VILLAGE OF MORTON GROVE

CONSTRUCTION STANDARDS

VILLAGE OF MORTON GROVE
6101 CAPULINA AVENUE
MORTON GROVE, ILLINOIS 60053
(847) 965-4100
Contents

SECTION 1: PERMITS
PERMIT PROCEDURES .................................................................................. P-1

SECTION 2: PAVEMENT REQUIREMENTS
STREET COMPOSITION AND REQUIREMENTS ............................................ S-1

SECTION 3: BACKFILL
TRENCH BACKFILL ...................................................................................... T-1 & T-1A

SECTION 4: CONCRETE
DRIVEWAY CONSTRUCTION ........................................................................ C-1
SIDEWALK CONSTRUCTION .......................................................................... C-2
CURB AND COMBINATION CURB AND GUTTER ........................................ C-3 & C-3A
SIDEWALK RAMPS FOR HANDICAPPED .................................................... C-4 & C-4A

SECTION 5: SANITARY SEWER
SANITARY SEWER CONSTRUCTION .............................................................. SS-1
SANITARY MANHOLE .................................................................................. SS-2
SANITARY DROP MANHOLE ....................................................................... SS-3
SANITARY SEWER SERVICE RISER ............................................................. SS-4
SANITARY SEWER SERVICE ....................................................................... SS-5
SANITARY SEWER LATERAL CONNECTION .............................................. SS-6
PRECAST REINFORCED CONCRETE FLAT TOP SLAB ............................... SS-7
SANITARY MANHOLE RECONSTRUCTION OR ADJUSTMENT .................. SS-8
SECTION 6: STORM SEWER

STORM SEWER CONSTRUCTION ................................................................. STS-1
TYPE “A” CATCH BASIN ............................................................................. STS-2
TYPE “C” CATCH BASIN ............................................................................. STS-3
STORM MANHOLE ...................................................................................... STS-4
TYPE “A” INLET .......................................................................................... STS-5
PRECAST REINFORCED CONCRETE FLAT SLAB TOP ............................. STS-6
STORM MANHOLE RECONSTRUCTION OR ADJUSTMENT .................... STS-7

SECTION 7: WATER

WATER MAIN CONSTRUCTION ..................................................................... W-1
FIRE HYDRANT ASSEMBLY ........................................................................ W-2
THRUST BLOCK INSTALLATIONS .............................................................. W-3 & W-3A
WATER SERVICE ........................................................................................ W-4
VALVE VAULT AT PRESSURE CONNECTION ............................................. W-5
VALVE VAULT ............................................................................................. W-6
COMMERCIAL SERVICE CONNECTION .................................................. W-7
FIRE HYDRANT PROTECTORS ................................................................. W-8

SECTION 8: WATER AND SEWER SEPARATION REQUIREMENTS

VERTICAL SEPARATION ............................................................................. SEP-1 TO -4
HORIZONTAL SEPARATION ....................................................................... SEP-5
SECTION 1

PERMITS
PERMIT PROCEDURES:

1. Submit seven (7) copies of the drawings for approval.

2. Fill out permit.

3. Furnish the Village of Morton Grove with a copy of insurance policy naming the Village of Morton Grove as additional insured.

4. Pay all appropriate fees.

5. Call all appropriate Departments to obtain all inspections. All inspection requests shall be made 48 hours prior to the actual inspection.
   - Building Dept. : 847/470-5214
   - Public Works Dept. : 847/470-5235
   - Engineering Dept. : 847/470-5235
   - Community Development : 847/470-5231

6. Obtain all required approvals of completed work by calling the appropriate Departments and requesting Final inspection of the project.

7. Construction hours are from 7:00 A.M. to 8:00 P.M. Monday thru Friday.

Strict adherence to the above mentioned procedures will ensure that your project will be completed with a minimum number of delays.
SECTION 2

STREET

PAVEMENT

REQUIREMENTS
STREET PAVEMENT REQUIREMENTS

THESE REQUIREMENTS ARE FOR ALL TYPES OF STREETS THAT ARE TO BE CONSTRUCTED IN THE VILLAGE OF MORTON GROVE.

