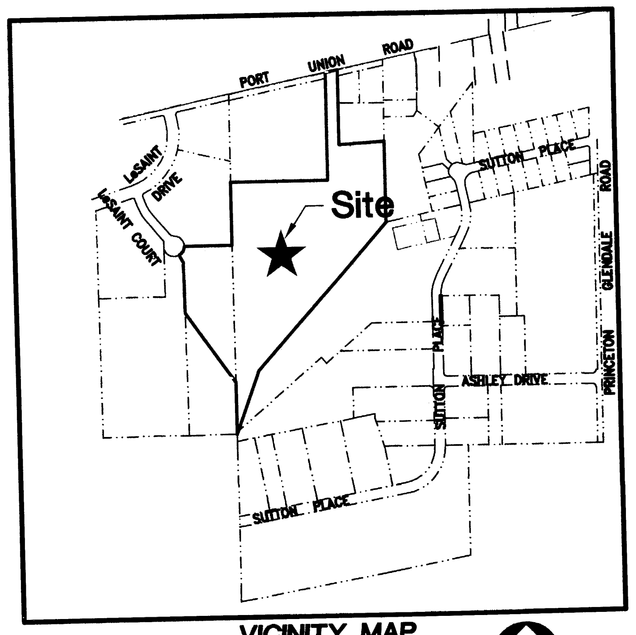
INTERSTATE COMMERCE CENTER I

SECTION 9, TOWN 2, RANGE 2
WEST CHESTER TOWNSHIP, BUTLER COUNTY, OHIO

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VICINITY MAP
NO SCALE

ZONING=M-2
FLOOD ZONE=A

SYMBOL LEGEND

EXISTING	PROPOSED	DESCRIPTION
		BENCHMARK
—()— —()—	—o— —o—	FENCE
		FLAG POLE
		HANDICAP SYMBOL
		MAILBOX
		SIGN
		SURVEY MONUMENTATION
		TRAFFIC BOX
		TRAFFIC SIGNAL POLE
		TREE
		VEGETATION LINE
		CABLE BOX
EX UC	UC	UNDERGROUND CABLE
		ANCHOR
		ELECTRICAL BOX
		ELECTRICAL MANHOLE
		ELECTRICAL TRANSFORMER
		LIGHT POLE
EX OHE	OHE	OVERHEAD ELECTRIC
EX UE	UE	UNDERGROUND ELECTRIC
		UTILITY POLE
EX G	G	GAS LINE
		GAS METER
		GAS VALVE
		CONTROL/SAMPLING MANHOLE
EX SL EX SL	SL	SANITARY LATERAL
		SANITARY MANHOLE
EX S	S	SANITARY SEWER
		CATCH BASIN
		HEADWALL
EX 12" STM	12" STM	STORM SEWER
		TELEPHONE BOX
		TELEPHONE MANHOLE
EX T	UT	UNDERGROUND TELEPHONE
		FIRE HYDRANT
		PURITY TEST STATION
EX W	W	WATER MAIN
		WATER MANHOLE
		WATER METER
EX WS EX WS	WS	WATER SERVICE
		WATER VALVE

SITE ADDRESS
4520 LESAINT COURT
FAIRFIELD, OHIO 45014

SCALE IN FEET
Plan Horizontal 0 40 80
SCALE: 1" = 40'

PROJECT DESCRIPTION
MASS GRADING A SITE FOR CONSTRUCTION OF A FUTURE 297,975 INDUSTRIAL BUILDING WITH TRUCK DOCKS AND PARKING LOTS

DEVELOPER
Midd Cities
7811 LAUREL AVENUE
CINCINNATI, OHIO 45243
PHONE: (513) 271-0624
FAX: (866) 855-6332

ABBREVIATION LEGEND

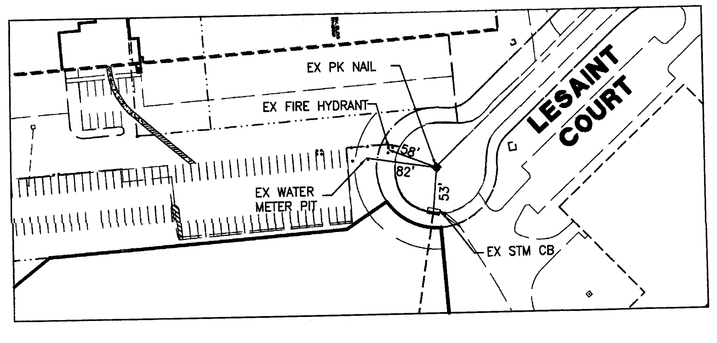
ABBREVIATION	DESCRIPTION
AC	ACRES
B/C	BACK OF CURB
CB	CATCH BASIN
E	EAST/EASTING
EASE	EASEMENT
ELEC	ELECTRIC
ELEV	ELEVATION
E/P	EDGE OF PAVEMENT
EX	EXISTING
FF	FINISHED FLOOR
FH	FIRE HYDRANT
ICW	INTEGRAL CURB AND WALK
IP	IRON PIN
INV	INVERT
MH	MANHOLE
MED	MEDIUM
MON	MONUMENT
N	NORTH/NORTHING
PG	PERFORMANCE GRADE
R/W	RIGHT OF WAY
SAN	SANITARY
SF	SQUARE FEET
SL	SANITARY LATERAL
STM	STORM
TBR	TO BE REMOVED
T/GR	TOP OF GRATE
T/RIM	TOP OF RIM
TYP	TYPICAL
VOL	VOLUME
W	WATER
WM	WATER MAIN
WS	WATER SERVICE

UNDERGROUND UTILITIES
2 WORKING DAYS
BEFORE YOU DIG
Call 1-800-362-2764
OHIO UTILITY
PROTECTION SERVICE
NON MEMBERS
MUST BE CALLED DIRECTLY

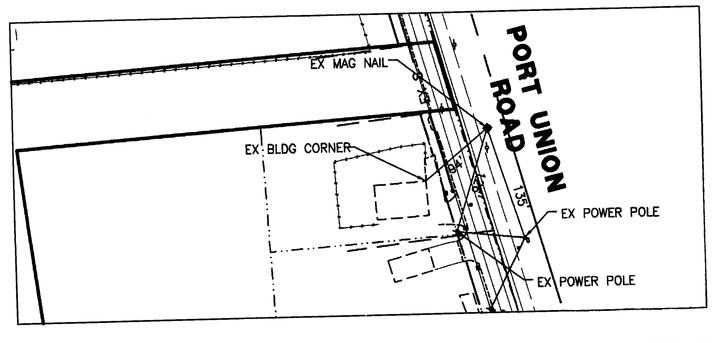
LOCATION OF ALL EXISTING UTILITIES TO BE DETERMINED IN THE FIELD PRIOR TO CONSTRUCTION.

O.D.O.T. STANDARD CONSTRUCTION DRAWINGS			
DRAWING NO.	DATE	DRAWING NO.	DATE
BP-5.1	07-28-00	DM-4.2	01-21-05
BP-7.1	01-19-07	DM-4.3	07-19-02
CB-1.1	07-15-05	DM-4.4	07-19-02
CB-1.2	07-15-05	GR 1.1	07-16-04
CB-1.3	07-15-05	GR 2.1	01-16-04
CB-2.1	07-15-05	GR 4.2	01-19-07
CB-3.1	07-15-05	HW-1.1	01-21-05
CB-3.2	07-15-05	MH-1.1	07-19-02
DM-1.2	10-21-05	MH-1.2	01-20-06
DM-1.4	04-21-06	WQ-1.1	04-16-04
DM-2.1	07-20-01	WQ-1.2	04-21-06

BENCHMARK
EX PK NAIL LOCATED AT THE CENTER OF THE CUL-DE-SAC OF LESAINT COURT
N=487284.0680
E=1403528.4830
ELEV=652.64



CONTROL POINT
EX MAG NAIL LOCATED FROM THE CENTERLINE INTERSECTION OF LESAINT DR AND UNION CENTRE BOULEVARD EAST 1206' ALONG UNION CENTRE BOUELVARD CENTERLINE AND THEN NORTH 30' FROM THE SAID CENTERLINE
N=488497.7045
E=1404684.9463



RECEIVED
JUN 08 2007
BY:

STATE OF OHIO ROBERT W. BAILEY E-62358 REGISTERED PROFESSIONAL ENGINEER
06-7-07

Item	Revision Description	Date	Dwn'd	Chk'd
1	ISSUED FOR PERMIT	06-04-07	JLR	RWB
2	BULLETIN 1 (UPDATE INDEX	06-07-07	JLR	RWB
3				
4				
5				
6				
7				
8				
9				

INTERSTATE COMMERCE CENTER I
4520 LESAINT COURT
FAIRFIELD, OHIO 45014
WEST CHESTER TOWNSHIP, BUTLER COUNTY, OHIO
SECTION 9, TOWN 2, RANGE 2
CIVIL TITLE SHEET

bayer becker
www.bayerbecker.com
10909 Mill Road
Fairfield, OH 45014 • 513.829.2149

Drawing: 06F070ST
Drawn by: JLR
Checked by: RWB
Issue Date: 06-04-07
Sheet: C1

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Plot time: Jun 07, 2007 - 1:06pm
Drawing name: J:\2006\06F070-000\CIV\DWG\06F070ST.dwg - Layout Tab: C01 CIVIL TITLE ICC

GENERAL NOTES

GENERAL

A. ITEM NUMBERS REFER TO THE OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIAL SPECIFICATIONS (CURRENT EDITION) AND ALL CONSTRUCTION WORK SHALL BE DONE ACCORDING TO SAID SPECIFICATIONS AND IN ACCORDANCE WITH APPLICABLE STANDARDS OF THE GOVERNING AGENCIES. WHEN IN CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL GOVERN.

B. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND ELEVATIONS OF ALL EXISTING UTILITIES PRIOR TO THE BEGINNING OF CONSTRUCTION OR EARTH MOVING OPERATIONS.

C. FORTY-EIGHT (48) HOURS BEFORE DIGGING IS TO COMMENCE, THE CONTRACTOR SHALL NOTIFY THE OHIO UTILITY PROTECTION SERVICE (OUPS) AND ALL OTHER AGENCIES WHICH MAY HAVE UNDERGROUND UTILITIES INVOLVED IN THIS PROJECT AND ARE NOT MEMBERS OF OHIO UNDERGROUND PROTECTION, INC.

D. CONTRACTOR SHALL REMOVE ALL TREES AND CLEAN ALL AREAS AS DETERMINED BY THE ENGINEER OR ARCHITECT TO PERFORM ALL GRADING AND UTILITY WORK IN ACCORDANCE WITH THE DRAWINGS, GENERAL NOTES, AND PROJECT SPECIFICATIONS.

E. ALL PAVEMENT DIMENSIONS AND NODES ARE TO THE BACK OF CURB (EDGE OF PAVEMENT WHERE CURB IS NOT CALLED FOR) UNLESS OTHERWISE NOTED. ALL STRIPING DIMENSIONS ARE TO THE FACE OF CURB (EDGE OF PAVEMENT WHERE CURB IS NOT CALLED FOR) UNLESS OTHERWISE NOTED.

F. ALL SPOT ELEVATIONS [XX.XX] ARE TO THE TOP OF FINISHED PAVEMENT/GRADE UNLESS OTHERWISE NOTED.

G. ALL SPOT ELEVATIONS [XX.XX / XX.XX] ARE TO THE TOP OF CURB AND FACE OF CURB UNLESS OTHERWISE NOTED. THE TOP OF CURB ELEVATION IS ON TOP. THESE ARE ALSO USED FOR FINISHED GRADE AT THE TOP AND BOTTOM OF RETAINING WALLS.

H. ALL STANDARD PARKING SPACES ARE A MINIMUM OF 10' BY 18'.

I. PARKING LOT STRIPING SHALL BE FOUR (4) INCHES WIDE WHITE OR YELLOW HIGHWAY-TYPE STRIPING APPLIED IN ACCORDANCE WITH THE PLAN.

J. ALL BACK OF CURB (EDGE OF PAVEMENT WHERE CURB IS NOT CALLED FOR) RADII ARE 4.5' UNLESS OTHERWISE NOTED.

K. ANY DETENTION BASIN ON SITE SHOULD BE CONSTRUCTED PRIOR TO THE CLEARING OF TOPSOIL AND GRADING OF THE SITE.

L. PRIOR TO CONSTRUCTION OF THE EMBANKMENTS, THE SITE SHOULD BE STRIPPED OF ALL VEGETATION, TOPSOIL, AND OTHER ORGANIC MATERIAL IN EMBANKMENT AREAS.

M. EMBANKMENT MATERIAL SHOULD CONSIST OF PLASTIC CLAY MATERIALS, FREE OF ORGANIC MATTER, WHICH CLASSIFY AS CL ACCORDING TO THE UNIFIED SOIL CLASSIFICATION SYSTEM AND SHALL CONTAIN NO STONES WHOSE LARGEST DIMENSION EXCEEDS FOUR (4) INCHES.

N. BUILDING PAD PREPARATION SHALL BE MADE IN ACCORDANCE WITH GEOTECHNICAL ENGINEER'S AND ARCHITECT'S RECOMMENDATIONS. BUILDING DIMENSIONS SHALL BE VERIFIED WITH THE ARCHITECTURAL AND STRUCTURAL DRAWINGS PRI~ TO CONSTRUCTION.

O. CONTRACTOR AND OWNER MUST TAKE OFF AND AGREE TO ALL EXCAVATION AND EMBANKMENT QUANTITIES PRIOR TO CONSTRUCTION.

P. THIS SITE HAS BEEN DESIGNED TO BALANCE THE EXCAVATION AND EMBANKMENT. A BORROW PIT MAY NEED TO BE DUG WITH WASTE MATERIAL USED TO BACKFILL THE PIT TO ACCOMPLISH THIS.

Q. A MINIMUM OF 10" OF TOPSOIL SHALL BE PLACED ON ALL GRASS AREAS UNLESS SPECIFIED OTHERWISE IN THE LANDSCAPE DRAWINGS.

R. ALL SITE EXCAVATION AND EMBANKMENT TO BE COMPLETED IN ACCORDANCE WITH THE GEOTECHNICAL REPORT AND/OR THE PROJECT SPECIFICATIONS. WHEN IN CONFLICT THE MORE STRINGENT REQUIREMENTS SHALL PREVAIL.

S. ANY AREAS THAT APPEAR AS FUTURE BUILDING OR PARKING LOTS SHALL BE GRADED TO DRAIN TO THE NEAREST SWALE, CATCH BASIN, OR OTHER DRAINAGE FEATURE OR PROVISIONS SHALL BE INSTALLED TO DRAIN THE AREAS TO THE NEAREST DRAINAGE FEATURE.

T. CONTRACTOR SHALL PERFORM ALL INSPECTIONS AS REQUIRED BY THE OHIO E.P.A. FOR THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND FURNISH OWNER'S REPRESENTATIVE WITH WRITTEN REPORTS UNLESS OTHERWISE DIRECTED BY THE OWNER OR OWNERS' REPRESENTATIVE.

U. A GEOTECHNICAL REPORT HAS BEEN COMPLETED FOR THIS SITE BY ATC ASSOCIATES, INC. DATED DECEMBER 29, 2006. COPIES OF THIS REPORT ARE AVAILABLE FROM THE OWNER'S REPRESENTATIVE.

V. CONTRACTOR SHALL OBTAIN A PERMIT FOR ALL CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH BUTLER COUNTY REQUIREMENTS AND PAY ALL INSPECTION FEES.

W. CONTRACTOR SHALL VERIFY ALL UTILITY AND CONDUIT SIZES AND LOCATIONS WITH THE ARCHITECTURAL, MECHANICAL, AND STRUCTURAL DRAWINGS PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES.

