE TREAD TRACK OF THE EQUIPMENT OR COMPACTION SHALL BE ACHIEVED BY A MINIMUM OF FOUR (4) PASSES OF A SHEEPSFOOT, RUBBER TIERED OR VIBRATORY ROLLER. FILL MATERIAL SHALL CONTAIN SUFFICIENT MOISTURE SUCH THAT THE REQUIRED DEGREE OF COMPACTION WILL BE OBTAINED WITH THE EQUIPMENT USED.

WHERE A MINIMUM REQUIRED DENSITY IS SPECIFIED, IT SHALL NOT BE LESS THAN 98% OF MAXIMUM DRY DENSITY WITH A MOISTURE CONTENT WITHIN +/- 2% OF THE OPTIMUM. EACH LAYER OF FILL SHALL BE COMPACTED AS NECESSARY TO OBTAIN THAT DENSITY, AND IS TO BE CERTIFIED BY THE GEOTECHNICAL ENGINEER AT THE TIME OF CONSTRUCTION. ALL COMPACTION IS TO BE DETERMINED BY AASHTO METHOD T- 99.

IF MATERIAL MEETING THE REQUIREMENTS FOR ODOT TYPE 2 GRANULAR MATERIAL (ODOT 703.11) IS USED FOR BACKFILL OF TYPE B CONDUITS (ABOVE THE REQUIRED BEDDING MATERIAL) THEN THE CONTRACTOR MUST PROVIDE AND INSTALL AN APPROVED GEOTECHNICAL FABRIC BETWEEN THE BEDDING AND THE BACKFILL TO PREVENT MIGRATION OF THE GRANULAR BACKFILL INTO THE BEDDING MATERIAL.

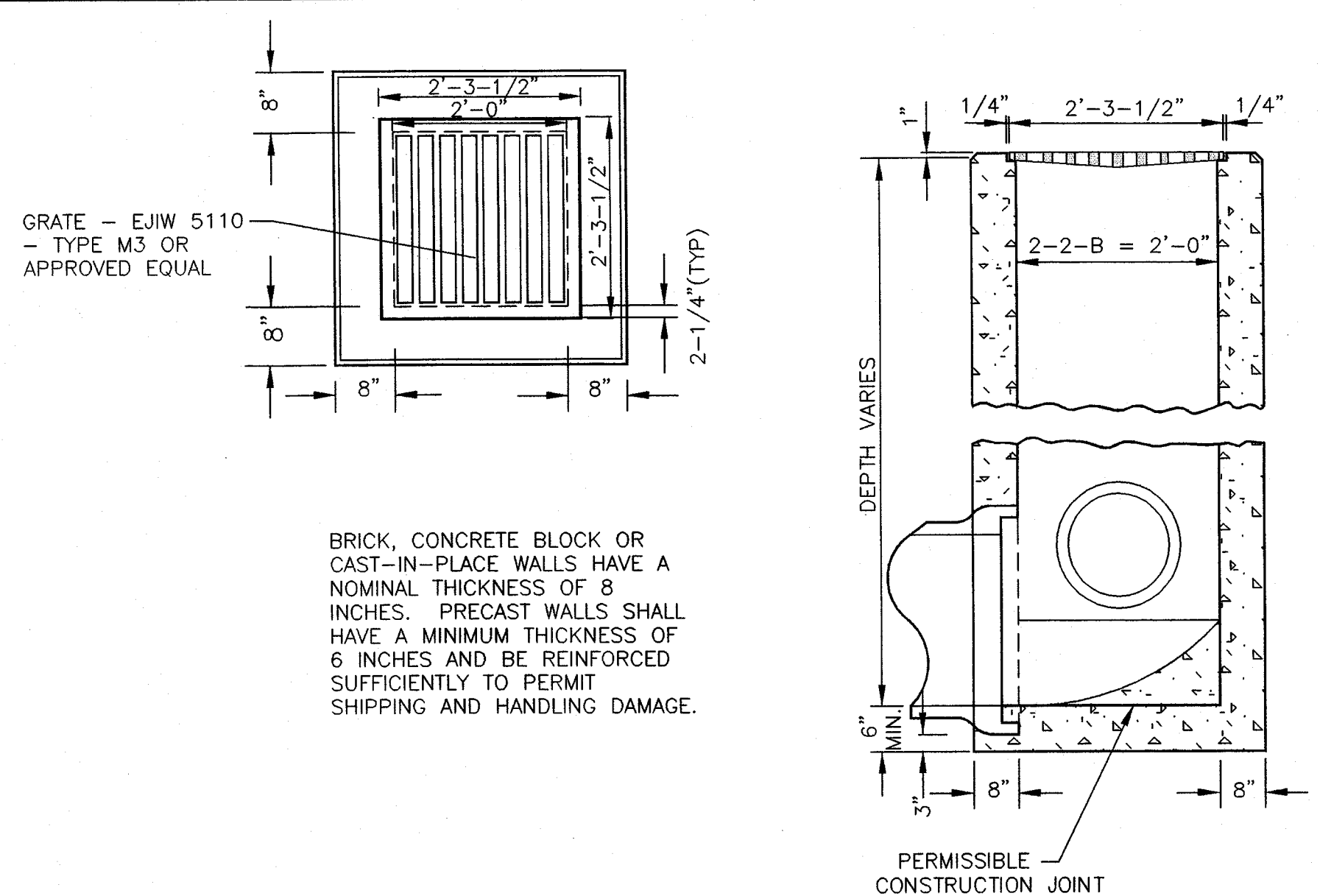
BEDDING: COMPACTED ANGULAR, CRUSHED STONE OR GRAVEL (#57 LESTONITE OR APPROVED EQUAL, NO SLAG) FOR POLYETHYLENE/HDPE AND PVC STORM SEWERS AND FOR PVC SANITARY SEWERS. CLASS I BEDDING AS PER ASTM D2321-72.