LOCAL RESIDENTIAL: & PARKING LOTS
1 1/2" BITUMINOUS SURFACE COURSE, CLASS I
1 1/2" BITUMINOUS CONCRETE BINDER COURSE, CLASS I
10" AGGREGATE BASE COURSE, TYPE B (100% CRUSHED)

LOCAL COLLECTOR:
1 1/2" BITUMINOUS SURFACE COURSE, CLASS I
3" BITUMINOUS CONCRETE BINDER COURSE, CLASS I
12" AGGREGATE BASE COURSE, TYPE B (100% CRUSHED)

INDUSTRIAL:
1 1/2" BITUMINOUS SURFACE COURSE, CLASS I
2" BITUMINOUS CONCRETE BINDER COURSE, CLASS I
8" BITUMINOUS AGGREGATE MIXTURE (MINIMUM M.S. - 1200)
4" AGGREGATE BASE COURSE, TYPE B (100% CRUSHED)
SECTION 3

BACKFILL
<table>
<thead>
<tr>
<th>Inside Diameter of Conduit or Pipe (inches)</th>
<th>Maximum Trench Width at Top of Conduit or Pipe</th>
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<tbody>
<tr>
<td>6</td>
<td>3'-2&quot;</td>
</tr>
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<td>102</td>
<td>13'-3&quot;</td>
</tr>
<tr>
<td>108</td>
<td>13'-10&quot;</td>
</tr>
</tbody>
</table>

**Notes:**

1. Definition of one (1) Sack Slurry Mix - one (1) sack cement to one (1) cubic yard sand to be transit mixed and delivered.

2. Contractor is to remove and dispose of all excavated material off-site.

3. Contractor shall sawcut six (6") inches each side of the trench for removal. All sawcuts shall be full length.

4. Trenches shall not exceed five (5') feet in depth without proper shoring and permission. OSHA notification will be required.

5. Trench is to be excavated to firm, undisturbed soil. If over excavation is required to reach a firm trench bottom, the contractor shall fill the void with CA6 and compact to obtain proper density and grade.

6. Instead of slurry backfill, the contractor at the Village's option, utilize Trench Backfill as specified in the IDOT "Standard Specifications for Road and Bridge Construction, latest edition." Compaction tests shall be required in locations approved by the Village and these tests shall be paid for by the contractor. Backfill and compaction will be performed on every other lift. All tests shall have 95% compaction or better. The contractor shall also furnish the Village with a copy of the final compaction report.

7. All bituminous and portland cement concrete pavement shall meet the requirements of and be constructed in accordance with the Standard Specifications for Road and Bridge Construction, latest edition.

8. Minimum thickness of pavement based on type of street.
EXIST. BIT. PAVEMENT
ON P.C.C. ST.

EXIST. BIT. PAVEMENT
EXIST. P.C.C. ST.

NOTE
1. For maximum trench width and General Notes see Std. T-1A
2. Instead of a Slurry backfill the contractor may at his option comply with Item 6 of STD. T-1A
3. Any Excavation in Parkway areas shall be restored to original condition and to the satisfaction of the Village Engineer

TRENCH BACKFILL
Village of Morton Grove
CONSTRUCTION STANDARDS T - 1
SECTION 4

CONCRETE
Replace Sidewalk in Driveway area with 6" P.C.C.

1/2" Expansion Joint

Remove Exist. Curb or Curb & Gutter - Install Depressed Curb per Village

Driveway Approach 6" thick (P.C.C.) or 3" Bit. Surface over 6" CA-6

1" Expansion Joint

PARKWAY

In no case shall any driveway approach be smaller than the existing existing driveway on property. Actual size to be approved by the Village.

TYPICAL RESIDENTIAL DRIVEWAY

Replace Sidewalk in Driveway area with 8" P.C.C.