X. CONTRACTOR AND OWNER SHALL VERIFY AND ACCEPT ALL QUANTITIES PRIOR TO BEGINNING CONSTRUCTION.

Y. ALL UTILITIES TYING INTO BUILDING ARE TO BE STUBBED 5 FT. FROM THE BUILDING FOR CONNECTION BY INTERIOR CONTRACTOR.

Z. CONTRACTOR SHALL VERIFY THAT COORDINATES, IF USED, MATCH PLAN DIMENSIONS. WHEN IN CONFLICT, THE PLAN DIMENSIONS SHALL GOVERN OVER COORDINATES, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

AA. EXISTING EDGE OF PAVEMENT ABUTTING PROPOSED PAVEMENT SHALL BE SAWCUT AND SEALED WITH ITEM 407 TACK COAT PRIOR TO PLACEMENT OF ITEM 301 OR 448.

BB. UNLESS OTHERWISE NOTED, ALL CONSTRUCTION DETAILS SHALL CONFORM WITH THE "STANDARD CONSTRUCTION DRAWINGS OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION".

CC. ALL STORM SEWER, SANITARY SEWER, WATER MAIN, WATER SERVICES AND UTILITY CROSSOVERS LOCATED IN THE PUBLIC RIGHT-OF-WAY SHALL BE TOTALLY BACKFILLED WITH CONTROL DENSITY FILL UNDER THE PAVEMENT TO A DISTANCE OF 5 FT BEYOND THE BACK OF CURB FOR PAVEMENT CUT BY TRENCHING OPERATIONS.

DD. ALL TRENCHES WITHIN THE RIGHT-OF-WAY AND 10' UTILITY EASEMENT SHALL BE COMPACTED AND BACKFILLED IN ACCORDANCE WITH ITEM 203 AND 603 IN THE STATE SPECIFICATIONS FOR TRENCHING OPERATIONS COMPLETED PRIOR TO PLACING PAVEMENT.

EE. ITEMS THAT PERTAIN TO UNDERGROUND UTILITIES SUCH AS WATERMAIN PIPE, SANITARY SEWER PIPE, WATER VALVES AND MANHOLE FRAMES AND COVERS, ETC., WILL REMAIN UNDER SPECIFICATIONS OF THE UTILITY SERVING THE AREA. STORM SEWERS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE BUTLER COUNTY ENGINEER.

KK. BUTLER COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES DOES NOT ACCEPT ANY RESPONSIBILITY FOR THE RELOCATION, REPAIR, OR REPLACEMENT OF ANY OTHER UTILITY INSTALLED WITHIN 5 FT OF THE CENTERLINE OF ANY SANITARY SEWER MAIN OR WATER MAIN.

STORM SEWERS

A. ALL WORK AND MATERIALS ARE TO CONFORM TO THE LATEST EDITION OF THE STATE OF OHIO DEPARTMENT OF TRANSPORTATION CONSTRUCTION AND MATERIALS SPECIFICATIONS AND BUTLER COUNTY SPECIFICATIONS. WHEN IN CONFLICT, THE MORE STRINGENT REQUIREMENTS SHALL PREVAIL.

B. STORM SEWER PIPES DESIGNATED AS "STM." SHALL MEET THE REQUIREMENTS OF ONE OF THE FOLLOWING:

1. NON-REINFORCED CONCRETE PIPE PER O.D.O.T. SPECIFICATION 706.01
2. REINFORCED CONCRETE CIRCULAR PIPE PER O.D.O.T. SPECIFICATION 706.02
3. REINFORCED CONCRETE ELLIPTICAL CULVERT, STORM DRAIN, AND SEWER PIPE PER O.D.O.T. SPECIFICATION 706.04
4. ALUMINIZED CORRUGATED STEEL PIPE AND PIPE ARCHES WITH PAVED INVERT PER O.D.O.T. SPECIFICATIONS 707.01 OR 707.02
5. ALUMINIZED CORRUGATED STEEL SPIRAL RIB CONDUITS PER O.D.O.T. SPECIFICATION 707.12
6. CORRUGATED POLYETHYLENE SMOOTH LINED PIPE PER O.D.O.T. SPECIFICATION 707.33
7. POLYVINYL CHLORIDE PROFILE WALL PIPE PER O.D.O.T. SPECIFICATION 707.43

C. ALL STORM STRUCTURES ARE O.D.O.T. TYPES UNLESS OTHERWISE INDICATED.

D. ALL CATCH BASINS SHALL BE EQUIPPED WITH HEAVY DUTY, BICYCLE SAFE GRATES CAPABLE OF CARRYING AN HS-25 LOADING.

E. ANY EXISTING STORM SEWER CUT IN EXCAVATION WHICH DRAINS AN OFFSITE AREA MUST BE TIED INTO THE STORM SEWER SYSTEM.

F. ALL CATCH BASINS IN THE PAVEMENT OR CURB ARE TO HAVE A MINIMUM OF TWO FOUR (4) INCH PERFORATED UNDERDRAINS EXTENDING TEN (10) LINEAR FEET FROM THE CATCH BASIN. UNDERDRAINS SHALL BE PLACED ONE ON EACH SIDE OF THE STORM SEWER AND AS NEAR TO PERPENDICULAR TO THE STORM SEWER AS IS PRACTICAL WITHOUT INTERFERING WITH STORM PIPES SHOWN ON THE PLANS.

G. AS THE INSTALLATION OF THE STORM SEWER PROGRESSES, EROSION CONTROL MEASURES SHALL BE PLACED AT INLET AND OUTLET OF SEWERS TO CONTROL THE SILT

H. ALL JOINTS SHALL BE SOIL SEAL JOINTS UNLESS SPECIFICALLY NOTED ON THE PLANS.

K. STORM WATER AND EXTRANEOUS FLOWS ARE PROHIBITED FROM ENTERING THE EXISTING SYSTEM DURING CONSTRUCTION. NO OPEN CUT TRENCHES WILL BE ALLOWED TO REMAIN OPEN OVERNIGHT. STORM DRAINS, DIVERSION DITCHES, PUMPS ETC., SHALL BE USED AS REQUIRED TO MAINTAIN THE INTEGRITY OF THE SYSTEM AT ALL TIMES.

L. ALL CATCH BASINS WITH A DEPTH GREATER THAN 4.0 FT SHALL BE PROVIDED WITH STEPS. STEPS SHALL MEET THE REQUIREMENTS OF ODOT STANDARD 604 AND SHALL CONFORM TO THE DETAILS SHOWN ON ODOT STANDARD DRAWING MH-1.1.

SANITARY SEWERS

A. ALL WORK AND MATERIAL SHALL CONFORM TO THE REQUIREMENTS OF THE GOVERNING AGENCY. WHEN IN CONFLICT WITH THE PROJECT SPECIFICATIONS, THE MORE RIGID REQUIREMENTS SHALL PREVAIL.

B. ROOF DRAINS, FOUNDATION DRAINS, AND ALL OTHER CLEAN WATER CONNECTIONS TO THE SANITARY SEWER SYSTEM ARE PROHIBITED.

C. SANITARY CONNECTIONS TO EXISTING MANHOLES (IF APPLICABLE) MUST BE CORE DRILLED AND RUBBER GASKET INSTALLED.

D. ALL SANITARY MANHOLES, PIPES, AND LATERALS CONSTRUCTED WITH THIS PROJECT SHALL BE PRIVATELY OWNED.

E. NO BUILDING SHALL BE CONNECTED TO A SEWER LATERAL UNTIL THE BUILDING IS UNDER ROOF.

F. SANITARY SHALL BE A MINIMUM OF SDR 35 FOR DEPTHS LESS THAN 16 FEET AND SDR 26 FOR DEPTHS GREATER THAN OR EQUAL TO 16 FEET.

G. ALL SANITARY SEWER MANHOLES, CASTINGS, PIPE, ETC., SHALL CONFORM WITH CURRENT SPECIFICATIONS OF THE BUTLER COUNTY SANITARY ENGINEER AND THE OHIO ENVIRONMENTAL PROTECTION AGENCY.

I. SANITARY SEWER MATERIALS AND INSTALLATION TO BE AS PER BUTLER COUNTY DEPARTMENT OF ENVIRONMENTAL SERVICES SPECIFICATIONS, USING SECTION 3110 FOR PVC SDR-35 & 26 PIPE; SECTION 3140 FOR ABS OR PVC COMPOSITE PIPE; SECTION 3410 FOR MANHOLES.

J. CROSSINGS
WHENEVER A SANITARY SEWER AND WATER MAIN MUST CROSS, THE SEWER SHALL BE AT SUCH AN ELEVATION THAT THE CROWN OF THE SEWER IS AT LEAST 18 INCHES MEASURED BETWEEN THE OUTSIDE PIPE WALLS, BELOW THE BOTTOM OF THE WATER MAIN. IF ~S ABSOLUTELY IMPOSSIBLE TO MAINTAIN THE 18 INCH VERTICAL SEPARATION, THE W~ER MAIN SHALL BE RELOCATED OR THE SEWER SHALL BE CONSTRUCTED AS FOLLOWS:

1. A SEWER PASSING OVER OR UNDER THE WATER MAIN SHALL BE ENCASED OR CONSTRUCTED OF MATERIALS THAT ARE EQUIVALENT TO WATER MAIN STANDARDS OF CONSTRUCTION FOR A MINIMUM DISTANCE OF 10 FEET ON EACH SIDE OF THE WATER MAIN.
2. THE SEWER CROSSING SHALL BE CONSTRUCTED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS.
3. WHERE A WATER MAIN PASSES UNDER A SEWER, ADEQUATE STRUCTURAL SUPPORT SHALL BE PROVIDED FOR THE SEWER TO PREVENT DAMAGE TO THE WATER MAIN.

K. PROVIDE THE BUTLER COUNTY ENGINEER'S OFFICE WITH A FORTY-EIGHT (48) HOUR NOTICE PRIOR TO THE START OF ANY CONSTRUCTION, INCLUDING SANITARY INSTALLATION BY CALLING (513) 785-4145.

WATER MAINS

A. ALL WATER WORK AND WATER MAIN MATERIALS INCLUDING PIPE, FITTINGS, VALVES, HYDRANTS, AND INSTALLATION SHALL CONFORM TO THE REQUIREMENTS OF THE WATER UTILITY PROVIDER. THE MOST RIGID SPECIFICATIONS SHALL GOVERN IN THE EVENT OF A CONFLICT WITH THE PROJECT SPECIFICATIONS.

B. ALL PUBLIC WATER MAIN MATERIALS, VALVES, FIRE HYDRANTS, FITTINGS, AND APPURTENANCES SHALL BE CLASS 53 DUCTILE IRON PER AWWA C-151, MEETING THE REQUIREMENTS OF THE GOVERNING AGENCY.

C. ALL WATER FACILITIES ON THIS PROJECT ARE TO BE PRIVATE.

D. UNLESS OTHERWISE DIRECTED BY THE UTILITY PROVIDER OR FIRE DEPARTMENT, ALL PRIVATE FIRE HYDRANT'S SHALL BE PAINTED RED AND ALL PUBLIC FIRE-HYDRANT'S SHALL BE PAINTED YELLOW. COLORS TO MEET THE REQUIREMENTS OF THE GOVERNING AGENCIES

E. PRIVATE MAINS AND APPURTENANCES SHALL MEET OR EXCEED THE REQUIREMENTS OF THE GOVERNING AGENCY.

F. FIRE DEPARTMENT CONNECTION (STORTZ CONNECTION) SHALL BE WITHIN 100 FT. OF A PUBLIC FIRE HYDRANT OR A FIRE HYDRANT OFF OF THE MAIN BETWEEN THE PUBLIC MAIN AND THE METER PIT.

G. FIRE DEPARTMENT CONNECTION LINE SHALL TIE INTO THE FIRE SUPPRESSION SYSTEM ON THE BUILDING SIDE OF THE PUMP IF A PUMP IS INSTALLED.

H. ALL FIRE HYDRANT VALVES AND WATER VALVES SHALL BE ENCASED IN A MIN. 6" CONCRETE SLAB MEETING THE REQUIREMENTS OF THE GOVERNING AGENCY.

I. NO PART OF ANY FIRE HYDRANT SETTING SHALL BE CLOSER THAN FIVE (5) FEET FROM ANY INLET, DRIVEWAY, PARKING LOT, UTILITY POLE, OR GUY WIRE ANCHOR.

J. BACKFILL SHALL BE CLASS A WHEN MAIN IS FIVE (5) FEET OR GREATER FROM EXISTING PUBLIC CURB. LESS THAN FIVE (5) FEET FROM EXISTING PUBLIC CURB, UNDER CURB OR EXISTING PUBLIC PAVEMENT BACKFILL SHALL BE CONTROLLED DENSITY FILL.

K. WATER MAINS SHALL MAINTAIN A MINIMUM COVER OF FOUR (4) FEET.

L. ALL WATER MAIN VALVES SHALL HAVE A MINIMUM DEPTH OF 2.5 FT. AND MAXIMUM DEPTH OF 4.0 FT. FROM PROPOSED GRADE TO THE TOP OF THE VALVE OPERATING NUT.

M. A MINIMUM CLEAR DISTANCE OF TEN (10) FEET HORIZONTAL OR EIGHTEEN (18) INCHES VERTICAL SHALL BE MAINTAINED BETWEEN SANITARY AND/OR STORM SEWERS AND WATER MAINS.

N. SANITARY AND STORM SEWERS THAT CROSS WATER MAINS SHALL BE LOCATED SUCH THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS.

O. ALL PUBLIC WATER MAINS SHALL BE CLASS 53 DUCTILE IRON AND PROVIDED WITH THRUST BLOCKING AT ALL TEES AND HORIZONTAL AND VERTICAL BENDS WHETHER SHOWN ON THE PLAN VIEW OR NOT. PRIVATE MAINS SHALL ALSO BE PROVIDED WITH THRUST BLOCKING THRUST BLOCKING AS DESCRIBED ABOVE. THRUST BLOCKING SHALL MEET THE REQUIREMENTS OF THE GOVERNING AGENCY.

P. PRIVATE WATER MAINS BEYOND THE METER PIT MAY BE C900 DR18 FOR WORKING PRESSURES LESS THAN 150 PSI. FOR DESIGN PRESSURES GREATER THAN 150 PSI, DUCTILE IRON PRESSURE CLASS 350 OR C900 DR 14 SHALL BE USED.

Q. SERVICE PIPING THREE (3) INCHES AND LARGER SHALL BE AWWA C-151, CLASS 53 DUCTILE IRON, MEETING THE REQUIREMENTS OF THE GOVERNING AGENCY.

