

— PLASTIC LINER

UNDER BERM (ENTRY SIDE ONLY)

WELL VEGETATED, GRASSY AREA

NOT BE PLACED ON SLOPES GREATER THAN 5%.

LARGER THAN 150 MICRONS.

ALREADY ATTACHED.

ELEVATION VIEW

LOW VOLUME FILTER BAGS SHALL BE MADE FROM NON-WOVEN GEOTEXTILE MATERIAL SEWN WITH HIGH STRENGTH, DOUBLE STITCHED "J" TYPE SEAMS. THEY SHALL BE CAPABLE OF TRAPPING PARTICLES

A SUITABLE MEANS OF ACCESSING THE BAG WITH MACHINERY REQUIRED FOR DISPOSAL PURPOSES SHALL

BAGS SHALL BE KEPT AVAILABLE FOR REPLACEMENT OF THOSE THAT HAVE FAILED OR ARE FILLED. BAGS

BAGS SHALL BE LOCATED IN WELL—VEGETATED (GRASSY) AREA, AND DISCHARGE ONTO STABLE, EROSION RESISTANT AREAS. WHERE THIS IS NOT POSSIBLE, A GEOTEXTILE UNDERLAYMENT AND FLOW PATH SHALL BE PROVIDED. BAGS MAY BE PLACED ON FILTER STONE TO INCREASE DISCHARGE CAPACITY. BAGS SHALL

BE PROVIDED. FILTER BAGS SHALL BE REPLACED WHEN THEY BECOME 1/2 FULL OF SEDIMENT. SPARE

SHALL BE PLACED ON STRAPS TO FACILITATE REMOVAL UNLESS BAGS COME WITH LIFTING STRAPS

I. THE PUMP DISCHARGE HOSE SHALL BE INSERTED INTO THE BAGS IN THE MANNER SPECIFIED BY THE MANUFACTURER AND SECURELY CLAMPED. A PIECE OF PVC PIPE IS RECOMMENDED FOR THIS PURPOSE.

THE PUMPING RATE SHALL BE NO GREATER THAN 750 GPM OR 1/2 THE MAXIMUM SPECIFIED BY THE

GEOTEXTILE FILTER BAG

MANUFACTURER, WHICHEVER IS LESS. PUMP INTAKES SHALL BE FLOATING AND SCREENED.

IMMEDIATELY AND NOT RESUME UNTIL THE PROBLEM IS CORRECTED.

. FILTER BAGS SHALL BE INSPECTED DAILY. IF ANY PROBLEM IS DETECTED, PUMPING SHALL CEASE

`PLASTIC LINER OVER BERM —

GRAVEL-FILLED BAG ----

TOP OF CUT -

ENTRY SIDE OF WASHOUT -

NOTES:

EARTHEN BERM ----

PLASTIC LINER OVER BERM -

GRAVEL-FILLED BAG -

CONCRETE WASH AREA

EARTHEN BERM -

EARTHEN BERM

1. THE CONCRETE WASHOUT SIGN SHALL BE INSTALLED WITHIN 32'-10" OF THE TEMPORARY CONCRETE WASHOUT FACILITY.

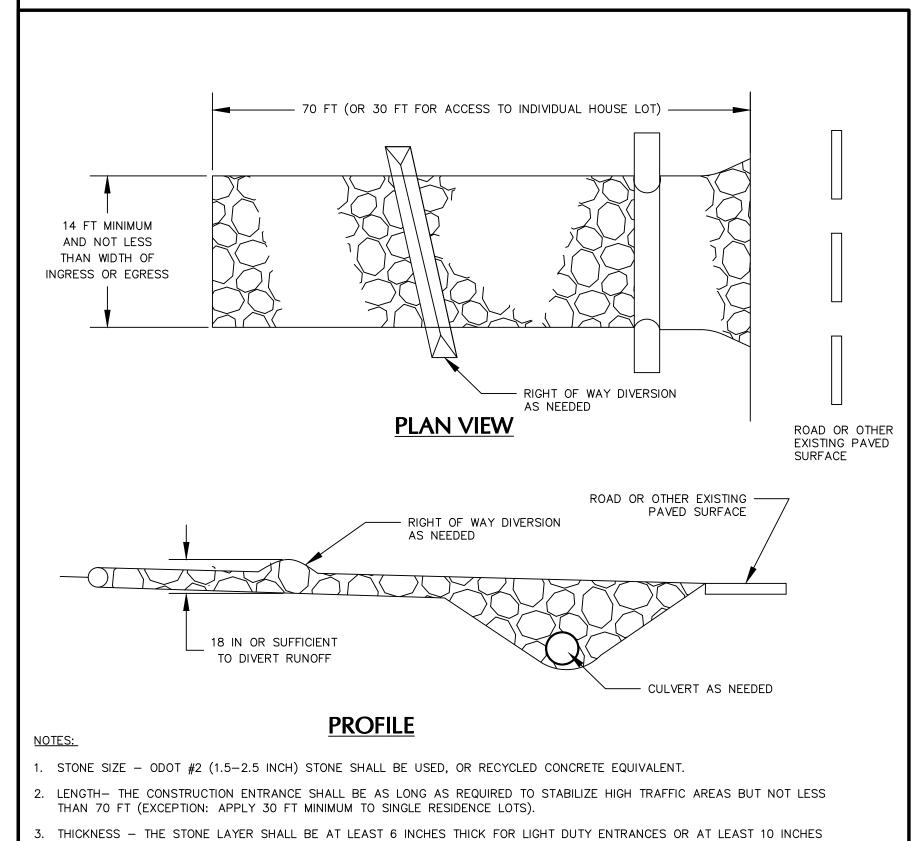
2. PLASTIC LINER SHALL BE ANCHORED WITH GRAVEL-FILLED BAGS FOR BELOW GRADE CONCRETE WASHOUT FACILITY.

