

**LMSD - DESIGN AND CONSTRUCTION STANDARDS
CROSSWALK DOCUMENT - I/I SPECIFICATIONS
31-Aug-09**

I/I Specifications				
Section		Title	Major Revision	Reason for Revision
Original	Revised			
1	1	Cured-in-Place Pipe	1. The requirement for determination of liner thickness has been changed from partially deteriorated pipe to fully deteriorated pipe and a groundwater depth of 10' above the top of the pipe or to the ground surface, whichever is less. 2. On-site and "over-the-hole" wet-outs are allowed and transportation of the impregnated tube to the job site shall be per manufacturers recommendation. 3. Deleted VCP as an acceptable pipe type for point repairs. 4. All video and photographic project documentation shall be submitted in digital format.	1. The revision was made to clarify the design requirement for CIPP liners and to provide a more conservative approach for liner thickness determination 2. Revised to ensure that wet-outs are performed in a controlled manner to provide wetting of the liner to produce an acceptable installation. 3. MSD is no longer accepting the use of VCP for use in any application. 4. This revision enables MSD to store this information within Hansen and easily make it available to all parties needing access.
2	2	Lateral Rehabilitation	1. All video and photographic project documentation shall be submitted in digital format. 2. Deleted VCP as an acceptable pipe type for point repairs.	1. This revision enables MSD to store this information within Hansen and easily make it available to all parties needing access. 2. MSD is no longer accepting the use of VCP for use in any application.
3	3	Chemical Grouting	1. All video and photographic project documentation shall be submitted in digital format. 2. Eliminated the section covering point repairs.	1. This revision enables MSD to store this information within Hansen and easily make it available to all parties needing access. 2. Any pipe segment with structural defects requiring a point repair should not be rehabbed using chemical grouting.
4	4	Manhole Rehabilitation - Mechanically Locking Chimney Seal	Minor changes only.	NA.
5	5	Manhole Rehabilitation-Non-Mechanical Chimney Seals	1. Changed the title of the section from " Chemical Chimney Seals" to "Non-Mechanical Chimney Seals".	1. The revision better reflects the types of chimney seals covered by the section.
6	NA	Manhole Rehabilitation-Chemical Cementitious Liner	Section was eliminated from the MSD I/I Specifications	MSD will no longer accept the use of a chemical cementitious liner for manhole rehabilitation. Past experience with this method of manhole rehab has proven to be unacceptable.
7	6	Manhole Rehabilitation-Epoxy Liner	1. All video and photographic project documentation shall be submitted in digital format. 2. Added requirements under Testing and Inspection for spark testing, adhesion testing and dye testing.	1. This revision enables MSD to store this information within Hansen and easily make it available to all parties needing access. 2. These additional testing requirements were added to ensure that MSD is getting an acceptable application of the epoxy liner.
8	7	Manhole Rehabilitation-Cast-in-Place Cementitious Liner	1. All video and photographic project documentation shall be submitted in digital format. 2. A list of acceptable supplies of plastic liners (to be used when corrosive elements are present) has been added to the spec. 3. Added requirements under Testing and Inspection for spark testing.	1. This revision enables MSD to store this information within Hansen and easily make it available to all parties needing access. 2. The list was added to assist contractors in locating acceptable plastic liner suppliers. 3. This testing requirement was added to ensure that the Contractor is performing the installation of the liner in an acceptable manner.
			1. Added additional reference standards that must be met to provide an acceptable installation. 2. All video and photographic project documentation shall be submitted in digital format.	1. Provides a more complete representation of the acceptable installation the MSD expects from the Contractor. 2. This revision enables MSD to store this information within Hansen and easily make it available to all parties needing access.

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9	8	Manhole Rehabilitation-Cast-in-Place Liner	3. The Materials section of this spec was completely revised in its entirety.	3. The section was completely rewritten to provide more detailed information regarding the installation of CIPM Liner. A table was added detailing test property values and minimum field cured thickness, information on the required design of the CIPM liner system and a list of acceptable suppliers.
			4. Added requirements under Testing and Inspection for spark testing.	4. This testing requirement was added to ensure that the Contractor is performing the installation of the liner in an acceptable manner.
10	NA	Pipe Bursting Method of Sewer Replacement	Section was moved to Section 7 of MSD's Standard Specifications - Trenchless Pipe Installation.	Section 7 of the Standard Specifications was revised to include all acceptable methods of trenchless pipe installation.
11	9	Chemical Root Control	1. All video and photographic project documentation shall be submitted in digital format.	1. This revision enables MSD to store this information within Hansen and easily make it available to all parties needing access.