R. ALL WATER METER PITS SHALL CONFORM TO THE MATERIALS AND SPECIFICATIONS OF THE GOVERNING AGENCY.

S. THE FOLLOWING ITEMS ARE TO BE APPROVED BY THE FIRE DEPARTMENT:

1. INSTALLATION OF ALL UNDERGROUND FIRE SUPPRESSION LINES ARE TO BE INSPECTED BY THE FIRE DEPARTMENT; INSTALLERS ARE REQUIRED TO BE LICENSED BY THE OHIO FIRE MARSHALL.
2. WATER SUPPLY AND CONNECTIONS TO THE SUPPLY.
3. PRESSURE REGULATORS OR METERS ON THE WATER SUPPLY LINES.
4. LOCATION AND/OR OMISSION OF FD CONNECTIONS.
5. FD CONNECTION HOSE CONNECTION THREADS (CAPS ALSO REQUIRED)
6. USE OF CONTROL VALVES IN WATER SUPPLY OTHER THAN INDICATING VALVES.
7. SIZE AND LOCATION OF VALVE PITS; USE OF BURIED VALVES OR PITS.
8. LOCATION AND IDENTIFICATION OF SECTION VALVES IN UNDERGROUND WATER SUPPLIES.
9. TYPE, ARRANGEMENT, LOCATION, IDENTIFICATION, THREADS, PROTECTION OF ALL HYDRANTS
10. UNDERGROUND PIPING INSTALLATION METHODS AND PROCEDURES.
11. HYDROSTATIC TESTING OF UNDERGROUND SYSTEMS; FIRE DEPT. MUST BE CALLED TO WITNESS TESTING; PROVIDE COPY OF CONTRACTOR'S MATERIAL & TEST CERTIFICATE FOR UNDERGROUND SYSTEM. AMOUNT OF PIPE LEAKAGE TO BE ACCEPTABLE TO FIRE DEPT.
12. FLUSHING OF UNDERGROUND SYSTEM TO BE WITNESSED BY FIRE DEPT.
13. HYDRANT OPERATING TEST TO BE WITNESSED BY FIRE DEPT.

TELEPHONE

A. TELEPHONE CONDUITS, WHETHER SHOWN IN THESE PLANS OR NOT, SHALL MEET THE FOLLOWING REQUIREMENTS.

B. TELEPHONE CONDUITS SHALL BE PVC SCH. 40 PRIVATELY OWNED (PO) CONDUITS, FOR TELEPHONE COMPANY USE, FROM THE PROPOSED BACK BOARD LOCATION TO THE POINT OF CONNECTION BY THE UTILITY PROVIDER. CONDUITS SHALL MEET THE REQUIREMENTS OF TELEPHONE SERVICE PROVIDER.

C. TERMINATE UNDERGROUND CONDUIT AT DESIGNATED LOCATION WITH A MINIMUM COVER OF 24 INCHES AND MAXIMUM COVER OF 36 INCHES.

D. WRAP THE END OF THE CONDUIT WITH A SUITABLE MATERIAL TO PREVENT CLOGGING UNTIL THE CABLE IS PLACED. TELEPHONE SERVICE PROVIDER WILL MAKE CONNECTION AT THIS POINT.

E. FLAG OR IDENTIFY THE END OF THE CONDUIT IN ORDER TO DESIGNATE THE POINT OF CONNECTION BETWEEN TELEPHONE SERVICE PROVIDER AND ENTRANCE CONDUIT.

F. POWER OR OTHER FOREIGN CONDUIT MUST BE SEPARATED FROM TELEPHONE CONDUIT BY A MINIMUM OF 12" OF EARTH OR 3" OF CONCRETE.

G. CONDUIT MUST BE PLACED AT A MINIMUM DEPTH OF 24" AND A MAXIMUM OF 36".

H. PROVIDE A 200# TEST PULL LINE IN CONDUIT.

I. ALL BENDS MUST BE LONG, SWEEPING BENDS WITH A RADIUS NOT LESS THAN TEN TIMES THE INTERNAL DIAMETER OF CONDUIT. WITH A MAXIMUM OF 180 DEGREES OF BENDS BETWEEN PULLING POINTS. WHEN 180 DEGREES OF BENDS ARE REQUIRED, A PULL BOX WILL BE REQUIRED.

J. CONDUIT ENTERING FROM BELOW GRADE POINT MUST EXTEND 4" ABOVE FINISHED FLOOR.

K. PROVIDE A 3/4" PLYWOOD BACKBOARD FOR TELEPHONE COMPANY USE. DIMENSIONS TO BE PROVIDED BY THE SERVICE PROVIDER. BACKBOARD SHALL BE PAINTED ON ALL SIDES WITH TWO COATS OF NONCONDUCTIVE, FIRE-RETARDANT PAINT OR FIRE RETARDANT VIRGIN PLYWOOD IS ALSO ACCEPTABLE.

L. PROVIDE A 110 VOLT 20 AMP DUPLEX OUTLET ON THE BACKBOARD.

M. PROVIDE AT THE BACKGROUND LOCATION, A COILED INSULATED #6 GROUND WIRE CONNECTED TO THE ELECTRIC SERVICE GROUND, FOR THE PROPER GROUNDING OF TELEPHONE COMPANY CABLES, TERMINALS, AND EQUIPMENT.

N. TERMINATION SPACE SHALL BE CONTINUALLY ACCESSIBLE, WELL-LIT, AND ENVIRONMENTALLY CLEAN.

O. TERMINATION SPACE MUST CONTAIN A 20 AMP DUPLEX GROUNDED OUTLET FOR TESTING AND MAINTENANCE AND SHALL HAVE A MINIMUM MAINTENANCE AREA OF 36 INCHES IN FRONT OF ALL TELEPHONE BOARDS.

P. CONDUIT MUST EXTEND 4" ABOVE FINAL GRADE AT THE CONNECTION TO THE UTILITY POLE.

ELECTRIC SERVICES

A. ELECTRIC SERVICE SHALL MEET THE REQUIREMENTS OF THE UTILITY PROVIDER.

B. ALL ELECTRICAL TRANSFORMERS SHALL BE LOCATED SO THAT THEY DO NOT INTERFERE WITH THE EXISTING MANHOLES OR WATER MAIN APPURTENANCES.

C. ELECTRIC CONDUITS SHALL CONSIST OF PVC SCHEDULE 40 NEMA RATED CONDUITS MEETING THE REQUIREMENTS OF THE ELECTRIC SERVICE PROVIDER.

D. ELECTRIC MANHOLES IF NECESSARY TO BE DESIGNED BY AND CONSTRUCTED IN ACCORDANCE WITH CINCINNATI GAS AND ELECTRIC CO. REQUIREMENTS.

GAS FACILITIES AND SERVICES

A. FOR GAS ENGINEERING NOTIFICATION, AGREEMENTS AND OFFICAL CORRESPONDENCE RELATED TO DUKE ENERGY, ADDRESS TO:
DUKE ENERGY
GAS ENGINEERING DEPARTMENT
P.O. BOX 960, ROOM 460 ANNEX
CINCINNATI, OH 45273-9598

B. THE GAS MAIN INFORMATION PROVIDED SHOWS THE APPROXIMATE LOCATIONS AND DEPTHS OF COVER AND IS PROVIDED TO COMPLY WITH STATUTORY REGULATIONS. THIS INFORMATION SHOULD BE USED ONLY FOR PLANNING, NOT CONSTRUCTION.

C. ALL GAS MAIN DEPTHS OF COVER IF NOTED ARE APPROXIMATE DEPTHS OF COVER RECORDED AT THE TIME OF INSTALLATION. ANY RESULTING GRADE CHANGES SINCE THE TIME OF THE MAIN INSTALLATION WILL CAUSE THE EXISTING DEPTHS OF COVER TO BE DIFFERENT. EXTREME CARE MUST BE TAKEN TO ENSURE SAFE EXCAVATION WHEN APPROACHING KNOWN OR SUSPECTED GAS FACILITIES.

D. GAS SERVICE SHALL MEET THE REQUIREMENTS OF THE UTILITY PROVIDER.

E. GAS SERVICE SHALL BE POLYETHYLENE PIPE MEETING THE REQUIREMENTS OF ASTM D-2513 AND THE PLASTIC PIPE INSTITUTE PE 2406 FOR MEDIUM DENSITY PIPE.

F. ALL GAS SERVICES WERE INSTALLED AT A MINIMUM OF 1'-6" OF COVER. SEE NOTE C. ABOVE.

G. FOR ADDITIONAL GAS FACILITY RECORD INFORMATION, CALL (513) 287-3636.

H. TO COMPLY WITH FEDERAL AND STATE REGULATIONS CONCERNING DAMAGE PREVENTION PROGRAMS, THE UTILITY COMPANIES MUST BE CONTACTED AT LEAST 48 HOURS (2 WORKING DAYS) PRIOR TO EXCAVATION BY CALLING THE OHIO UTILITIES PROTECTION SERVICE (OUPS), TOLL FREE AT 1-800-362-2764.

I. GAS FACILITES ARE TO BE KEPT IN SERVICE AT ALL TIMES.

J. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO GAS FACILITIES DURING OR AS A RESULT OF THE CONTRACTOR'S CONSTRUCTION. ALL DAMAGE TO GAS FACILITIES REQUIRING ADJUSTMENTS, RELOCATIONS AND/OR REPAIRS WILL BE MADE AT THE CONTRACTOR'S EXPENSE.

K. THE CONTRACTOR SHALL SHEET AND SHORE ALL EXCAVATIONS AS REQUIRED TO CONTINUOUSLY SUPPORT GAS FACILITIES WITHIN THE ZONE OF INFLUENCE (AS DETERMINED BY THE NATURAL ANGLE OF REPOSE OF THE SOIL).

L. CROSSING BURIED GAS FACILITIES WITH HEAVY CONSTRUCTION EQUIPMENT MAY CAUSE DAMAGE TO THE GAS FACILITIES. CONTACT THE GAS ENGINEERING DEPARTMENT FOR DETAILS ON HOW TO PROTECT THE GAS FACILITIES FROM DAMAGE.

M. THE CONTRACTOR SHALL NOT BACKFILL EXPOSED GAS FACILITIES UNTIL THE UTILITY HAS INSPECTED ITS FACILITIES AND PERFORMED ANY MAINTENANCE AND/OR ADJUSTMENTS THAT MAY BE REQUIRED.

N. THE CONTRACTOR IS RESPONSIBLE FOR PREVENTING ANY DAMAGE TO EXISTING GAS FACILITIES. THIS INCLUDES PROTECTION OF COATINGS AND WRAPPINGS ON STEEL GAS MAINS. IT ALSO INCLUDES ANY DAMAGE WHICH MAY HAVE OCCURRED TO PLASTIC GAS MAINS, SUCH AS CRIMPS OR GOUGES.

O. WHEN CAST IRON OR SIMILAR GAS FACILITIES ARE EXPOSED OR INTERFERED WITH BY THE CONTRACTOR, REPLACEMENT OR REINFORCEMENT BY THE UTILITY OWNER MAY BE REQUIRED AT THE CONTRACTOR'S EXPENSE. BACKFILL WITH CONTROL LOW STRENGTH MATERIAL WILL BE REQUIRED.

P. BLASTING OR OTHER CONSTRUCTION PROCEDURES WHICH MAY TRANSMIT LOADS OR VIBRATIONS IN THE VICINITY OF GAS FACILITIES MUST BE APPROVED BY THE GAS ENGINEERING DEPARTMENT. A BLASTING PLAN, IDENTIFYING ALL PERTINENT INFORMATION, MUST BE SUBMITTED IN WRITING BY A BLASTING EXPERT PRIOR TO ANY WORK.

Q. PROPOSED DEVELOPMENT PLANS AROUND AND NEAR GAS FACILITIES WITHIN PRIVATE EASEMENTS MUST BE SUBMITTED TO THE GAS ENGINEERING DEPARTMENT FOR REVIEW. THESE PLANS MUST BE APPROVED BEFORE ANY WORK MAY BEGIN WITHIN THE UTILITY OWNER'S EASEMENTS.

R. SPECIFIED EASEMENT WIDTHS MUST BE MAINTAINED IN ORDER FOR THE UTILITY PROVIDER TO PROTECT ITS FACILITIES.

S. NO PERMANENT STRUCTURES MAY BE BUILT WITHIN THE EASEMENTS.

U. CUTS AND FILLS ARE GENERALLY NOT PERMITTED WITHIN THE EASEMENTS. SOME FILLS MAY BE ALLOWED, AND WILL BE REVIEWED ON AN INDIVIDUAL BASIS. ANY PERMITTED FILLS WILL BE LIMITED TO AN AMOUNT WHICH WILL ALLOW THE UTILITY OWNERS TO PROPERLY MAINTAIN ITS FACILITIES.

V. PERPENDICULAR UTILITY CROSSINGS OF GAS EASEMENTS ARE ACCEPTABLE, PROVIDED PROPER CLEARANCES ARE MAINTAINED. PARALLEL INSTALLATIONS ARE NORMALLY NOT ALLOWED.

EROSION AND SEDIMENT CONTROLS

A. THE PROJECT HAS BEEN DESIGNED TO CONTROL EROSION AND PREVENT DAMAGE TO OTHER PROPERTY. ALL STRIPPING, EARTHWORK, AND REGRADING SHALL BE PERFORMED TO MINIMIZE EROSION. NATURAL VEGETATION SHALL BE RETAINED WHEREVER POSSIBLE. THE PROPOSED PLAN WILL ALLOW MOST ERODED MATERIALS TO BE RETAINED ON SITE.

B. VEGETATIVE PRACTICES

1. SUCH PRACTICES MAY INCLUDE: TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, MATTING, SOD STABILIZATION, VEGETATIVE BUFFER STRIPS, PHASING AND PROTECTION OF TREES. THE CONTRACTOR SHALL INITIATE APPROPRIATE VEGETATIVE PRACTICES ON ALL DISTURBED AREAS WITHIN SEVEN (7) DAYS IF THEY ARE TO REMAIN DORMANT (UNDISTURBED) FOR MORE THAN FORTY-FIVE (45) DAYS. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DISTURBED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE.
2. ALL DISTURBED AREAS SHALL BE SEEDED AND STRAWED UNLESS OTHERWISE NOTED IN THE PROJECT SPECIFICATIONS.

C. STRUCTURAL PRACTICES

STRUCTURAL PRACTICES SHALL BE USED TO CONTROL EROSION AND TRAP SEDIMENT FROM ALL SITES REMAINING DISTURBED FOR MORE THAN FOURTEEN (14) DAYS.

D. TIMING

SEDIMENT CONTROL STRUCTURES SHALL BE FUNCTIONAL THROUGHOUT EARTH DISTURBING ACTIVITY. SEDIMENT PONDS AND PERIMETER SEDIMENT BARRIERS SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING AND WITHIN SEVEN DAYS FROM THE START OF GRUBBING. THEY SHALL CONTINUE TO FUNCTION UNTIL THE UPSLOPE DEVELOPMENT AREA IS RESTABILIZED.

E. SEDIMENT BARRIERS

1. SHEET FLOW RUNOFF FROM DENUDED AREAS SHALL BE INTERCEPTED BY SEDIMENT BARRIERS. SEDIMENT BARRIERS, SUCH AS SEDIMENT FENCES OR DIVERSIONS DIRECTION RUNOFF TO SETTLING FACILITIES, SHALL PROTECT ADJACENT PROPERTIES AND WATER RESOURCES FROM SEDIMENT TRANSPORTED BY SHEET FLOW.
2. EROSION AND SEDIMENT CONTROL PRACTICES USE TO SATISFY THE CONDITIONS OF THIS PLAN SHALL MEET THE STANDARDS AND SPECIFICATIONS IN THE CURRENT EDITION OF WATER MANAGEMENT AND SEDIMENT CONTROL IN URBANIZED AREAS (SOIL CONSERVATIONS SERVICE).

F. MAINTENANCE & WASTE DISPOSAL

1. ALL TEMPORARY AND PERMANENT CONTROL PRACTICES SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION.
2. NO SOLID OR LIQUID WASTE, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED IN STORM WATER RUNOFF. OFF-SITE VEHICLE TRACKING OF SEDIMENTS SHALL BE MINIMIZED. THE PLAN SHALL ENSURE AND DEMONSTRATE COMPLIANCE AND APPLICABLE STATE OF LOCAL WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS.
3. EXCESS EXCAVATED MATERIAL IS TO BE DISPOSED OF ON SITE AS DIRECTED BY THE CONSTRUCTION MANAGER. EXCESS MATERIAL SHALL BE GRADED TO DRAIN.
4. CONTRACTOR SHALL IMPLEMENT ALL SOIL AND EROSION CONTROL PRACTICES AS PER PLAN AND AS REQUIRED BY THE LOCAL GOVERNING AGENCY AND THE OHIO E.P.A. THE EROSION CONTROL MEASURES SHALL BE INSTALLED PER THE RAINWATER AND LAND DEVELOPMENT HANDBOOK PUBLISHED BY THE OHIO DEPARTMENT OF NATURAL RESOURCES, CURRENT EDITION.