UNDER BERM

(ENTRY SIDE ONLY)

SECTION B-B

SECTION A-A



STRONG ROT-PROFF POLYMERIC FIBERS AND MEET THE FOLL	LOWING SPECIFICATIONS:
GEOTEXTILE SPECIFICATION F	OR CONSTRUCTION ENTRANCE
MINIMUM TENSILE STRENGTH	200 LBS
MINIMUM PUNCTURE STRENGTH	80 PSI
MINIMUM TEAR STRENGTH	50 LBS
MINIMUM BURST STRENGTH	320 PSI
MINIMUM ELONGATION	20%
EQUIVALENT OPENING SIZE	EOS < 0.6 mm

1X10-3 cm/sec

6. TIMING — THE CONSTRUCTION ENTRANCE SHALL BE INSTALLED AS SOON AS IS PRACTICABLE BEFORE MAJOR GRADING ACTIVITIES.

7. CULVERT — A PIPE OR CULVERT SHALL BE CONSTRUCTED UNDER THE ENTRANCE IF NEEDED TO PREVENT SURFACE WATER FROM FLOWING ACROSS THE ENTRANCE OR TO PREVENT RUNOFF FROM BEING DIRECTED OUT ONTO PAVED SURFACES.

. WIDTH — THE ENTRANCE SHALL BE AT LEAST 15 FEET WIDE, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS

5. GEOTEXTILE - A GEOTEXTILE SHALL BE LAID OVER THE ENTIRE AREA PRIOR TO PLACING STONE. IT SHALL BE COMPOSED OF

FOR HEAVY DUTY USE.

PERMITTIVITY

OR EGRESS OCCURS.

--- INTAKE HOSE

- 8. 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.
- 9. 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.
- 10. 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.

 1. REMOVAL THE ENTRANCE SHALL REMAIN IN PLACE UNTIL THE DISTURBED AREA IS STABILIZED OR REPLACED WITH A PERMANENT ROADWAY OR ENTRANCE.

ROCK CONSTRUCTION ENTRANCE



KEY PLAN

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PROFESSIONAL SEAL:

DRAWING RELEASE:		
No.	Date	Description
	11/07/2018	Schematic Design Set
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SHEET TITLE:		
SOIL EROSION AND		

C501

SHEET NUMBER:

SEDIMENT CONTROL

DETAILS

TEMPORARY SEEDING SPECIES SELECTION		LD /1 000 FT 2	LD/DED AC
EEDING DATES	SPECIES	LB./1,000 FT. ²	LB/PER AC.
MARCH 1 TO AUGUST 15	OATS	3	128 (4 BUSHEL)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	1	40
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	ANNUAL RYEGRASS	1.25	55
	PERENNIAL RYEGRASS	3.25	142
	CREEPING RED FESCUE	0.4	17
	KENTUCK BLUEGRASS	0.4	17
	OATS	3	128 (3 BUSHEL)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
AUGUST 16 TO NOVEMBER 1	RYE	3	112 (2 BUSHEL)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	WHEAT	3	120 (2 BUSHEL)
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	PERENNIAL RYEGRASS	1	40
	TALL FESCUE	1	40
	ANNUAL RYEGRASS	1	40
	ANNUAL RYEGRASS	1.25	40
	PERENNIAL RYEGRASS	3.25	40
	CREEPING RED FESCUE	0.4	40
	KENTUCK BLUEGRASS	0.4	
NOVEMBER 1 TO FEBRUARY 29	USE MULCH ONLY OR D	ORMANT SEEDING	
IOTE: OTHER APPROVED SEED SPECIES MAY BE SUBSTITUTED			
GENERAL NOTES:	4. SOIL AMENDMENTS — TEMPORARY SEEDING RATES SHALL ESTABLISH ADEQUATE STANDS OF		
1. STRUCTURAL EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS AND SEDIMENT TRAPS SHALL BE INSTALLED AND STABILIZED WITH	SOIL AMEN	N, WHICH MAY REQUIRE TH IDMENTS. BASE RATES FOR SHALL BE USED.	
TEMPORARY SEEDING PRIOR TO GRADING THE REST OF THE CONSTRUCTION—SITE.	5. SEEDING M	IETHOD — SEED SHALL BE WITH A CYCLONE SPREAD	
O TEMPODADY CEED CHALL DE ADDUED DETWEEN	UNIFURML	WITH A CICLUME SPREAL	JER, DRILL,

2. TEMPORARY SEED SHALL BE APPLIED BETWEEN CULTIPACKER SEEDER, OR HYDROSEEDER. WHEN CONSTRUCTION OPERATIONS ON SOIL THAT WILL FEASIBLE, SEED THAT HAS BEEN BROADCAST NOT BE GRADED OR REWORKED FOR 21 DAYS OR SHALL BE COVERED BY RAKING OR DRAGGING AND GREATER. THESE IDLE AREAS SHALL BE SEEDED THEN LIGHTLY TAMPED INTO PLACE USING A ROLLER OR CULTIPACKER. IF HYDROSEEDING IS WITHIN 7 DAYS AFTER GRADING. USED, THE SEED AND FERTILIZER WILL BE MIXED 3. THE SEEDBED SHOULD BE PULVERIZED AND LOOSE ON-SITE AND THE SEEDING SHALL BE DONE TO ENSURE THE SUCCESS OF ESTABLISHING IMMEDIATELY AND WITHOUT INTERRUPTION. VEGETATION. TEMPORARY SEEDING SHOULD NOT

• MECHANICAL - A DISK, CRIMPER, OR SIMILAR

LENGTH OF APPROXIMATELY 6 INCHES.

MULCH NETTING — NETTING SHALL BE USED

ACCORDING TO THE MANUFACTURERS

RECOMMENDATIONS. NETTING MAY BE NECESSARY TO HOLD MULCH IN PLACE IN

SYNTHETIC BINDERS — SYNTHETIC BINDERS

WOOD-CELLULOSE FIBER - WOOD-CELLULOSE

FIBER BINDER SHALL BE APPLIED AT A NET DRY WT OF 750 LB/AC. THE WOOD-CELLULOSE

FIBER SHALL BE MIXED WITH WATER AND THE MIXTURE SHALL CONTAIN A MAXIMUM OF 50

MANUFACTURER.