1/2" Expansion Joint

Remove Exist. Curb or Curb & Gutter - Install Depressed Curb per Village

Driveway Approach 6" thick (P.C.C.)

1" Expansion Joint

PARKWAY

4' 35'-0" 4'

Max.

43'-0"

Max.

NOTES:

1. All material and workmanship shall conform to the Standard Specifications for Road and Bridge Construction, latest edition.

2. All pours must be separate. No monolithic pours with curb and gutter, driveway approaches, and sidewalks.

3. All sawcuts are to be full depth.

4. The contractor shall notify the Village 48 - hours prior to commencing work.

5. Protective coating shall be installed on all concrete work.

6. Residential driveway materials shall be determined by the Village.

DRIVEWAY CONSTRUCTION

Village of Morton Grove

CONSTRUCTION STANDARDS C-1
Notes:

1. All material and workmanship shall conform to the Standard Specifications for Road and Bridge Construction, latest edition.

2. All pours must be separate. No monolithic pours with curb and gutter, driveway approaches, and sidewalks.

3. All sawcuts are to be full depth.

4. The contractor shall notify the Village 48 – hours prior to commencing work.

5. Protective coating shall be installed on all concrete work.

6. Install contraction joints 1/8" wide every five (5) lineal feet.

7. Install 1/2" expansion material every fifty (50) lineal feet.

8. Install 1/2" expansion material between the sidewalks and all structures such as light standards, traffic signal standards, poles, columns, or any structure which extends through the sidewalk.

   6" Where residential driveways cross sidewalks.
   8" Where commercial driveways cross sidewalks.
CURB AND GUTTER TYPE B-6.12

CURB AND GUTTER TYPE M-3.12

Notes:

1. All material and workmanship shall conform to the Standard Specifications for Road and Bridge Construction, latest edition.

2. All pours must be separate. No monolithic pours with curb and gutter, driveway approaches, and sidewalks.

3. All sawcuts are to be full depth.

4. The contractor shall notify the Village 48 - hours prior to commencing work.

5. Protective coating shall be installed on all concrete work.

6. Residential driveway materials shall be determined by the Village.
RECOMMENDED LOCATIONS OF RAMPS

Ramp texturing is to be done with an expanded metal grate placed and removed from wet concrete to leave a diamond pattern as shown. The long axis of the diamond pattern shall be perpendicular to the curb. Grooves shall be 1/8" deep and 1/4" wide.

The maximum slope of the side flare for Type B ramps shall be 1:10: However, if the width of the landing area between the top of the ramp and an obstruction is less than 4' then the maximum slope shall be 1:12.

As slope ratios are expressed as units of vertical displacement to units of horizontal displacement (V / H).

HANDICAPPED RAMPS
Village of Morton Grove
CONSTRUCTION STANDARDS
Notes:

1. All material and workmanship shall conform to the Standard Specifications for Road and Bridge Construction, latest edition.

2. Contraction joints shall be constructed at twenty-five (25) feet O.C. and expansion joints at the beginning of all return radii and five feet either side of the structure.

3. Wherever curb and gutter is poured adjacent to the new P.C. Concrete pavement or base course, tie bars shall be provided in accordance with Illinois Department of Transportation Standards 2130 and 2323. Wherever curb and gutter is poured adjacent to existing P.C. Concrete pavement or base course, expansion tie anchors 5/8" shall be installed into the pavement or base course.

CURB AND COMBINATION CURB AND GUTTER
Village of Morton Grove
CONSTRUCTION STANDARDS C - 3A
Flush with top of roadway curb and top of sidewalk

DETAIL of SIDE CURB
(Side curb may be constructed monolithically with ramp)

Ramp Thickness

Variable

Ramp

See DETAIL A & B

Slope 1:12 MAX.

RAMP PROFILE

Ramp Width

.5

.5

Ramp

Width

.5

TEXTURED SURFACE

SIDE FLARE

SIDE FLARE

TYPE A RAMPS

TYPE B RAMPS

DETAILS of RAMPS

Gutter slope 1:20 MAX.