G. SEDIMENT CLEANUP

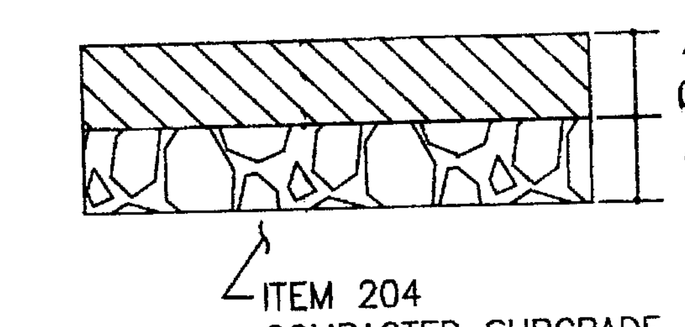
BY THE END OF EACH WORK DAY, SWEEP OR SCRAPE UP SOIL TRACKED ONTO THE ROAD. BY THE END OF THE NEXT WORK DAY AFTER A STORM, CLEAN UP SOIL WASHED OFF-SITE, AND CHECK STRAW BALES AND SILT FENCE FOR DAMAGE OR SEDIMENT BUILDUP.

H. DOWNSPOUT EXTENDERS

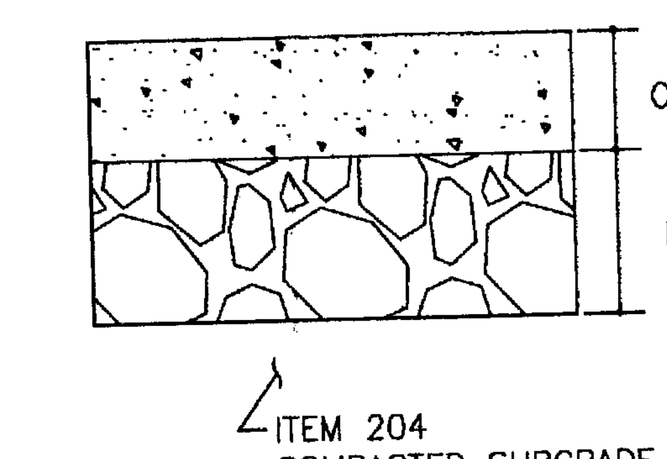
NOT REQUIRED, BUT HIGHLY RECOMMENDED. INSTALL AS SOON AS GUTTERS AND DOWNSPOUTS ARE COMPLETED. ROUTE WATER TO A GRASSED OR PAVED AREA. MAINTAIN UNTIL A LAWN IS ESTABLISHED.

I. EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO EXCAVATION OR AS SOON AS EXCAVATION IS COMPLETED OR SUSPENDED.

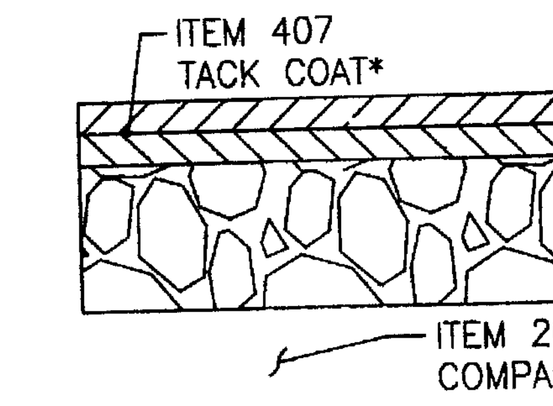
J. SEED WITHIN 30 DAYS OF REACHING FINAL GRADE OR AS SOON AS POSSIBLE.



SIDEWALK SECTION



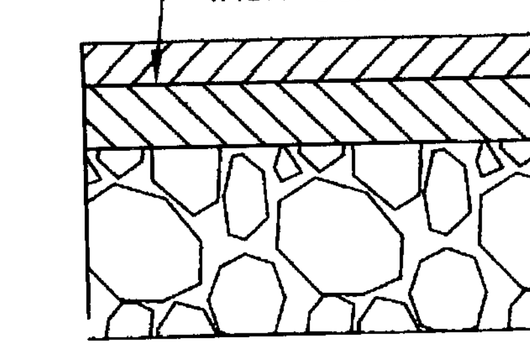
CONCRETE PAVEMENT SECTION



LIGHT PAVEMENT SECTION

* ITEM 407 TACK COAT TO BE PLACED BETWEEN ASPHALT LAYERS WHEN PAVEMENT HAS BEEN SUBJECTED TO TRAFFIC BEFORE UPPER LAYERS OF ASPHALT ARE PLACED. APPLICATION RATE TO BE A MINIMUM OF 0.100 GAL/SQ YD.

** FOR A FULL DEPTH ASPHALT SECTION, ITEM 304 MAY BE REPLACED WITH ITEM 301 USING A MINIMUM OF 1" ITEM 301 FOR EVERY 2.50" OF ITEM 304



HEAVY PAVEMENT SECTION

* ITEM 407 TACK COAT TO BE PLACED BETWEEN ASPHALT LAYERS WHEN PAVEMENT HAS BEEN SUBJECTED TO TRAFFIC BEFORE UPPER LAYERS OF ASPHALT ARE PLACED. APPLICATION RATE TO BE A MINIMUM OF 0.100 GAL/SQ YD.

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1	ISSUED FOR PERMIT	06-04-07	JLR	RWB
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STATE OF OHIO
ROBERT W. BAILEY
E-62836
REGISTERED
PROFESSIONAL ENGINEER
6-7-07

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FAIRFIELD, OHIO 45014
WEST CHESTER TOWNSHIP, BUTLER COUNTY, OHIO
SECTION 9, TOWN 2, RANGE 2
GENERAL NOTES

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Drawing: 06F070GN
Drawn by: JLR
Checked By: RWB
Issue Date: 06-04-07
Sheet: C2

Plot time: Jun 07, 2007 - 1:06pm
Drawing name: J:\2006\06F070-000\CV\DWG\06F070ST.dwg - Layout Tab: C03 SCHEMATIC ICC

LOT AREA

29.828 AC
(1,299,308 SF)

IMPERVIOUS AREAS	AREA (SF)	AREA (AC)
DESCRIPTION		
BUILDING	297,975	6.84
PARKING	312,774	7.18
WALK	3,542	0.08
TRUCK DOCK	54,006	1.24
TOTAL	668,297	15.34
PERCENTAGE IMPERVIOUS	51% < 85%	

PARKING

DESCRIPTION LOCATION	AREA (SF)	REQUIRED PARKING RATIO	SPACES
OFFICE (10%)	29,798	1:200	149
WAREHOUSE	268,177	1:3000	89
TOTAL	297,975	TOTAL	288

PROVIDED PARKING LOCATION	SPACES
EAST	81
SOUTH	93
WEST	64
TOTAL	238≥238 TOTAL REQUIRED PARKING

PROPOSED LESAINT EAST BUILDING
285'X1050'
297,975 S.F.
FF=654.20
29.320 Ac.

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SECTION 9, TOWN 2, RANGE 2

SITE CONCEPT PLAN B

Item	Revision Description	Date	Drwn	Chkr
1	ISSUED FOR PERMIT	06-04-07	JLR	RWB
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STATE OF OHIO
ROBERT W. BAILEY
E-62836
REGISTERED PROFESSIONAL ENGINEER
6-7-07

0 100 200
SCALE: 1" = 100'

Plot time: Jun 07, 2007 - 1:06pm
Drawing name: J:\2006\06F070-000\CV\DWG\06F070ST.dwg - Layout Tab: C04 LAYOUT ICC

EXISTING FACILITY
FN E.&E. 348

Krone-Portmann LLC
O.R. 7868, Pg. 2175
13.531 Ac.

15 TRAILER PARKING STALLS

Ex. 50' Utility & Access Esm't P.E. 1548, Pg. A

CL Ex. 5' Private Drainage Esm't

11 TRACTOR PARKING STALLS

Pt.#26

Pt.#25

CL Ex. 25' B.L.

N34°54'08"W 579.97'

36.00' ELEC EASE

25' A.&U.E.

25.00'

PROP E/P

N00°23'51"W 345.48'

36.00' ELEC EASE

Ex. 20' Utility & Drainage Esm't P.E. 1548, Pg. A

33 SPACES @ 9'X18' = 297.00'

N34°54'08"W 326.31'

31 SPACES @ 9'X18' = 297.00'

6' CONCRETE WALK

R=5.00'

R=200.00'
L=120.44'
CH=S17°38'59"E
118.83'

END ODOT CURB TYPE 6 TAPER CURB HEIGHT FROM 6" TO 0" IN 5'

N29°12'59"W 56.82'

BEGIN ODOT CURB TYPE 6 TAPER CURB HEIGHT FROM 6" TO 0" IN 5'

ELEC-TRANSFORMER PAD WALL ELEV=652.64

LeSAINT COURT

TYPE T ANCHOR ASSEMBLY

3'1"-TYPE 5 GUARDRAIL

2-TYPE T ANCHOR ASSEMBLY

2' GRAVEL

Portion of Ex. 20' U.E. P.E. 1548, Pg. A

HANDICAP SIGNS (MOUNTED TO BLDG)

5'X5' STOOP

END ODOT CURB TYPE 6

R=49.50'

N00°23'51"W 205.95'

R=24.50'

R=9.50'

R=29.50'

BEGIN ODOT CURB TYPE 6 TAPER CURB HEIGHT FROM 6" TO 0" IN 5'

R=70.00'
L=72.61'
CH=S31°04'10"W
69.39'

ODOT CURB TYPE 6

Ex. 25' B.L. P.E. 1548, Pg. A

R=100.00'
L=24.80'
CH=S82°51'29"E
24.74'

Ex. 15' U.E. P.E. 1548, Pg. A

24.00'

12.00'

2.00'

263'-TYPE 5 GUARDRAIL

100 Year Flood Plain Easement

5' WALK

HANDICAP SIGNS (MOUNTED TO BLDG)

2' GRAVEL

50.00' (TYP)

45.00' (TYP)

60.00' (TYP)

PROP E/P

93 SPACES @ 9'X18' = 972.00'

S55°05'52"W 1007.38'

TYPE T ANCHOR ASSEMBLY

413'-TYPE 5 GUARDRAIL

S41°49'19"W 1327.86'

PROPOSED LESAINT EAST BUILDING
285'X1050'
297,975 S.F.
FF=634.20
29.828 Ac.

60.00'

39.00'

N00°01'54"W 276.64'

31.50'

R=10.50'

R=14.50' ODOT CURB TYPE 6

R=21.50'

ODOT CURB TYPE 6

7 SPACES @ 11'X25' = 175.00'

5 SPACES @ 11'X25' = 132.00'

23 SPACES @ 11'X55' & 3 SPACES @ 11'X25' = 288.00'

10 SPACES @ 11'X55' & 5 SPACES @ 11'X25' = 185.00'

5 SPACES @ 11'X55' & 5 SPACES @ 11'X25' = 180.00'

N55°05'52"E 753.51'

483.69'

130.00'

N65°38'57"E 396.84'

N00°02'01"W 429.80'

Iron Pin

NEYER PROPERTIES, SECTION FOUR P.E. 1548, Pg. A

Lot #23

PAVEMENT LEGEND
CONCRETE PAVEMENT
SIDEWALK
LIGHT PAVEMENT
HEAVY PAVEMENT

MATCHLINE (SEE SHEET C5)

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LAYOUT PLAN

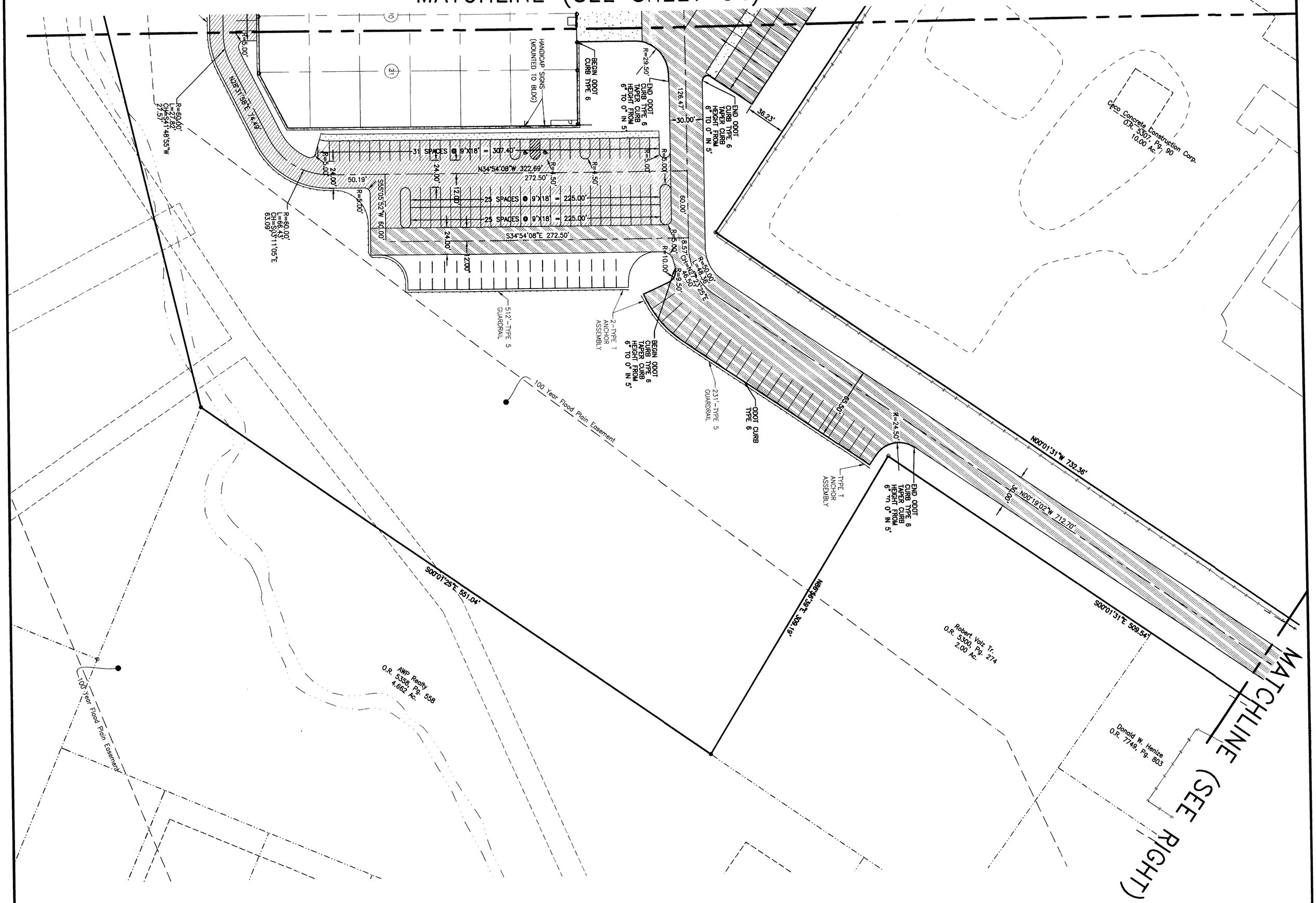
Item	Revision Description	Date	Drwn	Chkr
1	ISSUED FOR PERMIT	06-04-07	JLR	RWB
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STATE OF OHIO
ROBERT W. BAILEY
E-62836
REGISTERED PROFESSIONAL ENGINEER
6-7-07