LB/GAL.

SPECIFICATIONS FOR TEMPORARY SEEDING

TYPE TOOL SHALL BE SET STRAIGHT TO PUNCH

OR ANCHOR THE MULCH MATERIAL INTO THE

AREAS OF CONCENTRATED RUNOFF AND ON

SUCH AS ACRYLIC DLR (AGRI-TAC), DCA-70,

PETROSET, TERRA TRACK OR EQUIVALENT MAY BE USED AT RATES RECOMMENDED BY THE

SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED BUT LEFT TO A

- MULCHING TEMPORARY SEEDING:

 3. STRAW MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER.

 ANCHORING METHODS:
- 1. APPLICATIONS OF TEMPORARY SEEDING SHALL INCLUDE MULCH, WHICH SHALL BE APPLIED DURING OR IMMEDIATELY AFTER SEEDING. SEEDINGS MADE DURING OPTIMUM SEEDING DATES ON FAVORABLE, VERY FLAT SOIL CONDITIONS MAY NOT NEED MULCH TO ACHIEVE ADEQUATE STABILIZATION.

BE POSTPONED IF IDEAL SEEDBED PREPARATION

IS NOT POSSIBLE.

MATERIALS:
 STRAW - IF STRAW IS USED, IT SHALL BE UNROTTED SMALL-GRAIN STRAW APPLIED AT A RATE OF 2 TONES PER ACRE OR 90 LBS/1000

SQ FT (2-3 BALES).

- HYDROSEEDERS IF WOOD CELLULOSE FIBER IS USED, IT SHALL BE USED AT 2000 LBS/AC OR 46 LB/ 1000 SQ FT.
 OTHER OTHER ACCEPTABLE MULCHES
- OTHER OTHER ACCEPTABLE MULCHES
 INCLUDE MULCH MATTINGS APPLIED ACCORDING
 TO MANUFACTURER'S RECOMMENDATIONS OR
 WOOD CHIPS APPLIED AT 6 TON/AC.

- SITE PREPARATION
- 1. A SUBSOILER, PLOW OR OTHER IMPLEMENT SHALL BE USED TO REDUCE SOIL COMPACTION AND ALLOW MAXIMUM INFILTRATION. (MAXIMIZING INFILTRATION WILL HELP CONTROL BOTH RUNOFF RATE AND WATER QUALITY.) SUBSOILING SHOULD BE DONE WHEN THE SOIL MOISTURE IS LOW ENOUGH TO ALLOW THE SOIL TO CRACK OR FRACTURE. SUBSOILING SHALL NOT BE DONE ON SLIP-PRONE AREAS WHERE SOIL PREPARATION SHOULD BE LIMITED TO WHAT IS NECESSARY FOR ESTABLISHING VEGETATION.
- 2. THE SITE SHALL BE GRADED AS NEEDED TO PERMIT THE USE OF CONVENTIONAL EQUIPMENT FOR SEEDBED PREPARATION AND SEEDING.
- 3. TOPSOIL SHALL BE APPLIED WHERE NEEDED TO ESTABLISH VEGETATION.

 SEEDBED PREPARATION
- 1. LIME AGRICULTURAL GROUND LIMESTONE SHALL BE APPLIED TO ACID SOIL AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, LIME SHALL BE APPLIED AT THE RATE OF 100 POUNDS PER 1,000 SQ FT OR 2 TONS PER ACRE.
- RATE OF 100 POUNDS PER 1,000 SQ FT OR 2 TONS PER ACRE.

 2. FERTILIZER FERTILIZER SHALL BE APPLIED AS RECOMMENDED BY A SOIL TEST. IN LIEU OF A SOIL TEST, FERTILIZER SHALL BE APPLIED AT A RATE OF 100 POUNDS PER 1000 SQ FT
- OR 1000 POUNDS PER ACRE OF A 10-10-10 OR 12-12-12 ANALYSES.

 3. THE LIME AND FERTILIZER SHALL BE WORKED INTO THE SOIL WITH A DISK HARROW, SPRING-TOOTH HARROW, OR OTHER SUITABLE FIELD IMPLEMENT TO A DEPTH OF 3 INCHES.
- ON SLOPING LAND THE SOIL SHALL BE WORKED ON THE CONTOUR.

 SEEDING DATES AND SOIL CONDITIONS
- SEEDING SHOULD BE DONE MARCH 1 TO MAY 31 OR AUGUST TO SEPTEMBER 30. IF SEEDING OCCURS OUTSIDE OF THE ABOVE—SPECIFIED DATES, ADDITIONAL MULCH AND IRRIGATION MAY BE REQUIRED TO ENSURE A MINIMUM OF 80% GERMINATION. TILLAGE FOR SEEDBED PREPARATION SHOULD BE DONE WHEN THE SOIL IS DRY ENOUGH TO CRUMBLE AND NOT FORM RIBBONS WHEN COMPRESSED BY HAND. FOR WINTER SEEDING, SEE THE FOLLOWING SECTION ON DORMANT SEEDING.
- DORMANT SEEDINGS
- 1. SEEDINGS SHOULD NOT BE MADE FROM OCTOBER 1 THROUGH NOVEMBER 20. DURING THIS PERIOD, THE SEEDS ARE LIKELY TO GERMINATE BUT PROBABLY WILL NOT BE ABLE TO
- SURVIVE THE WITNER.

 2. THE FOLLOWING METHODS MAY BE USED FOR "DORMANT SEEDING"
- FROM OCTOBER 1 THROUGH NOVEMBER 20, PREPARE THE SEEDBED, ADD THE REQUIRED
 AMOUNTS OF LIME AND FERTILIZER, THEN MULCH AND ANCHOR. AFTER NOVEMBER 20, AND
 BEFORE MARCH 15, BROADCAST THE SELECTED SEED MIXTURE. INCREASE THE SEEDING
 RATES BY 50% FOR THIS TYPE OF SEEDING.
- FROM NOVEMBER 20 THROUGH MARCH 15, WHEN SOIL CONDITIONS PERMIT, PREPARE THE SEEDBED, LIME AND FERTILIZE, APPLY THE SELECTED SEED MIXTURE, MULCH AND ANCHOR. INCREASE THE SEEDING RATES BY 50% FOR THIS TYPE OF SEEDING.

APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL CULTIPACKER SEEDER, OR HYDRO—SEEDER (SLURRY MAY INCLUDE SEED AND FERTILIZER) ON A FIRM MOIST SEEDBED.
 WHERE FEASIBLE, EXCEPT WHEN A CULTIPACKER TYPE SEEDER IS USED, THE SEEDBED SHOULD BE FIRMED FOLLOWING SEEDING OPERATIONS WITH A CULTIPACKER, ROLLER OR LIGHT DRAG. ON SLOPING LAND, SEEDING OPERATIONS SHOULD BE ON THE CONTOUR WHERE

MULCHING

1. MULCH MATERIAL SHALL BE APPLIED IMMEDIATELY AFTER SEEDING. DORMANT SEEDING SHALL
BE MULCHED. 100% OF THE GROUND SURFACE SHALL BE COVERED WITH AN APPROVED
MATERIAL.

- STRAW IF STRAW IS USED IT SHALL BE UNROTTED SMALL—GRAIN STRAW APPLIED AT THE RATE OF 2 TONS PER ACRE OR 90 POUNDS (TWO TO THREE BALES) PER 1000 SQ FT. THE MULCH SHALL BE SPREAD UNIFORMLY BY HAND OR MECHANICALLY APPLIED SO THE SOIL SURFACE IS COVERED. FOR UNIFORM DISTRIBUTION OF HAND—SPREAD MULCH, DIVIDE AREA INTO APPROXIMATELY 1000 SQ FT SECTIONS AND SPREAD TWO 45 LB BALES OF STRAW IN EACH SECTION.

 HYDROSEEDERS IF WOOD CELLULOSE FIBER IS USED, IT SHALL BE APPLIED AT 2000
- LB/AC OR 46 LB/1000 SQ FT.
 OTHER OTHER ACCEPTABLE MULCHES INCLUDE ROLLED EROSION CONTROL MATTINGS OR BLANKETS APPLIED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS OR WOOD CHIPS APPLIED AT 6 TONS PER ACRE.
- 3. STRAW AND MULCH ANCHORING METHODS

PER 100 GALLONS OF WATER.

- STRAW MULCH SHALL BE ANCHORED IMMEDIATELY TO MINIMIZE LOSS BY WIND OR WATER.

 MECHANICAL A DISK, CRIMPER OR SIMILAR TYPE TOOL SHALL BE SET STRAIGHT TO PUNCH OR ANCHOR THE MULCH MATERIAL INTO THE SOIL. STRAW MECHANICALLY ANCHORED SHALL NOT BE FINELY CHOPPED, BUT GENERALLY BE LEFT LONGER THAN 6 INCHES.
- MULCH NETTING NETTING SHALL BE USED ACCORDING TO THE MANUFACTURER'S RECOMMENDATIONS. NETTING MAY BE NECESSARY TO HOLD MULCH IN PLACE IN AREAS OF CONCENTRATED RUNOFF AND ON CRITICAL SLOPES.

 ASPHALT EMULSION ASPHALT SHALL BE APPLIED AS RECOMMENDED BY THE
- MANUFACTURER OR AT THE RATE OF 160 GALLONS PER ACRE.

 SYNTHETIC BINDERS SYNTEHTIC BINDERS SUCH AS ACRYLIC DLR (AGRI—TAC), DCA—70, PETROSET, TERRA TACK OR EQUIVALENT MAY BE USED AT RATES SPECIFIED BY THE MANUFACTURER. WOOD CELLULOSE FIBER WOOD CELLULOSE FIBER SHALL BE APPLIED AT A NET DRY WEIGHT OF 750 POUNDS PER ACRE. THE WOOD CELLULOSE FIBER SHALL BE

MIXED WITH WATER WITH THE MIXTURE CONTAINING A MAXIMUM OF 50 POUNDS CELLULOSE

IRRIGATION

PERMANENT SEEDING SHALL INCLUDE IRRIGATION TO ESTABLISH VEGETATION DURING DRY WEATHER OR ON ADVERSE SITE CONDITIONS, WHICH REQUIRE ADEQUATE MOISTURE FOR SEED GERMINATION AND PLANT GROWTH.

IRRIGATION RATES SHALL BE MONITORED TO PREVENT EROSION AND DAMAGE TO SEEDED AREAS FROM EXCESSIVE RUNOFF.

	SEEDING RATE		NOTES.	
SEED MIX	LB/AC	LB/1000 FT ²	NOTES:	
	GEI	NERAL USE	-	
CREEPING RED FESCUE	20-40	.5-1	FOR CLOSE MOWING & FOR WATERWA	
DOMESTIC RYGRASS	10-20	.255	WITH <2.0 FT/SEC VELOCITY	
KENTUCKY BLUEGRASS	10-20	.255		
TALL FESCUE	40-50	1-1.25		
TURF-TYPE (DWARF) FESCUE	90	2.25		
	STEEP BAN	KS OR CUT SLO	PES	
TALL FESCUE	40-50	1-1.25		
CROWN VETCH	10-20	.255	DO NOT SEED LATER THAN AUGUS	
TALL FESCUE	20-30	.575		
FLAT PEA	20-25	.575	DO NOT SEED LATER THAN AUGUS	
TALL FESCUE	20-30	.575		
	ROAD DITO	CHES AND SWA	LES	
TALL FESCUE	40-50	1-1.25		
TURF TYPE (DWARF) FESCUE	90	2.25		
KENTUCKY BLUEGRASS	5	0.1		
		LAWNS		
KENTUCKY BLUEGRASS	100-120	2		
PERENNIAL RYEGRASS		2		
KENTUCKY BLUEGRASS	100-120	2	EOD CHADED ADEAC	
CREEPING RED FESCUE		1.5	FOR SHADED AREAS	