COMPACTED GRANULAR MATERIAL (NO SLAG) FOR R.C.P. STORM SEWERS. BEDDING MAY BE TERMINATED AT THE SPRING LINE OF R.C.P. STORM SEWERS.

APPROVED COMPACTED GRANULAR MATERIAL PER ANSI/AWWA C150/A21.50 FOR D.I.P. WATERLINE, LAYING CONDITION TYPE 5.

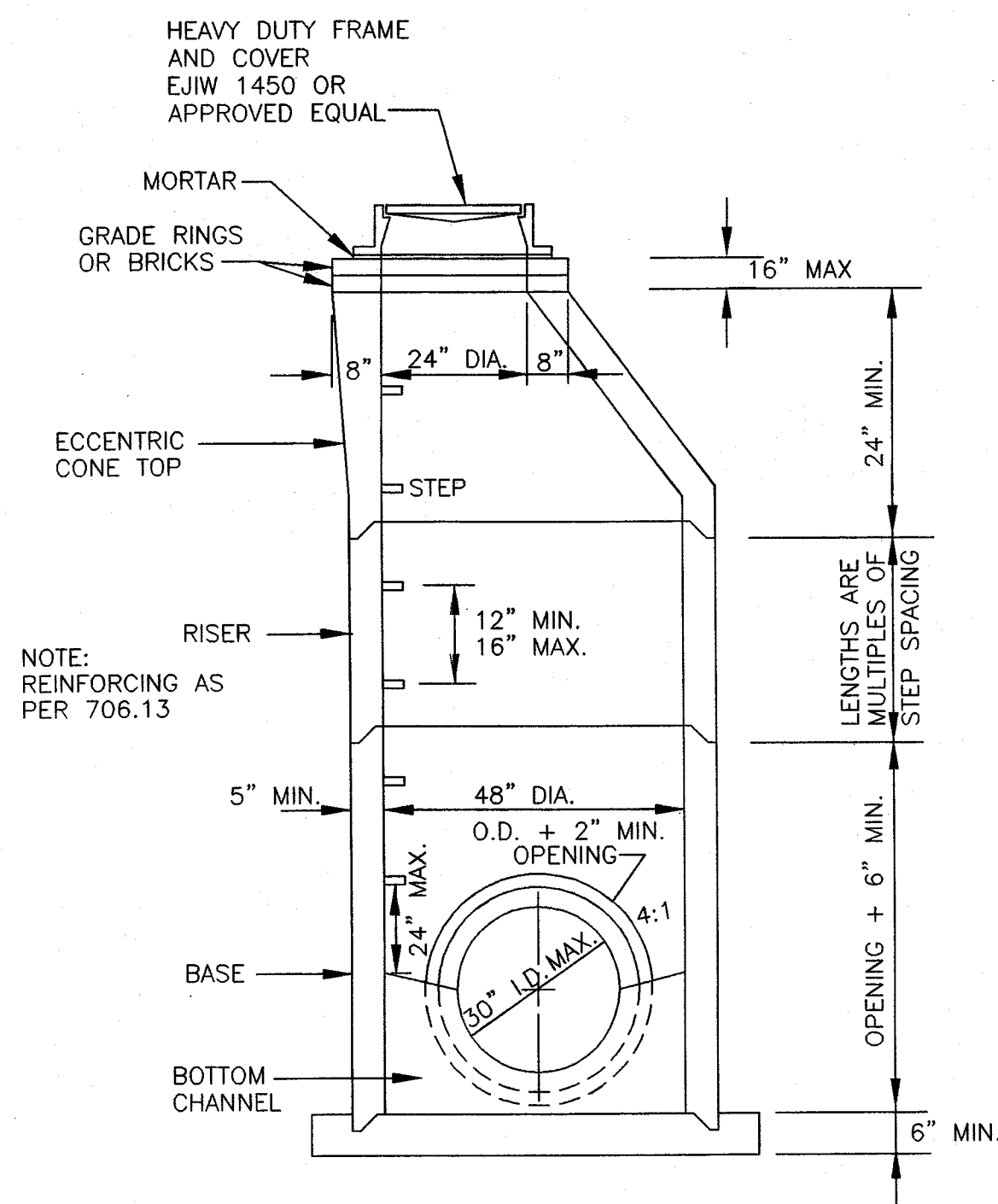
PIPE BEDDING DETAIL

NOT TO SCALE



STANDARD NO. 2-2B CATCH BASIN

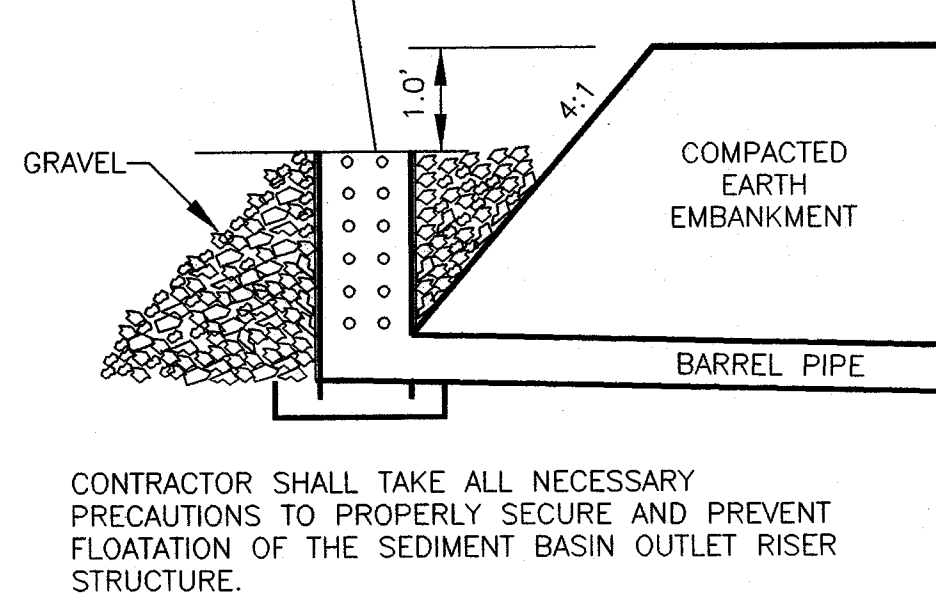
NOT TO SCALE



REINFORCED PRECAST STORM MANHOLE

NOT TO SCALE

12" POLYETHYLENE SMOOTH LINED (WITH PERFORATED CAP) STAND PIPE WITH 1 INCH Ø HOLES WRAPPED IN FILTER FABRIC. DEWATERING ORIFICE SHALL BE 2" IN DIAMETER (WITH TRASH GUARD).



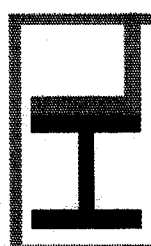
SEDIMENT BASIN CROSS SECTION DETAIL

NOT TO SCALE

SHEET 6 OF 6

NOTES AND DETAILS

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