0 40 80
SCALE: 1" = 40'

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Drawing name: J:\2006\06F070-000\CV\DWG\06F070ST.dwg - Layout Tab: C05 LAYOUT ICC

MATCHLINE (SEE SHEET C4)



PAVEMENT LEGEND
- CONCRETE PAVEMENT
- SIDEWALK
- LIGHT PAVEMENT
- HEAVY PAVEMENT

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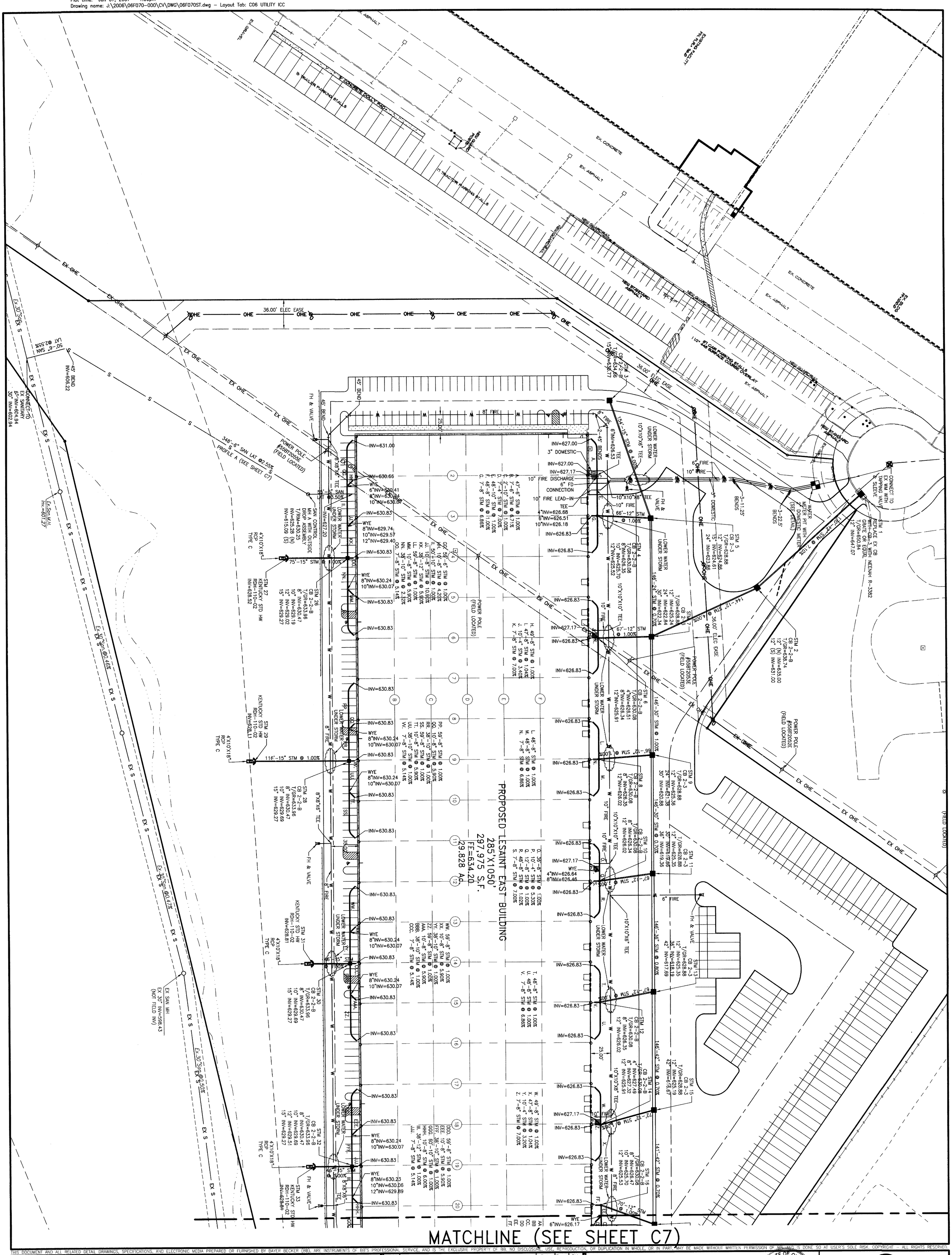
LAYOUT PLAN

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STATE OF OHIO
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E-62836
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6-7-07

0 40 80
SCALE: 1" = 40'

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SECTION 9, TOWN 2, RANGE 2

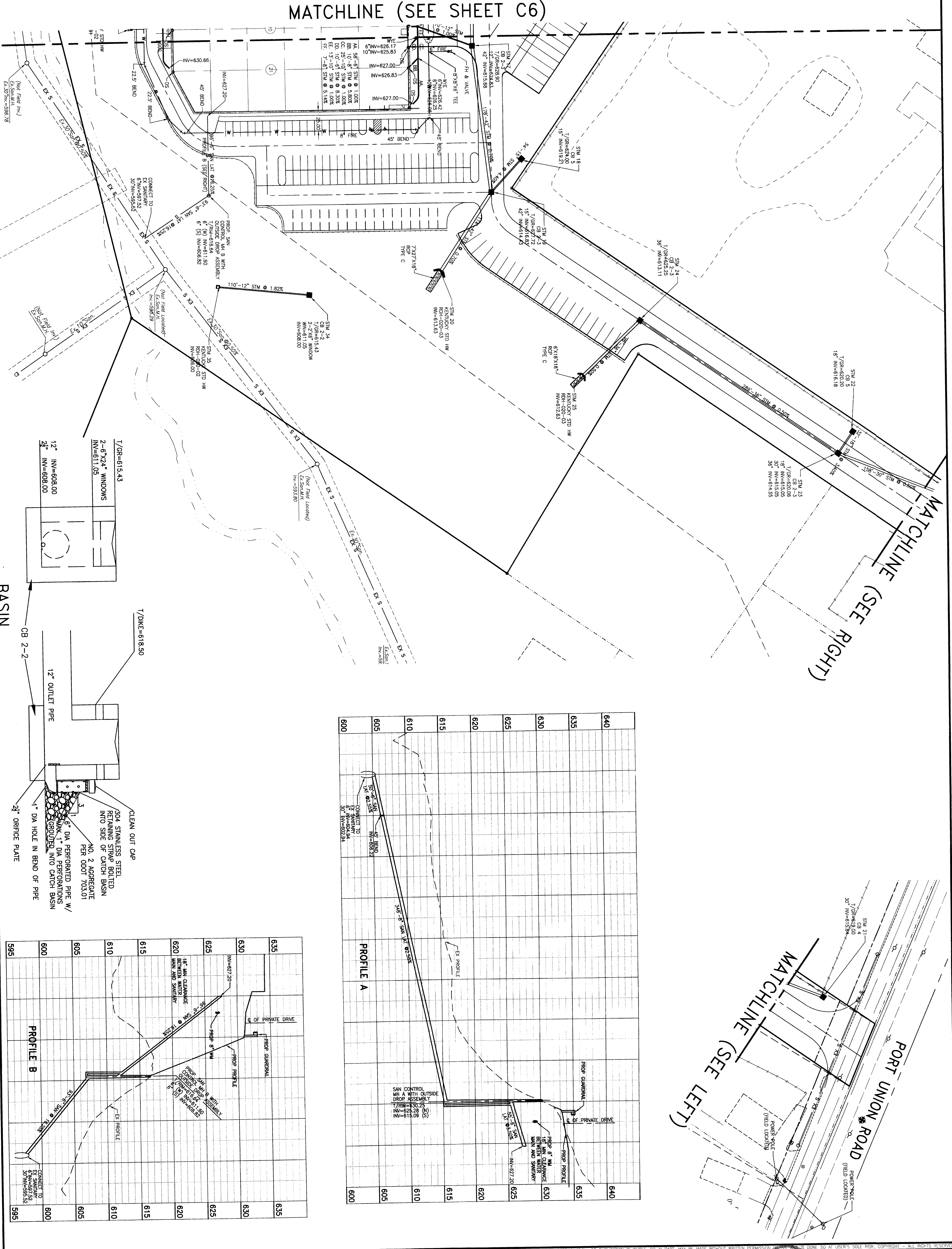
UTILITY PLAN

Item	Revision Description	Date	Drwn:	Chk:
1	ISSUED FOR PERMIT	06-04-07	JLR	RWB
2	BULLETIN 1: REVISED PER INTERNAL	06-07-07	JLR	RWB
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STATE OF OHIO
ROBERT W. BAILEY
E-62836
REGISTERED PROFESSIONAL ENGINEER
6-7-07

0 40 80
SCALE: 1" = 40'

Plot time: Jun 07, 2007 - 1:07pm
Drawing name: J:\2006\06F070-000\CV\DWG\06F070ST.dwg - Layout Tab: C07 UTILITY ICC



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WEST CHESTER TOWNSHIP, BUTLER COUNTY OHIO
SECTION 9, TOWN 2, RANGE 2

UTILITY PLAN

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STATE OF OHIO · ROBERT W. BAILEY · E-62836 · REGISTERED · PROFESSIONAL ENGINEER
6-7-07

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EROSION CONTROL NOTES

1. SEEDING AND MULCHING
3. PRESERVE EXISTING VEGETATION
5. SILT FENCE
19. CHECK DAMS
21. CONSTRUCTION ENTRANCE
25. DANDY BAG

SEE EROSION CONTROL DETAIL SHEET FOR EROSION CONTROL DETAILS

8" CONCRETE DUTY SLAB
15 TRAILER PARKING STALLS
11 TRACTOR PARKING STALLS
NEW CURB
NEW GUARDRAIL
EXISTING FACILITY PAV. ELEV.=649
EX. ELEC.
BENCHMARK PK NAIL ELEV.=652.64
LeSAINT COURT
Prop. 100 Yr. Flood Boundary
PROPOSED LESAINT EAST BUILDING
285'X1050'
297,975 S.F.
FF=634.20
29.828 Ac.
45.00' (TYP)
60.00' (TYP)
50.00' (TYP)
Iron Pin
MATCHLINE (SEE SHEET C9)

SEE SHEET C8 FOR EROSION CONTROL DETAILS
BAT LANDLOK TRM SC250 OR EQUIVALENT AVAILABLE FROM COUNTRY CONSTRUCTION PRODUCTS, INC.

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GRADING & EROSION CONTROL PLAN

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ROBERT W. BAILEY
E-62836
REGISTERED PROFESSIONAL ENGINEER
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Drawing name: J:\2006\06F070-000\CV\DWG\06F070ST.dwg – Layout Tab: C09 GRADING ICC

MATCHLINE (SEE SHEET C8)

715 S.Y. EROSION CONTROL MAT, LANDLOK TRM 450 OR EQUIVALENT AVAILABLE FROM CONTECH CONSTRUCTION PRODUCTS, INC.

30" SPILLWAY INV=616.43

50 YR ELEV=616.43
100 YR ELEV=616.75

T/DIKE=616.50

100 Yr. FEMA Floodplain Boundary

Prop. 100 Yr. Flood Boundary

1000 S.Y. EROSION CONTROL MAT, LANDLOK TRM 450 OR EQUIVALENT AVAILABLE FROM CONTECH CONSTRUCTION PRODUCTS, INC.

MATCHLINE (SEE RIGHT)

MATCHLINE (SEE LEFT)

PORT UNION ROAD

SAWCUT & MEET EX E/P

CONTROL POINT

EX YELLOW LINE

EX E/P

EX YELLOW LINE

EX E/P

EROSION CONTROL NOTES

1 SEEDING AND MULCHING
3 PRESERVE EXISTING VEGETATION
5 SILT FENCE
19 CHECK DAMS
21 CONSTRUCTION ENTRANCE
25 DANDY BAG

SEE EROSION CONTROL DETAIL SHEET FOR EROSION CONTROL DETAILS

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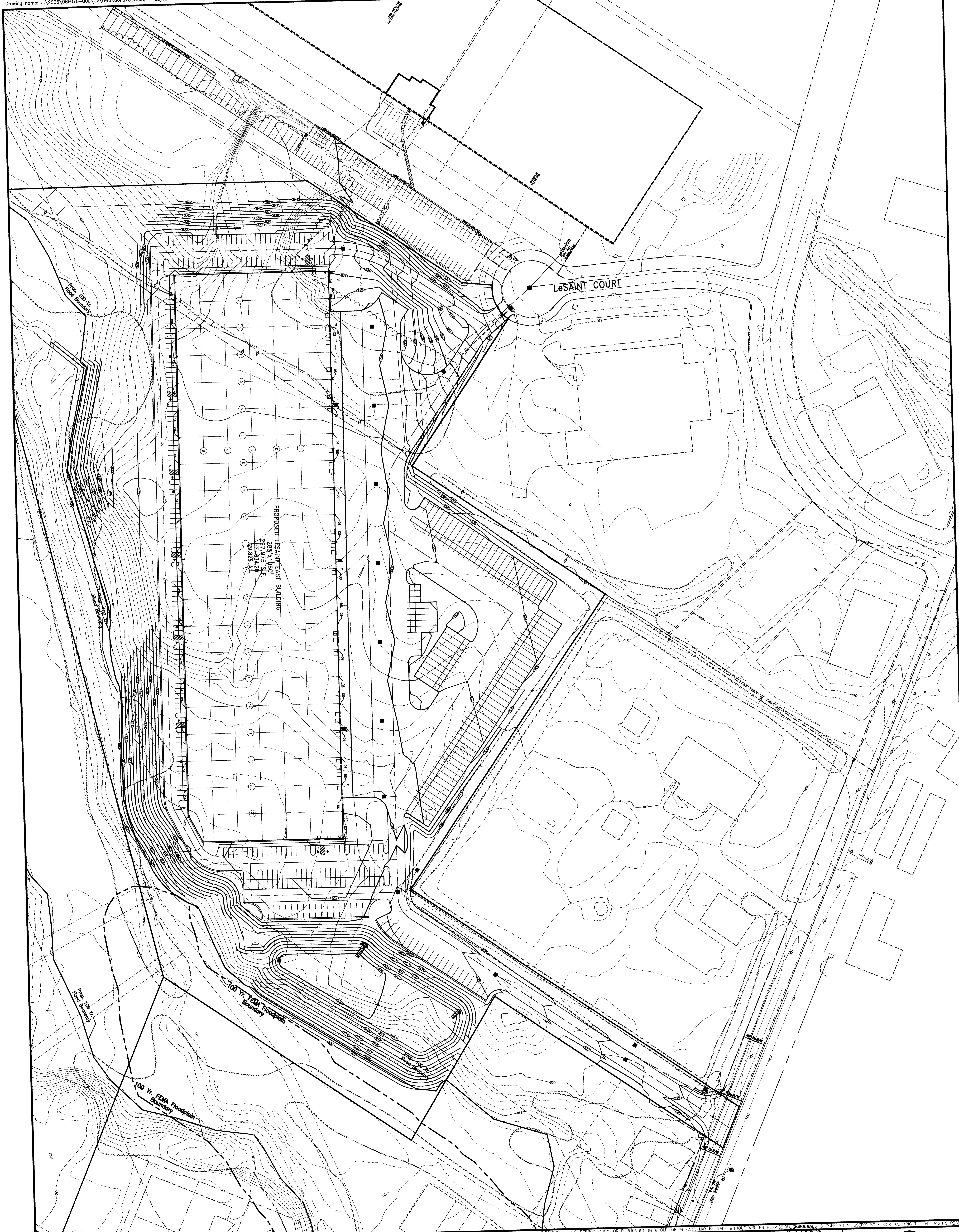
GRADING & EROSION CONTROL PLAN