SPECIFICATIONS FOR PERMANENT SEEDING

KEY PLAN

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PROFESSIONAL SEAL:





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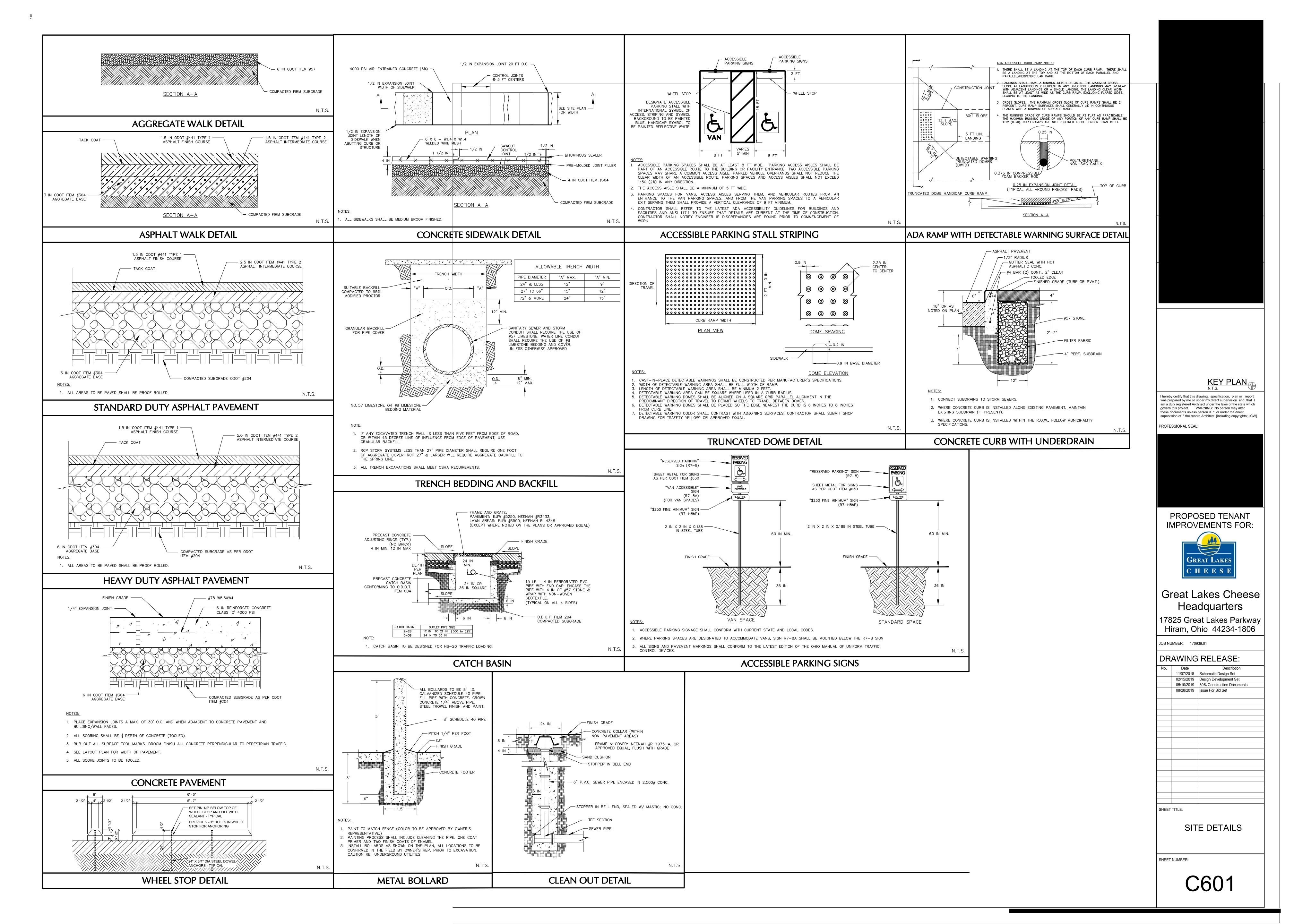
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	11/07/2018	Schematic Design Set
	02/15/2019	Design Development Set
	05/10/2019	80% Construction Documents
	08/28/2019	Issue For Bid Set

SOIL EROSION AND SEDIMENT CONTROL DETAILS

SHEET NUMBER:

C502



CLEVELAND WATER NOTES FOR WATER MAIN INSTALLATION AND/OR REPLACEMENT

DEVELOPERS, ENGINEERS, AND CONTRACTORS ARE TO ABIDE BY THE MOST CURRENT VERSION OF THE CLEVELAND WATER NOTES AND DETAILS. THE MOST UP-TO-DATE VERSION CAN BE FOUND AT WWW.CLEVELANDWATER.COM/CONSTRUCTION/

GENERAL

ACCURACY IS NOT GUARANTEED.

CLEVELAND DIVISION OF WATER INSPECTOR.

 ALL WATER WORK REQUIRED, WHETHER SHOWN ON THE PLANS OR AS DIRECTED BY CLEVELAND WATER, SHALL BE AT THE EXPENSE OF THE PROJECT UNLESS OTHERWISE AGREED TO BY THE COMMISSIONER OF THE CLEVELAND DIVISION OF WATER.