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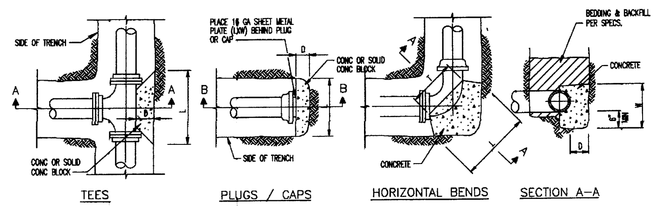
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DRAINAGE PLAN

Item	Revision Description	Date	Drwn:	Chk:
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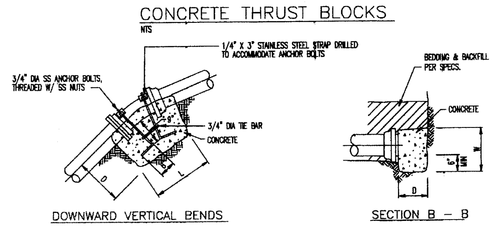
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ROBERT W. BAILEY
E-62836
REGISTERED
PROFESSIONAL ENGINEER
6-7-07

0 40 80
SCALE: 1" = 40'



CONCRETE THRUST BLOCKS

NTS



CONCRETE ANCHOR BLOCKS

NTS

PLUGS, CAPS & TEES									
SIZE	6"	8"	10"	12"	16"	18"	20"	24"	30"	36"
D	6"	6"	8"	8"	10"	12"	14"	18"	24"	30"
L & W	20"	22"	24"	24"	32"	36"	40"	54"	76"	102"
45° EIGHTH BENDS										
SIZE	6"	8"	10"	12"	16"	18"	20"	24"	30"	36"
D	6"	6"	6"	6"	6"	8"	8"	10"	12"	16"
L	18"	20"	22"	24"	34"	40"	45"	58"	72"	98"
T	16"	16"	18"	18"	28"	33"	37"	46"	52"	58"
W	12"	14"	16"	18"	22"	25"	28"	36"	46"	76"
90° QUARTER BENDS										
SIZE	6"	8"	10"	12"	16"	18"	20"	24"	30"	36"
D	8"	10"	12"	12"	12"	16"	20"	20"	24"	26"
L	24"	27"	30"	34"	48"	51"	54"	78"	92"	144"
T	16"	18"	20"	22"	36"	40"	44"	50"	56"	62"
W	12"	16"	20"	24"	28"	34"	40"	50"	66"	96"

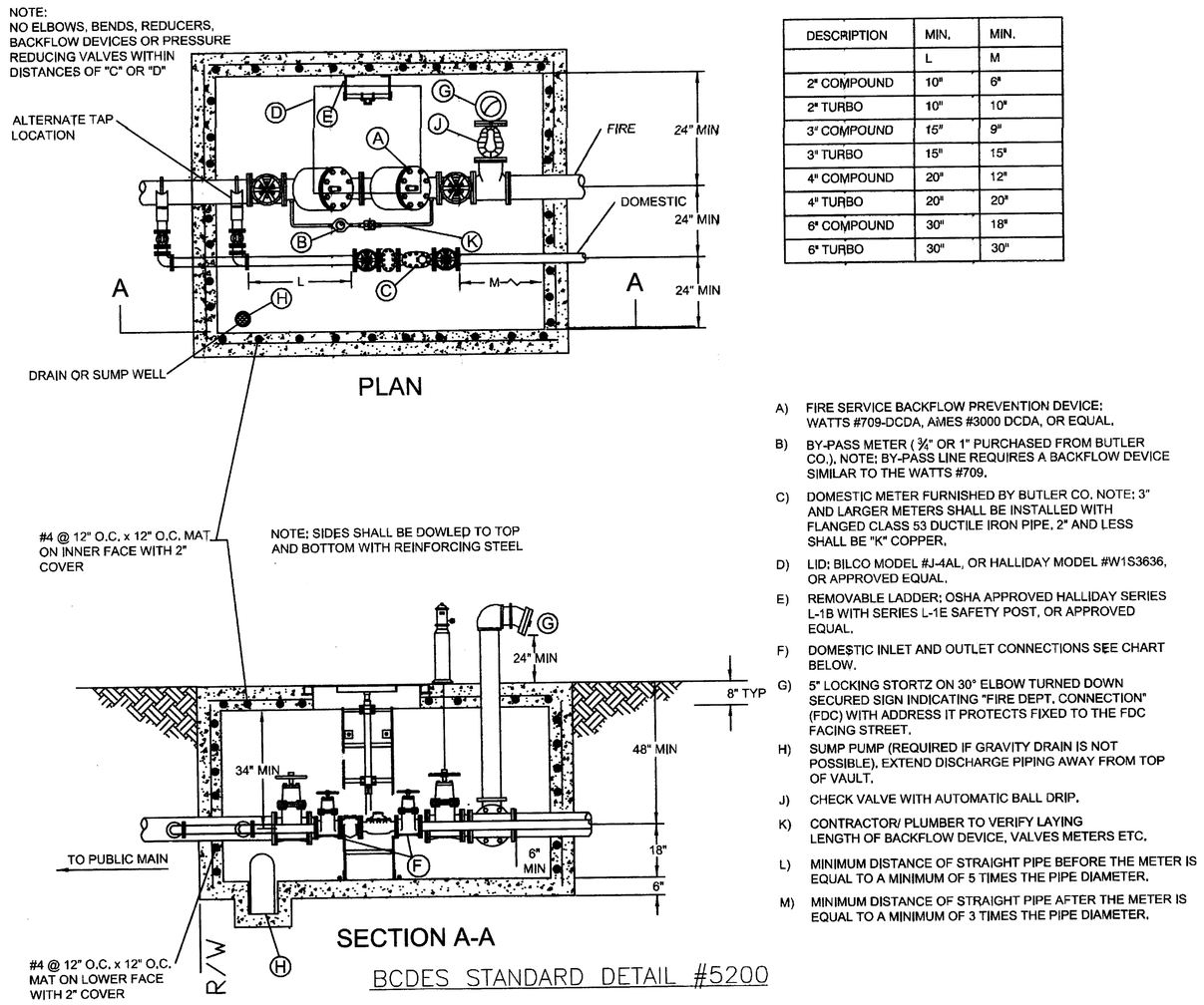
VERTICAL BEND & STRAIGHT PIPE										
SIZE	6"	8"	10"	12"	16"	18"	20"	24"	30"	36"
D	15"	15"	18"	18"	21"	21"	24"	24"	32"	38"
L	24"	24"	30"	30"	36"	36"	36"	42"	56"	66"

NOTES:

1. ANCHORS TO BE FULL WIDTH OF TRENCH
2. DEPTH "D" MAY BE GREATER THAN SPECIFIED TO ALLOW WORKING SPACE. CONC MUST BE PLACED AGAINST UNDISTURBED EARTH.
3. THESE ARE REPRESENTATIVE BLOCKING DIMENSIONS OTHER BENDS WILL ALSO NEED BLOCKING IF NOT UTILIZING RESTRAINED JOINTS.
4. ENCASE ALL JOINTS, BOLTS, & NUTS WITH POLYETHYLENE BEFORE PLACING CONCRETE
5. CONCRETE TYPE AND STRENGTH PER SPECS.
6. ALL ANCHOR BOLTS, NUTS, AND STRAPS TO BE STAINLESS STEEL.
7. UPWARD VERTICAL BENDS TO HAVE THRUST BLOCKS WITH SAME DIVISIONS AS FOR HORIZONTAL BENDS.
8. 11 1/4 DEGREE AND 22 1/2 DEGREE BENDS TO HAVE THRUST BLOCKS WITH SAME DIMENSIONS AS FOR 45 DEGREE BENDS.

WATER MAIN RESTRAINT JOINT LOCATION CHART

Water Main Dia.	Horizontal 11.25° Bends	Horizontal 22.5° Bends	Horizontal 45° Bends	Vertical 45° Bends	Dead Ends
6"	18' both sides	18' both sides	18' both sides	36' both sides	36' Back
8"	18' both sides	18' both sides	18' both sides	36' both sides	36' Back
10"	18' both sides	18' both sides	36' both sides	36' both sides	54' Back
12"	18' both sides	18' both sides	36' both sides	54' both sides	54' Back



BCDES STANDARD DETAIL #5200

DESCRIPTION	MIN. L	MIN. M
2" COMPOUND	10'	6'
2" TURBO	10'	10'
3" COMPOUND	15'	9'
3" TURBO	15'	15'
4" COMPOUND	20'	12'
4" TURBO	20'	20'
6" COMPOUND	30'	18'
6" TURBO	30'	30'

A) FIRE SERVICE BACKFLOW PREVENTION DEVICE: WATTS #709-DCDA, AMES #3000 DCDA, OR EQUAL.

B) BY-PASS METER (¾" OR 1" PURCHASED FROM BUTLER CO.), NOTE: BY-PASS LINE REQUIRES A BACKFLOW DEVICE SIMILAR TO THE WATTS #709.

C) DOMESTIC METER FURNISHED BY BUTLER CO. NOTE: 3" AND LARGER METERS SHALL BE INSTALLED WITH FLANGED CLASS 53 DUCTILE IRON PIPE, 2" AND LESS SHALL BE "K" COPPER.

D) LID: BILCO MODEL #J-4AL, OR HALLIDAY MODEL #W1S3636, OR APPROVED EQUAL.

E) REMOVABLE LADDER: OSHA APPROVED HALLIDAY SERIES L-1B WITH SERIES L-1E SAFETY POST, OR APPROVED EQUAL.

F) DOMESTIC INLET AND OUTLET CONNECTIONS SEE CHART BELOW.

G) 5" LOCKING STORTZ ON 30° ELBOW TURNED DOWN SECURED SIGN INDICATING "FIRE DEPT. CONNECTION" (FDC) WITH ADDRESS IT PROTECTS FIXED TO THE FDC FACING STREET.

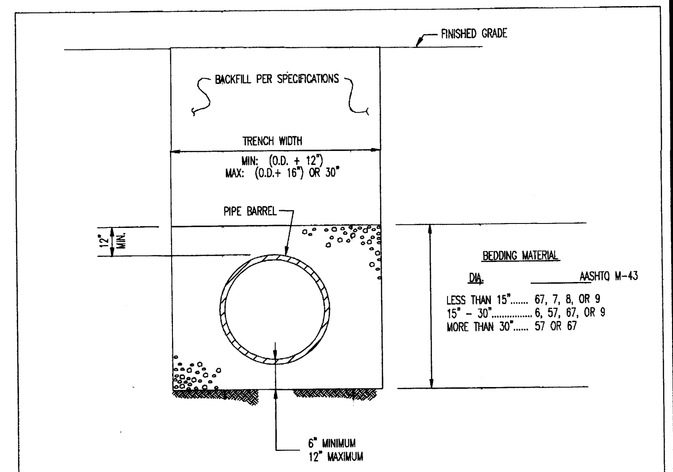
H) SUMP PUMP (REQUIRED IF GRAVITY DRAIN IS NOT POSSIBLE), EXTEND DISCHARGE PIPING AWAY FROM TOP OF VAULT.

J) CHECK VALVE WITH AUTOMATIC BALL DRIP.

K) CONTRACTOR/ PLUMBER TO VERIFY LAYING LENGTH OF BACKFLOW DEVICE, VALVES METERS ETC.

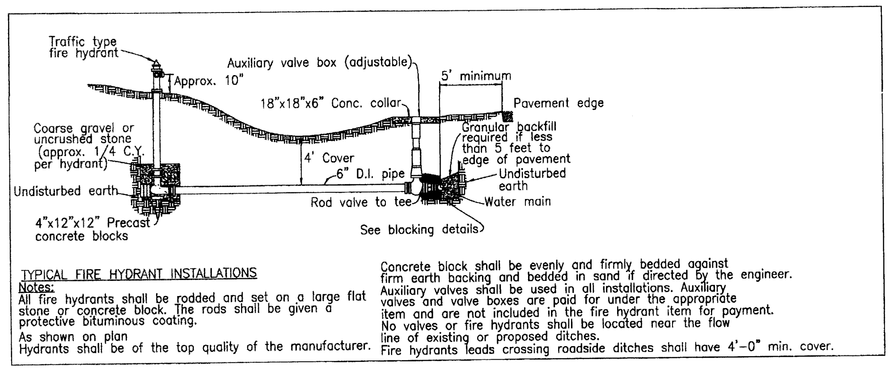
L) MINIMUM DISTANCE OF STRAIGHT PIPE BEFORE THE METER IS EQUAL TO A MINIMUM OF 5 TIMES THE PIPE DIAMETER.

M) MINIMUM DISTANCE OF STRAIGHT PIPE AFTER THE METER IS EQUAL TO A MINIMUM OF 3 TIMES THE PIPE DIAMETER.



TYPICAL TRENCH DETAIL

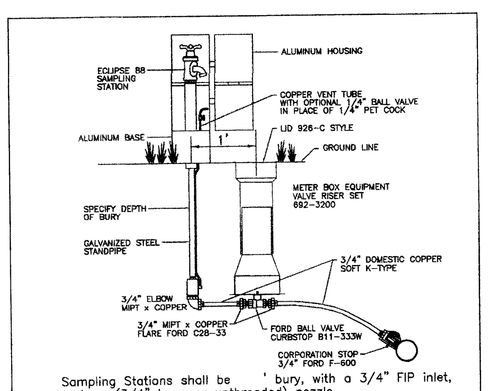
SEWER INSTALLATION



TYPICAL FIRE HYDRANT INSTALLATIONS

Notes:
All fire hydrants shall be rodded and set on a large flat stone or concrete block. The rods shall be given a protective bituminous coating.
As shown on plan
Hydrants shall be of the top quality of the manufacturer.

Concrete block shall be evenly and firmly bedded against firm earth backing and bedded in sand if directed by the engineer.
Auxiliary valves shall be used in all installations. Auxiliary valves and valve boxes are paid for under the appropriate item and are not included in the fire hydrant item for payment.
No valves or fire hydrants shall be located near the flow line of existing or proposed ditches.
Fire hydrants leads crossing roadside ditches shall have 4'-0" min. cover.



Sampling Stations shall be ' bury, with a 3/4" FIP inlet, and a (3/4" hose or unthreaded) nozzle.

All stations shall be enclosed in a lockable, nonremovable, aluminum-cast housing.

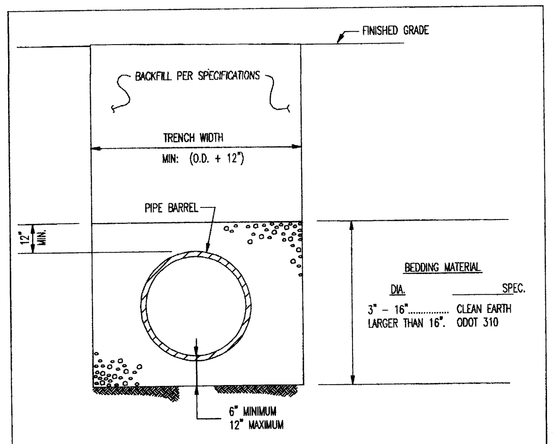
When opened, the station shall require no key for operation, and the water will flow in an all brass waterway.

All working parts will also be of brass and be removable from above ground with no digging. Exterior piping shall be galvanized steel (brass pipe also available).

A copper vent tube will enable each station to be pumped free of standing water to prevent freezing and to minimize bacteria growth.

Eclipse No. 88 Sampling Station shall be manufactured by Kupferle Foundry, St. Louis, MO 63102.

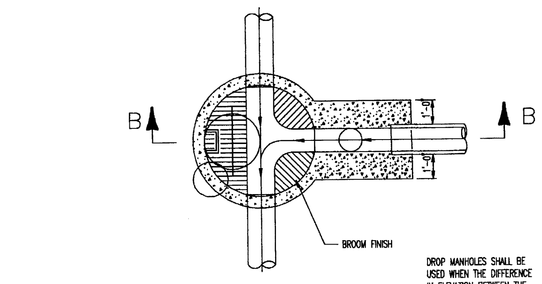
ECLIPSE NO.88 SAMPLING STATION



TYPICAL TRENCH DETAIL

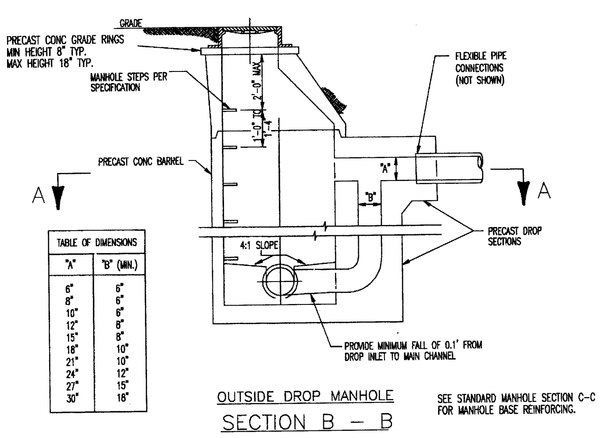
WATER MAIN INSTALLATION

NTS



OUTSIDE DROP MANHOLE

SECTION A – A



OUTSIDE DROP MANHOLE

SECTION B – B

SEE STANDARD MANHOLE SECTION C-C FOR MANHOLE BASE REINFORCING.

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STATE OF OHIO
ROBERT W. BALLEY
E-62855
REGISTERED PROFESSIONAL ENGINEER
10-17-07

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SANITARY & WATER DETAILS

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Drawing: 06F070GN
Drawn by: JLR
Checked By: RWB
Issue Date: 06-04-07
Sheet: C11

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Drawing name: x:\2006\06F070-000\CV\DWG\06F070GN.dwg – Layout Tab: C11 SAN WAT ICC

EROSION AND SEDIMENT CONTROLS

A. THE PROJECT HAS BEEN DESIGNED TO CONTROL EROSION AND PREVENT DAMAGE TO OTHER PROPERTY. ALL STRIPPING, EARTHWORK, AND REGRADING SHALL BE PERFORMED TO MINIMIZE EROSION. NATURAL VEGETATION SHALL BE RETAINED WHEREVER POSSIBLE. THE PROPOSED PLAN WILL ALLOW MOST ERODED MATERIALS TO BE RETAINED ON SITE.

B. VEGETATIVE PRACTICES

1. SUCH PRACTICES MAY INCLUDE: TEMPORARY SEEDING, PERMANENT SEEDING, MULCHING, MATTING, SOD STABILIZATION, VEGETATIVE BUFFER STRIPS, PHASING AND PROTECTION OF TREES. THE CONTRACTOR SHALL INITIATE APPROPRIATE VEGETATIVE PRACTICES ON ALL DISTURBED AREAS WITHIN SEVEN (7) DAYS IF THEY ARE TO REMAIN DORMANT (UNDISTURBED) FOR MORE THAN FORTY-FIVE (45) DAYS. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DISTURBED AREAS WITHIN SEVEN (7) DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE.

2. ALL DISTURBED AREAS SHALL BE SEEDED AND STRAWED UNLESS OTHERWISE NOTED IN THE PROJECT SPECIFICATIONS.

C. STRUCTURAL PRACTICES

STRUCTURAL PRACTICES SHALL BE USED TO CONTROL EROSION AND TRAP SEDIMENT FROM ALL SITES REMAINING DISTURBED FOR MORE THAN FOURTEEN (14) DAYS.

D. TIMING

SEDIMENT CONTROL STRUCTURES SHALL BE FUNCTIONAL THROUGHOUT EARTH DISTURBING ACTIVITY. SEDIMENT PONDS AND PERIMETER SEDIMENT BARRIERS SHALL BE IMPLEMENTED AS THE FIRST STEP OF GRADING AND WITHIN SEVEN DAYS FROM THE START OF GRUBBING. THEY SHALL CONTINUE TO FUNCTION UNTIL THE UPSLOPE DEVELOPMENT AREA IS RESTABILIZED.

E. SEDIMENT BARRIERS

1. SHEET FLOW RUNOFF FROM DENUDED AREAS SHALL BE INTERCEPTED BY SEDIMENT BARRIERS. SEDIMENT BARRIERS, SUCH AS SEDIMENT FENCES OR DIVERSIONS DIRECTION RUNOFF TO SETTLING FACILITIES, SHALL PROTECT ADJACENT PROPERTIES AND WATER RESOURCES FROM SEDIMENT TRANSPORTED BY SHEET FLOW.

2. EROSION AND SEDIMENT CONTROL PRACTICES USE TO SATISFY THE CONDITIONS OF THIS PLAN SHALL MEET THE STANDARDS AND SPECIFICATIONS IN THE CURRENT EDITION OF WATER MANAGEMENT AND SEDIMENT CONTROL IN URBANIZED AREAS (SOIL CONSERVATIONS SERVICE).

F. MAINTENANCE & WASTE DISPOSAL

1. ALL TEMPORARY AND PERMANENT CONTROL PRACTICES SHALL BE MAINTAINED AND REPAIRED AS NEEDED TO ASSURE CONTINUED PERFORMANCE OF THEIR INTENDED FUNCTION.

2. NO SOLID OR LIQUID WASTE, INCLUDING BUILDING MATERIALS, SHALL BE DISCHARGED IN STORM WATER RUNOFF. OFF-SITE VEHICLE TRACKING OF SEDIMENTS SHALL BE MINIMIZED. THE PLAN SHALL ENSURE AND DEMONSTRATE COMPLIANCE AND APPLICABLE STATE OF LOCAL WASTE DISPOSAL, SANITARY SEWER OR SEPTIC SYSTEM REGULATIONS.

3. EXCESS EXCAVATED MATERIAL IS TO BE DISPOSED OF ON SITE AS DIRECTED BY THE CONSTRUCTION MANAGER. EXCESS MATERIAL SHALL BE GRADED TO DRAIN.

4. CONTRACTOR SHALL IMPLEMENT ALL SOIL AND EROSION CONTROL PRACTICES AS PER PLAN AND AS REQUIRED BY THE LOCAL COVERNING AGENCY AND THE OHIO E.P.A. THE EROSION CONTROL MEASURES SHALL BE INSTALLED PER THE RAINWATER AND LAND DEVELOPMENT HANDBOOK PUBLISHED BY THE OHIO DEPARTMENT OF NATURAL RESOURCES, CURRENT EDITION.

G. SEDIMENT CLEANUP

BY THE END OF EACH WORK DAY, SWEEP OR SCRAPE UP SOIL TRACKED ONTO THE ROAD. BY THE END OF THE NEXT WORK DAY AFTER A STORM, CLEAN UP SOIL WASHED OFF-SITE, AND CHECK STRAW BALES AND SILT FENCE FOR DAMAGE OR SEDIMENT BUILDUP.

H. DOWNSPOUT EXTENDERS

NOT REQUIRED, BUT HIGHLY RECOMMENDED. INSTALL AS SOON AS GUTTERS AND DOWNSPOUTS ARE COMPLETED. ROUTE WATER TO A GRASSED OR PAVED AREA. MAINTAIN UNTIL A LAWN IS ESTABLISHED.

I. EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO EXCAVATION OR AS SOON AS EXCAVATION IS COMPLETED OR SUSPENDED.

J. SEED WITHIN 30 DAYS OF REACHING FINAL GRADE OR AS SOON AS POSSIBLE.

1 SEEDING AND MULCHING

SPREAD 4 TO 6 INCHES OF TOPSOIL.
FERTILIZE ACCORDING TO SOIL TEST (OR APPLY 10 LB./1000 SQ. FT. OF 20-10-10 OR 10-10-10 FERTILIZER.)
SEED WITH AN APPROPRIATE MIX FOR THE SITE (SEE TABLE.) RAKE LIGHTLY TO COVER SEED WITH 1/4" OF SOIL. ROLL LIGHTLY.
MULCH WITH STRAW (70-90 LB. OR ONE BALE PER 1000 SQ. FT.)
ANCHOR MULCH BY PUNCHING 2 INCHES INTO THE SOIL WITH A DULL, WEIGHTED DISK OR BY USING NETTING OR OTHER MEASURES ON STEEP SLOPES, OR WINDY AREAS. WATER GENTLY EVERY DAY OR TWO TO KEEP SOIL MOIST. LESS WATERING IS NEEDED ONCE GRASS IS 2 INCHES TALL.

3 PRESERVE EXISTING VEGETATION

WHEREVER POSSIBLE, PRESERVE EXISTING TREES, SHRUBS, AND OTHER VEGETATION.
TO PREVENT ROOT DAMAGE, DO NOT GRADE, PLACE SOIL PILES, OR PARK VEHICLES NEAR TREES MARKED FOR PRESERVATION.
PLACE PLASTIC MESH OR SNOW FENCE BARRIERS AROUND TREES TO PROTECT THE AREA BELOW THEIR BRANCHES.

9 SILT FENCE

INSTALLATION

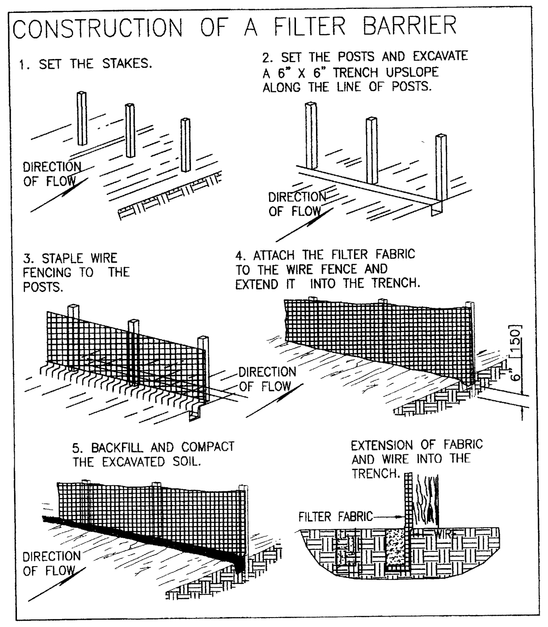
1. PUT UP BEFORE ANY OTHER WORK IS DONE.
2. INSTALL ON DOWNSLOPE SIDE(S) OF SITE WITH ENDS EXTENDED UP SIDESLOPES A SHORT DISTANCE.
3. PLACE PARALLEL TO THE CONTOUR OF THE LAND AND AT THE FLATTEST AREA AVAILABLE TO ALLOW WATER TO POND BEHIND FENCE.
4. STAKE TO BE A MINIMUM OF 32 INCHES LONG
5. MINIMUM HEIGHT SILT FENCE 16 INCHES ABOVE ORIGINAL GROUND SURFACE
6. LEAVE NO GAPS BETWEEN SECTIONS OF SILT FENCE. INSPECT AND REPAIR ONCE A WEEK AND AFTER EVERY 1/2 INCH RAIN. REMOVE SEDIMENT IF DEPOSITS REACH HALF THE FENCE HEIGHT.
7. MAXIMUM DISTANCE FROM TOE OF THE SLOPE, LEAVING AT LEAST 5' DISTANCE.
8. STAKE ON DOWNHILL SIDE OF GEOTEXTILE WITH 8" OF CLOTH CLOTH BELOW THE GROUND SURFACE; EXCESS MATERIAL TO LAY ON THE BOTTOM OF 6" TRENCH
9. ODOT TYPE "C" GEOTEXTILE FABRIC OR EQUAL
10. MAINTAIN UNTIL A LAWN IS ESTABLISHED.

MATERIALS: FILTER FABRIC SHALL MEET THE REQUIREMENTS OF CMS 712.09, TYPE C. SUPPORT STAKES SHALL BE A MINIMUM OF 1.5"X1.5" [38X38], NOMINAL AND SHALL BE HARDWOOD OF SOUND QUALITY. THE STAKES SHALL BE DRIVEN A MINIMUM OF 6" [150] BELOW THE BOTTOM OF THE FILTER FABRIC. THE MAXIMUM SPACING BETWEEN SUPPORT STAKES SHALL BE 10' [3 M].

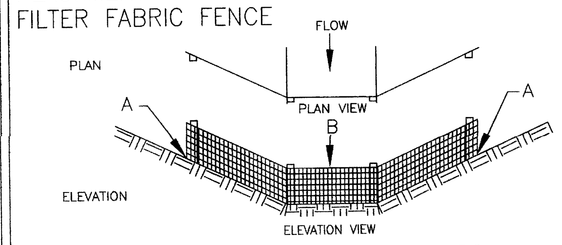
CONSTRUCTION: THE BOTTOM OF THE FABRIC SHALL BE BURIED 6" [150] BELOW THE GROUND. THE ENDS OF ADJACENT SECTIONS OF FENCE SHALL BE OVERLAPPED WITH THE END STAKE OF EACH SECTION WRAPPED TOGETHER PRIOR TO INSTALLATION. THE GROUND ELEVATION OF THE FENCE SHALL BE HELD CONSTANT EXCEPT THAT THE END ELEVATIONS SHALL BE RAISED UPSLOPE TO PREVENT FLOW AROUND THE END OF THE FENCE. MAINTENANCE: THE FILTER FABRIC FENCE SHALL BE MAINTAINED TO BE FUNCTIONAL. THIS SHALL INCLUDE REMOVAL OF TRAPPED SEDIMENT AND REQUIRED CLEANING, REPAIR, AND REPLACEMENT OF THE FILTER FABRIC. THE MAINTENANCE OR REPLACEMENT COST WILL BE PAID FOR BY THE DEPARTMENT UNDER UNIT BID PRICES, AGREED UNIT PRICES, OR CMS 109.04.

PAYMENT: THE COST OF ALL MATERIALS, CONSTRUCTION AND REMOVAL SHALL BE PAID FOR UNDER ITEM 207 – TEMPORARY PERIMETER FILTER FABRIC FENCE OR TEMPORARY DITCH CHECK FILTER FABRIC FENCE, LINEAR FOOT [METER].

CONSTRUCTION OF A FILTER BARRIER

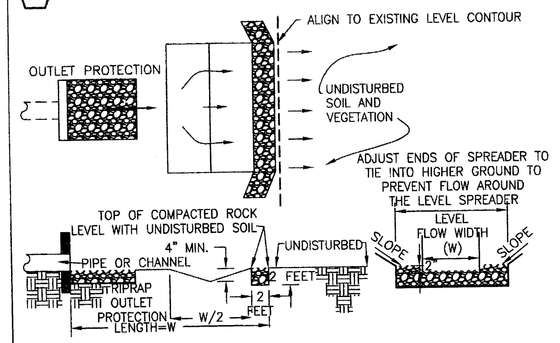


PLACEMENT AND CONSTRUCTION OF DITCH CHECK FILTER FABRIC FENCE



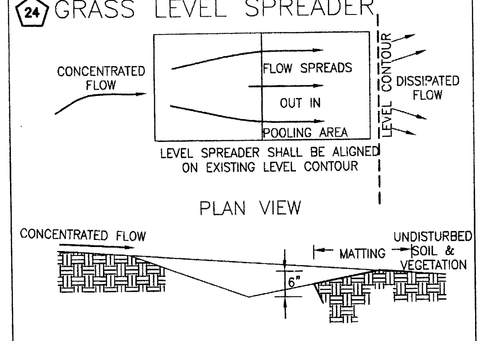
POINTS A SHOULD BE HIGHER THAN POINT B

23 RIPRAP LEVEL SPREADER



1. CONSTRUCT LEVEL ROCK WEIR ON A LEVEL CONTOUR TO ENSURE UNIFORM SPREADING OF STORM RUNOFF, CONVERTING CONCENTRATED FLOW TO SHEET FLOW.
2. ROCK SHALL BE ODOT TYPE C WHERE 50% OF THE MATERIAL BY WEIGHT IS GREATER THAN 12" AND 85% IS 6-18".
3. LEVEL SPREADERS MUST BE CONSTRUCTED ON UNDISTURBED SOIL, NOT ON FILL.
4. STORM RUNOFF PASSING OVER THE LEVEL SPREADER MUST OUTLET TO EROSION-RESISTANT AREAS WITH ESTABLISHED EXISTING VEGETATION.
5. ROCK IN LEVEL SPREADER SHALL BE COMPACTED WITH AT LEAST TWO PASSES OF HEAVY MACHINERY TO PREVENT FURTHER SETTLING.