THE INFORMATION SHOWN ON THE CLEVELAND DIVISION OF WATER'S SUMMARY OF WORK/CHARGE LETTER, STRIP MAPS, AS BUILT DRAWINGS, AND GIS ARE TAKEN FROM EXISTING AVAILABLE RECORDS, AND THEIR

3. CALL THE INSPECTION AND ENFORCEMENT UNIT AT 216-664-2342 TO SCHEDULE A PRECONSTRUCTION MEETING AT LEAST 1 WEEK PRIOR TO STARTING CONSTRUCTION. THE OPERATION OF ANY VALVE OR ALTERATION OF ANY PART OF THE WATER SYSTEM BY CONTRACTORS OR THEIR EMPLOYEES IS PROHIBITED WITHOUT THE SUPERVISION OF THE

4. PRIOR TO REQUESTING CHLORINATION, THE CONTRACTOR SHALL SUPPLY THE CLEVELAND WATER INSPECTOR WITH REDLINE DRAWINGS SHOWING CHANGES MADE FROM THE APPROVED DESIGN DRAWINGS AND ACTUAL MEASUREMENTS. CHLORINATION SHALL NOT OCCUR BEFORE THESE DRAWINGS ARE SUBMITTED.

5. FOR THE PURPOSES OF CHLORIMATION AND BACTERIOLOGICAL TESTING OF THE WATER MAINS THE CONTRACTOR SHALL PROVIDE AND INSTALL, AT EACH OF THE CHLORINATION PIT LOCATIONS SHOWN AND AT OTHER LOCATIONS DETERMINED BY CLEVELAND WATER. FLUSHING / SAMPLING TAP SIZES ARE TO BE DETERMINED CLEVLEAND WATER. CHLORINATION PITS SHALL BE SIX (6) FOOT SQUARE AND ARE TO MEET OSHA STANDARDS. NO CUSTOMER TAPS SHALL BE INSTALLED PRIOR TO CHLORINATION.

6. A TWO YEAR WARRANTY, COMMENCING FROM THE DATE OF ACCEPTANCE OF THE FINAL CHLORINATION OF THE WATER MAIN INSTALLATION SHALL BE PROVIDED BY THE BUILDER/DEVELOPER AND/OR CONTRACTOR FOR ALL WATER MAINS AND SERVICE CONNECTION WORK PERFORMED BY THE CONTRACTOR, INCLUDING TAPS IF PERFORMED. SHOULD ANY LEAKS OCCUR AND REPAIRS BE REQUIRED DUE TO DEFECTIVE MATERIAL OR POOR WORKMANSHIP, A LETTER INDICATING THE COMMENCEMENT DATE AND END DATE OF THE WARRANTY SHALL BE INCLUDE WITH THE AS-BUILT SUBMISSION IN NOTE 12.

7. USE BACKFILL MATERIAL AS SPECIFIED AND COMPACT SUFFICIENTLY IN THOSE AREAS WHERE EXISTING MAINS AND WATER SERVICE CONNECTIONS ARE EXPOSED. (SEE CLEVELAND WATER STANDARD DETAIL STD. 604)

8. ALL MATERIALS, INCLUDING BUT NOT LIMITED TO WATER MAINS, FIRE HYDRANTS, VALVES, CONNECTION MATERIALS AND OTHER WATER APPURTENANCES, SHALL BE NEW AND UNUSED AND SHALL CONFORM TO THE MOST CURRENT CLEVELAND WATER SPECIFICATIONS. ALL MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH CLEVELAND WATER'S

9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO EXISTING WATER MAINS AND APPURTENANCES THEREOF WHEN

CONSTRUCTING OR CONNECTING THE NEW WATER MAIN. THIS SHALL

INCLUDE LEADED JOINTS IN EXISTING FITTINGS WHICH MAY REQUIRE REPLACEMENT FITTINGS AT THE DISCRESION OF THE INSPECTOR IF IT IS DETERMINED THEY WERE DISTURBED. ALL REPAIRS TO DAMAGED EXISTING FACILITIES SHALL BE MADE BY THE CONTRACTOR, AT THE PROJECT' EXPENSE, TO THE SATISFACTION OF CLEVELAND WATER.

10. ALL HYDROSTATIC PRESSURE TESTING SHALL BE DONE BY THE CONTRACTOR IN THE PRESENCE OF THE CLEVELAND WATER INSPECTOR. THE HYDROSTATIC TEST PRESSURE SHALL BE 75 PSI ABOVE THE STATIC PRESSURE PREVAILING AT THE SITE, BUT IN NO CASE LESS THAN 150 PSI. THE PRESSURE TEST SHALL BE FOR A DURATION OF TWO (2) HOURS WITH THE PRESSURE BEING MAINTAINED WITHIN 5 PSI OF THE REQUIRED TEST PRESSURE. SHOULD THE PRESSURE TEST FAIL THE CONTRACTOR SHALL FIND AND CORRECT THE DEFICIENCY(IES) TO THE SATISFACTION OF CLEVELAND WATER AND REPEAT THE TWO (2) HOUR PRESSURE TEST.

11. ALL BURIED WATER MAINS, FITTINGS, VALVES, FIRE HYDRANT BRANCH PIPING AND APPURTENANCES SHALL BE ENCASED WITH POLYETHYLENE WRAPPING IN ACCORDANCE WITH THE MOST CURRENT REVISION OF ANSI/AWWA C-105/A21.5 INSTALLATION METHOD "A". ALTERNATE INSTALLATION METHOD A FOR WET TRENCH CONDITIONS SHALL BE USED WHEN WATER MAINS ARE INSTALLED IN UNPAVED LOCATIONS SUCH AS TREE LAWNS AND EASEMENTS TRAVERSING PRIVATE PROPERTY.

12. THE PROJECT'S PROFESSIONAL ENGINEER OR A DESIGNATED PROFESSIONAL SURVEYOR SHALL OBTAIN ACTUAL FIELD MEASUREMENTS OF THE MAIN DURING INSTALLATION AND SHALL FURNISH THE CLEVELAND WATER INSPECTOR WITH AS-BUILT DRAWINGS MEETING CLEVELAND WATER STANDARDS WITHIN 30 DAYS OF THE WATER MAIN GOING INTO SERVICE AND ALL TAPS/RETAPS BEING MADE. ONE HARD COPY AND ONE PDF COPY SHALL BE PROVIDED. DRAWINGS SHALL BE SIGNED, DATED, AND STAMPED WITH THE ENGINEER OR SURVEYOR'S SEAL. REDLINE DRAWINGS ARE NOT SUFFICIENT. CLEVELAND WATER RESERVES THE RIGHT TO WITHHOLD PAYMENT AND/OR APPROVAL OF FUTURE WORK IF AS-BUILTS ARE NOT SUBMITTED.