24 GRASS LEVEL SPREADER



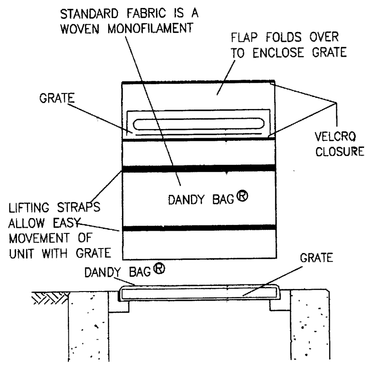
1. THE OUTLET EDGE OF THE POOLING AREA SHALL BE CUT ON A LEVEL CONTOUR TO ENSURE UNIFORM SPREADING OF STORM RUNOFF, CONVERTING CONCENTRATED FLOW TO SHEET FLOW.
2. LEVEL SPREADERS MUST BE CONSTRUCTED ON UNDISTURBED SOIL, NOT ON FILL MATERIALS.
3. STORM RUNOFF PASSING OVER THE LEVEL SPREADER MUST OUTLET TO EROSION-RESISTANT AREAS WITH ESTABLISHED EXISTING VEGETATION.

25 DANDY BAG®

THE PATENTED DANDY BAG® IS DESIGNED FOR USE WITH FLAT GRATES (INCLUDING ROUND) AND MOUNTABLE CURBS TO DETAIN SEDIMENT-LADEN STORM WATER. THE SUSPENDED SOLIDS ARE ALLOWED TO SETTLE OUT OF THE SLOWED FLOW PRIOR TO ENTERING THE DANDY BAG®.

INSTALLATION

1. STAND THE GRATE ON END
2. PLACE THE DANDY BAG® OVER THE GRATE
3. ROLL THE GRATE OVER SO THAT THE OPEN END IS UP
4. PULL UP THE SLACK
5. TUCK THE FLAP IN
6. PRESS THE VELCRO STRIPS TOGETHER
7. BE SURE THAT THE END OF THE GRATE IS COMPLETELY COVERED BY THE FLAP OR THE DANDY BAG® WILL NOT WORK PROPERLY
8. HOLDING THE HANDLES, CAREFULLY PLACE THE DANDY BAG® WITH THE GRATE INSERTED INTO THE CATCH BASIN FRAME



MAINTENANCE

TO INSURE PROPER OPERATION REMOVE SILT, SEDIMENT, AND DEBRIS FROM THE SURFACE AND THE VICINITY OF THE UNIT WITH A SQUARE POINT SHOVEL OR STIFF BRISTLE BROOM AWAY FROM ENVIRONMENTALLY SENSITIVE AREAS AND WATERWAYS IN MANNER SATISFACTORY TO THE ENGINEER/INSPECTOR. REMOVE FINE MATERIAL FROM INSIDE DANDY BAG® AS NEEDED. DISPOSE OF DANDY BAG® NO LONGER IN USE AT AN APPROPRIATE RECYCLING OR SOLID WASTE FACILITY.

INLET INSPECTION

TO INSPECT INLET, REMOVE DANDY BAG® WITH GRATE INSIDE, INSPECT CATCH BASIN AND REPLACE DANDY BAG® BACK INTO GRATE FRAME.

PONDING IS LIKELY IF SEDIMENT IS NOT REMOVED REGULARLY. THE DANDY BAG® MUST NEVER BE USED WHERE OVERFLOW MAY ENDANGER AN EXPOSED SLOPE. THE DANDY BAG® IS NOT INTENDED FOR ANY OTHER USE AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE.

BEAVER DAM PLAN DETAIL 26

THE PATENTED BEAVER DAM IS DESIGN FOR USE WITH CURB INLETS TO DETAIN SEDIMENT – LADEN STORM WATER. THE SUSPENDED SOLIDS ARE ALLOWED TO SETTLE OUT OF THE SLOWED FLOW PRIOR TO ENTERING THE BEAVER DAM.

INSTALLATION

1. *STAND THE GRATE ON END*
2. *SLIDE THE BEAVER DAM BAG ON WITH THE DAM ON TOP OF THE GRATE.*
3. *PULL THE EXCESS DOWN*
4. *LAY THE UNIT ON ITS SIDE*
5. *CAREFULLY TUCK THE FLAP IN*
6. *PRESS THE VELCRO STRIPS TOGETHER*
7. *INSTALL THE UNIT MAKING SURE THE FRONT EDGE OF THE GRATE IS INSERTED IN THE FRAME FIRST, THEN LOWER IT BACK INTO PLACE*
8. *PRESS THE VELCRO DOTS TOGETHER THAT ARE LOCATED UNDER THE STRAPS TO HOLD THE STRAPS TO THE SURFACE OF THE UNIT.*

MAINTENANCE

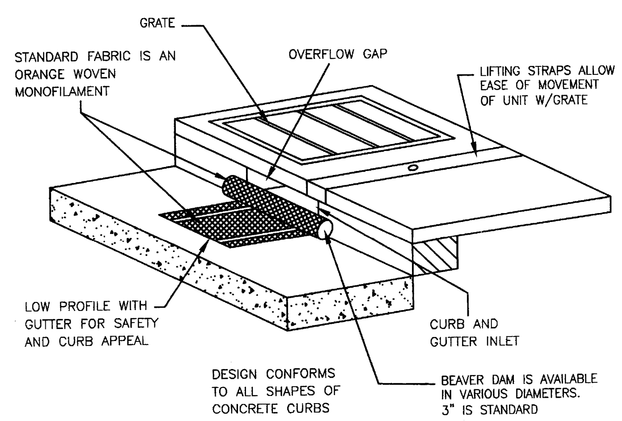
TO INSURE PROPER OPERATION REMOVE SILT, SEDIMENT, AND DEBRIS FROM THE SURFACE AND THE VICINITY OF THE UNIT WITH A SQUARE POINT SHOVEL OF STIFF BRISTLE BROOM AWAY FROM ENVIRONMENTALLY SENSITIVE AREAS AND WATERWAYS IN A MANNER SATISFACTORY TO THE ENGINEER/INSPECTOR, REMOVE FINE MATERIAL FROM INSIDE BEAVER DAM AS NEEDED.

INLET INSPECTION

TO INSPECT INLET, REMOVE BEAVER DAM WITH GRATE INSIDE, INSPECT CURB INLET/CATCH BASIN AND REPLACE BEAVER DAM INTO GRATE FROM AND AGAINST CURB OPENINGS.

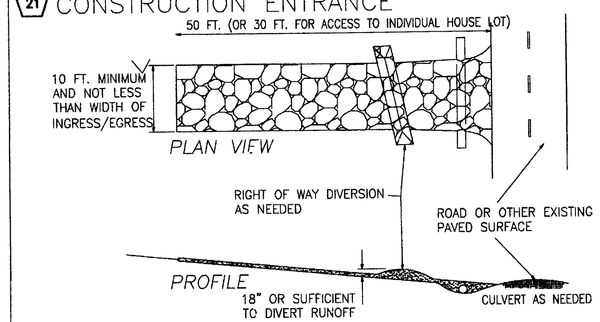
PONDING IS LIKELY IF SEDIMENT IS NOT REMOVED REGULARLY. THE BEAVER DAM MUST NEVER BE USED WHERE OVERFLOW MAY ENDANGER AN EXPOSED SLOPE. THE BEAVER DAM IS NOT INTENDED FOR ANY OTHER USE AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE.

RAINWATER AND LAND DEVELOPMENT:
OHIO'S STANDARDS FOR STORM WATER MANAGEMENT LAND DEVELOPMENT AND URBAN STREAM PROTECTION.



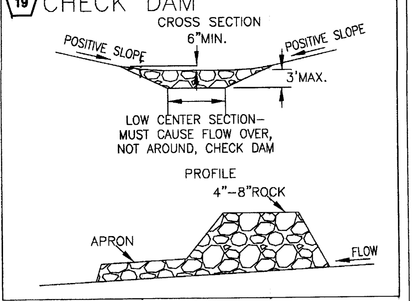
RAINWATER AND LAND DEVELOPMENT:
OHIO'S STANDARDS FOR STORMWATER MANAGEMENT LAND DEVELOPMENT AND URBAN STREAM PROTECTION

21 CONSTRUCTION ENTRANCE



1. STONE SIZE – MINIMUM TWO-INCH STONE SHALL BE USED, OR RECYCLED CONCRETE EQUIVALENT.
2. LENGTH – THE CONSTRUCTION ENTRANCE SHALL BE AS LONG AS REQUIRED TO STABILIZE HIGH TRAFFIC AREAS BUT NOT LESS THAN 50 FT. (EXCEPT ON SINGLE RESIDENCE LOTS WHERE A 30-FT. MINIMUM LENGTH APPLIES.
3. THICKNESS – THE STONE LAYER SHALL BE AT LEAST 6 IN. THICK.
4. WIDTH – THE ENTRANCE SHALL BE AT LEAST 10 FT. WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. BEDDING – A GEOTEXTILE SHALL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL HAVE A GRAB TENSILE STRENGTH OF AT LEAST 200 LB. AND A MULLEN BURST STRENGTH OF AT LEAST 190 LB.
6. CULVERT – A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FLOWING ACROSS THE ENTRANCE FROM BEING DIRECTED OUT ONTO PAVED SURFACES.
7. WATER BAR – A WATER BAR SHALL BE CONSTRUCTED AS PART OF THE CONSTRUCTION ENTRANCE IF NEEDED TO PREVENT SURFACE RUNOFF FROM FLOWING THE LENGTH OF THE CONSTRUCTION ENTRANCE AND OUT ONTO PAVED SURFACES.
8. MAINTENANCE – TOP DRESSING OF ADDITIONAL STONE SHALL BE APPLIED AS CONDITIONS DEMAND. MUD SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC ROADS, OR ANY SURFACE WHERE RUNOFF IS NOT CHECKED BY SEDIMENT CONTROLS, SHALL BE REMOVED IMMEDIATELY. REMOVAL SHALL BE ACCOMPLISHED BY SCRAPING OR SWEEPING. ENTRANCE SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION UNTIL DRIVEWAY IS PAVED.
9. CONSTRUCTION ENTRANCES SHALL NOT BE RELIED UPON TO REMOVE MUD FROM VEHICLES AND PREVENT OFF-SITE TRACKING. VEHICLES THAT ENTER AND LEAVE THE CONSTRUCTION SITE SHALL BE RESTRICTED FROM MUDDY AREAS. PARK ALL CONSTRUCTION VEHICLES ON THE STREET AND OFF THE SITE.

19 CHECK DAM



DESCRIPTION

CHECK DAMS ARE SMALL ROCK DAMS CONSTRUCTED IN SWALES, GRASSED WATERWAYS OR DIVERSIONS. THEY REDUCE THE VELOCITY OF CONCENTRATED FLOWS, THEREBY REDUCING EROSION WITHIN THE SWALE OR WATERWAY. WHILE THIS PRACTICE OFTEN TRAPS SOME SEDIMENT, ITS TRAPPING EFFICIENCY IS EXTREMELY POOR, THUS, IT SHOULD NOT BE USED AS A SEDIMENT TRAPPING PRACTICE.

CONDITIONS

THIS PRACTICE IS LIMITED TO USE IN SMALL OPEN CHANNELS WHERE IT IS NECESSARY TO SLOW THE VELOCITY OF FLOWS IN ORDER TO PREVENT EROSION. APPLICATIONS INCLUDE TEMPORARY SWALES WHICH, BECAUSE OF THEIR SHORT LENGTH OF SERVICE, ARE NOT PRACTICAL TO RECEIVE A NONERODIBLE LINING OR SWALES WHICH NEED PROTECTION DURING THE ESTABLISHMENT OF GRASS LININGS, SEE SPECIFICATIONS FOR ROCK CHECK AND GRAVEL RIFFLE FOR LARGER CHANNELS AND STREAMS.

DESIGN LIMITS

CHECK DAMS MUST NOT BE RELIED UPON TO REMOVE SEDIMENT FROM RUNOFF FLOWING THROUGH A CHANNEL BUT RATHER ARE USED TO REDUCE EROSION OF THE CHANNEL ITSELF. HOWEVER, INNOVATIVE APPLICATIONS MAY PRODUCE EFFECTIVE PONDING AREAS BEHIND CHECK DAM OR SILT FENCE STRUCTURES ADEQUATE TO TRAP SEDIMENT FROM SITES WITH VERY LITTLE SLOPE AND VERY LITTLE DRAINAGE AREA, LESS THAN 2% SLOPE AND LESS THAN 2 AC. DRAINAGE AREA.

SPLASH APRON

WHERE CHECK DAMS ARE EXPECTED TO BE IN USE FOR AN EXTENDED PERIOD OF TIME, A STONE APRON MAY BE CONSTRUCTED IMMEDIATELY DOWNSTREAM OF THE CHECK DAM TO PREVENT FLOWS FROM UNDERCUTTING THE STRUCTURE. THE APRON SHOULD BE 6 INCHES THICK AND ITS LENGTH TWO TIMES THE HEIGHT OF THE DAM.

CHECK DAMS

1. THE CHECK DAM SHALL BE CONSTRUCTED OF 4 TO 8 INCH DIAMETER STONE, PLACED SO THAT IT COMPLETELY COVERS THE WIDTH OF THE CHANNEL.
2. THE TOP OF THE CHECK DAM SHALL BE CONSTRUCTED SO THAT THE CENTER IS APPROXIMATELY 6 INCHES LOWER THAN THE OUTER EDGES SO WATER WILL FLOW ACROSS THE CENTER AND NOT AROUND THE ENDS.
3. THE MAXIMUM HEIGHT OF THE CHECK DAM AT THE CENTER OF THE WEIR SHALL NOT EXCEED 3 FT.
4. SPACING BETWEEN DAMS SHALL BE AS SHOWN BY THE CHECK DAM SPACING TABLE.

CHECK DAM SPACING				
DAM HEIGHT (FT.)	CHANNEL SLOPE			
	< 5%	5–10%	10–15%	15–20%
1	65 FT.	30 FT.	20 FT.	15 FT.
2	130 FT.	65 FT.	40 FT.	30 FT.
3	200 FT.	100 FT.	65 FT.	50 FT.

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Item	Revision Description	Date	Drwn	Chkr
1	ISSUED FOR PERMIT	06-04-07	JLR	RWB
2				
3				
4				
5				
6				
7				
8				
9				

STATE OF OHIO – ROBERT W. BAILEY – E-63886 – PROFESSIONAL ENGINEER – 6-4-07

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Checked by: RWB
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