WATER MAINS:

13. ALL PIPE, UNLESS OTHERWISE APPROVED BY CLEVELAND WATER, SHALL BE DUCTILE IRON, MINIMUM CLASS 52, CEMENT LINED HAVING PUSH-ON JOINTS WITH RADIALLY COMPRESSED RUBBER RING GASKET AND INSTALLED AS PER THE MOST CURRENT REVISION OF AWWA C600.

14. ALL FITTINGS, UNLESS OTHERWISE CALLED FOR, SHALL BE APPROVED DUCTILE IRON, CLASS 350, CEMENT LINED OR FUSION BONDED EPOXY COATED. ALL FITTINGS AND PIPE CONNECTED TO FITTINGS SHALL BE RESTRAINED USING A "RETAINED" MECHANICAL JOINT CONFORMING TO THE MATERIAL AND PERFORMANCE REQUIREMENTS OF ANSI/AWWA C-110/A21.10 AND ANSI/AWWA C-111/A21.11, OR "COMPACT" FITTINGS IN ACCORDANCE WITH ANSI/AWWA C-153/A21.53, EXCEPT FOR ANCHOR TEES, REDUCERS OR OTHER SPECIAL CIRCUMSTANCES WHEN BY CLEVELAND WATER, ALL FITTINGS ARE TO HAVE BELL ENDS.

15. ALL BOLTS AND NUTS ON ALL "RETAINED" MECHANICAL JOINTS SHALL HAVE FIELD APPLIED ONE (1) COAT OF BITUMASTIC PAINTING.

16. WHERE SHOWN ON THE PLANS, OR WHEN OTHERWISE CALLED FOR, PIPE AND FITTINGS SHALL HAVE AN APPROVED "TYPE I" OR "TYPE II" BOLTLESS RESTRAINED PUSH-ON JOINTS TO THE LIMITS SHOWN ON THE DRAWINGS.

17. AT THE END OF EACH WORKDAY, THE CONTRACTOR SHALL PLUG ALL OPEN PIPE ENDS WITH WATER TIGHT PLUGS AS PER THE "PREVENTITIVE AND CORRECTIVE MEASURES DURING CONSTRUCTION" SECTION OF THE MOST CURRENT REVISION OF AWWA C-651 AS TO PREVENT THE INFILTRATION OR INTRUSION OF ANY FOREIGN OBJECTS OR MATERIALS, DATE STAMPED DIGITAL PHOTOS SHALL BE PROVIDED FOR EACH WORKDAY DEMONSTRATING THAT PROPER AWWA C-651 METHODS WERE USED TO PLUG ALL OPEN WATER MAIN ENDS. EACH PHOTO SHALL CLEARLY IDENTIFY THE STATION AT WHICH THE PIPE IS PLUGGED. THE STATIONING SHALL BE SHOWN BY THE USE OF A STATION MARKER

PHOTOS SHALL BE SUBMITTED ON A DAILY BASIS UNLESS OTHERWISE DEFINED BY THE CLEVELAND WATER INSPECTOR OR ENGINEER. ALL PHOTOS TAKEN OVER THE COURSE OF THE PROJECT SHALL BE SUBMITTED BY THE CONTRACTOR AS PART OF THE AS-BUILT SUBMITTAL. PHOTOS ARE TO INCLUDE STATIONING MARKERS. AS-BUILTS SHALL BE DEEMED

INCOMPLETE WITHOUT SAID COLLECTION OF DIGITAL PHOTOS.

HYDRANTS:

PLACED AT THE PLUGGED PIPE END.

18. IN ALL HYDRANT INSTALLATIONS THE CONTRACTOR SHALL FACE ALL HYDRANT'S 4" (STEAMER) NOZZLE TOWARD THE PAVEMENT PRIOR TO TESTING AND CHLORINATION OF WATER MAINS. ONLY CLEVELAND WATER APPROVED HYDRANT MODELS SHALL BE INSTALLED. CONTRACTOR SHALL CONSULT WITH THE LOCAL MUNICIPALITY'S ENGINEERING OR SERVICE DEPARTMENT TO OBTAIN HYDRANT NOZZLE THREAD REQUIREMENTS IF NOT INDICATED ON THE APPROVED PLANS.

VALVES

19. ALL VALVES SHALL BE AN APPROVED MODEL RESILIENT SEATED GATE VALVES AS PER THE MOST CURRENT VERSION OF AWWA C509 OR C515. VALVE OPERATING NUTS SHALL BE TAPERED (1 7/8" TO 2" FROM TOP TO BOTTOM) AND 2" DEEP. VALVES MORE THAN 10 YEARS OLD AT TIE IN POINTS TO EXISTING MAINS SHALL BE REPLACED AT THE PROJECT'S EXPENSE UNLESS OTHERWISE DIRECTED.

SERVICE CONNECTIONS:

20. ANY CITYSIDE LEAD SERVICE CONNECTION ENCOUNTERED SHALL BE REPLACED WITH TYPE K COPPER OR OTHER APPROVED MATERIAL. IF OWNERSIDE LEAD WILL REMAIN, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY CWD BY CALLING 216-664-2882 AND LEAVING A CLEVELAND WATER SUPPLIED CUSTOMER NOTIFICATION DOORHANGER ON ALL ACCESSIBLE POINTS OF ENTRY TO THE HOME.

21. AS PART OF THE AS BUILT SUBMISSION IN NOTE 12, THE CONTRACTOR SHALL PROVIDE A TABLE SHOWING ALL EXISTING CONNECTIONS, IDENTIFIED BY CLEVELAND WATER CONNECTION NUMBER, SHOWING THE FOUND CONNECTION MATERIAL FOR BOTH THE CITYSIDE AND OWNERSIDE CONNECTION, AS WELL AS THE NEW CONNECTION MATERIAL FOR ALL CONNECTIONS REPLACED. THE TABLE SHALL ALSO NOTE ANY REVISED CONNECTION MEASUREMENTS AND SIZES. A SAMPLE TABLE WILL BE PROVIDED. THE SUBMISSION SHALL BE IN MICRSOFT EXCEL FORMAT. CLEVELAND WATER SHALL REQUIRE THE DELIVERY AND ACCEPTANCE OF THIS TABLE BEFORE THE PRESSURE TEST AND CHLORINATION/DISINFECTION OF THE MAIN WILL BE PERMITTED.

22. NEW WATER SERVICE CONNECTIONS LOCATIONS SHOWN ON THESE DRAWINGS ARE FOR REFERENCE ONLY AND ARE NOT PART OF THE WATER MAIN APPROVAL. THE SPECIFIC LOCATION FOR EACH CONNECTION WILL BE DETERMINED BY CLEVELAND WATER PRIOR TO THE TAPS BEING INSTALLED. ALL PERMITS FOR TAPS AND METERS FOR PARCELS ASSOCIATED WITH THE WATER MAINS INSTALLED ON THIS PROJECT ARE

TO BE OBTAINED BY THE LAND OWNER OF SAID IMPROVEMENT PLANS. IT

IS THE LAND OWNERS RESPONSIBILITY TO ARRANGE FOR OBTAINING PERMITS FOR ALL WATER SERVICE CONNECTIONS BEFORE ANY SERVICE CONNECTION WORK MAY PROCEED. ALL FEES CAN BE OBTAINED FROM THE CLEVELAND WATER PERMITS AND SALES SECTION AT 216-664-3130 PROMPT #7 OR 216-664-2444 X75209.

ACCOUNTS SHALL BE INITIATED IN THE LAND OWNER'S NAME AS PART OF THE PERMITTING PROCESS. ALL RESPONSIBILITIES ASSOCIATED WITH EACH WATER SERVICE, INCLUDING, THE OWNER SIDE INSPECTIONS, METER SET/METER PIPING INSPECTION AND THE METER INSTALLATION SHALL BE THE RESPONSIBILITY OF SAID OWNER.

METERS INSTALLATIONS WILL NOT BE AUTHORIZED TO BE INSTALLED UNTIL ALL INSPECTIONS HAVE BEEN COMPLETED. ESTIMATED BILLS MAY ENSUE IF A HOME IS IDENTIFIED AS HAVING WATER SERVICE BUT NO METER HAS BEEN INSTALLED. IF NEW OWNERS, ONCE PARCELS ARE SOLD OFF AND TRANSFER TITLE, DO NOT CONTACT CLEVELAND WATER TO ESTABLISH ACCOUNTS IN THEIR NAME, ACCOUNTS AND THEIR ASSOCIATED BILLS WILL REMAIN IN THE NAME OF OUR LAST OWNER OF RECORD WHICH MAY BE THE DEVELOPER OR BUILDER. IT IS THE RESPONSIBILITY OF THE NEW OWNER TO TRANSFER ACCOUNTS INTO THEIR NAME WHEN THE PROPERTIES LEGALLY TRANSFER. UPON TRANSFER OF PROPERTY, SELLER OF PROPERTY MUST COMMUNICATE ALL UNCOMPLETED PORTIONS OF THE REFERENCED RESPONSIBILITIES TO THE NEW OWNER.

23. ONE INCH SERVICE CONNECTIONS SHALL BE PERMITTED TO SERVICE NEW HOMES (AS SHOWN ON APPROVED WATER MAIN EXTENSION PLANS) BASED ON THE FOLLOWING CRITERIA:

 PEAK FLOW DEMANDS DO NOT EXCEED 25 GPM FOR AN INDIVIDUAL HOME/UNIT. INCLUSIVE OF ALL USAGE (DOMESTIC

LENGTH OF ONE INCH CONNECTION DOES NOT EXCEED 75
FEET AS MEASURED FROM THE MAIN TO THE POINT OF ENTRY

THE CONNECTIONS DO NOT INCLUDE LIMITED AREA OR NFPA

13D SPRINKLER SYSTEMS

ANY SERVICE REQUESTS DIFFERING FROM THE STATED CRITERIA SHALL REQUIRE THE SUBMITTAL OF A COMPLETE WATER SERVICE APPLICATION

24. ALL CURB VALVE BOXES & METER VAULTS WILL BE INSTALLED IN GRASS AREAS WHEN POSSIBLE. CURB VALVES IN EASEMENTS SHALL BE PLACED APPROXIMATELY 3 FEET OFF THE WATER MAIN. IF VALVE BOXES OR METER VAULTS ARE INSTALLED OUTSIDE OF A DEDICATED RIGHT OF WAY OR EASEMENT FOR THE PURPOSES OF WATER SUPPLY, A STANDARD CLEVELAND EASEMENT FOR A VAULT SHALL BE PROVIDED.

EMERGENCIES:

25. IF A WATER MAIN OR SERVICE CONNECTION BREAK OCCURS DURING CONSTRUCTION AND EMERGENCY ASSISTANCE IS REQUIRED, PLEASE NOTIFY CLEVELAND WATER AT <u>216-664-3060</u>. THIS LINE IS AVAILABLE 24/7/365

FOR EACH WATER SERVICE REQUESTED.

DATE: 11/28/2017 BY: FSR STD-011

KEY PLAN

I hereby certify that this drawing, specification, plan or report was prepared by me or under my direct supervision and that I am a duly registered Architect under the laws of the state which govern this project. WARNING: No person may alter these documents unless person is " or under the direct supervision of " the record Architect. [including copyrights; JCW]

PROFESSIONAL SEAL:



PROPOSED TENANT IMPROVEMENTS FOR:



Great Lakes Cheese Headquarters

17825 Great Lakes Parkway Hiram, Ohio 44234-1806

JOB NUMBER: 170939.01

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02/15/2019 Design Development Set
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SHEET TITLE:

SITE DETAILS

SHEET NUMBER:

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