Expansion joint

Curb Rise

1/2' MAX.

Special depressed curb

SIDE CURB (where required)

DETAIL A

DETAIL B

HANDICAPPED RAMPS

Village of Morton Grove

CONSTRUCTION STANDARDS C - 4A
SECTION 5

SANITARY SEWER
Sanitary Sewer Requirements:

1. Depths of the main may vary as approved by the Village.

2. Sanitary sewer mains shall not be less than 8" in diameter. Sewer laterals from the sewer main to the property line shall not be less than 6" in diameter.

3. Pavement is to be sawcut full depth before removal begins.

4. All trench backfill shall comply with Village Standard Number T-1 and T-1A.

5. All testing shall be done in accordance with the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.

6. Sanitary sewer lines must be kept separate from storm sewer lines. Combined sewer systems are not allowed in new construction projects.

7. All sanitary sewer lines of any length and service laterals of 100' or longer shall require a drawing and calculations signed and sealed by a Professional Engineer.

8. Notify the Sewer Superintendent 48 hours prior to commencing work.


10. The sewer line shall be constructed of extra strength VCP and shall conform to ASTM C-700 71T with no bell joint, or PVC type SDR26 as approved by the Village and shall conform to ASTM 3033 and 3034.
Manhole shall be constructed with precast reinforced concrete sections and offset cones.

Top half of pipe to be removed through manhole.

Frame & Lid lettered "Sanitary"
Type & Style to be approved by Village.

Bituminous mastic bed

Diameter | Diameter Main Sewer | Diameter Manhole | Wall Thick.
---|---|---|---
18" & Under | 4'-0" | 4" |
21"-42" Inclusive | 5'-0" | 5"

Notes:
1. Notify the Sewer Superintendent 48 hours prior to commencing work.
2. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, as well as the requirements of the Metropolitan Water Reclamation District of Greater Chicago (M.W.R.D.G.C.).
3. All sanitary manholes shall be water tight.

SANITARY MANHOLE
Village of Morton Grove
CONSTRUCTION STANDARDS
Manhole shall be constructed with precast reinforced concrete sections and offset cones.

Top half of pipe to be removed through manhole.

Frame & Lid lettered "Sanitary" Type & Style to be approved by Village.

Bituminous mastic bed

Concrete, adjusting rings (8" Max.) if needed

Ground Line

SECTION A-A

Concrete bench

Steps 16" o.c.

Concrete Casement

6" Reinforced concrete slab 3,500 PSI concrete

Sand Cushion (6" Min.)

Rubber gasketed couplings per ASTM C-923

Notes:

1. Notify the Sewer Superintendent 48 hours prior to commencing work.

2. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, as well as the requirements of the Metropolitan Water Reclamation District of Greater Chicago (M.W.R.D.G.C.).

3. All sanitary manholes shall be water tight.

SANITARY DROP MANHOLE

Village of Morton Grove

CONSTRUCTION STANDARDS SS - 3
Connect to service from building or seal end with disc and mastic

Undisturbed Earth - shape to provide uniform bearing for 1/4 of barrel circumference

Maximum Slope (slope to be less than 3:1 when necessary to secure bedding in undisturbed earth)

Standard Tee - barrel size to be as called for on plans, or as otherwise specified

Bedding as specified

Notes:

1. Notify the Sewer Superintendent 48 hours prior to commencing work.

2. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, as well as the requirements of the Metropolitan Water Reclamation District of Greater Chicago (M.W.R.D.G.C.).
Notes:
1. Notify the Sewer Superintendent 48 hours prior to commencing work.
2. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, as well as the requirements of the Metropolitan Water Reclamation District of Greater Chicago (M.W.R.D.G.C.).

SANITARY SEWER SERVICE
Village of Morton Grove
CONSTRUCTION STANDARDS
SS - 5
WHERE WYES ARE NOT PROVIDED, TAPPING SADDLES WILL BE REQUIRED. AXIS OF OUTLET PLACED AT 45° SLOPE WITH HORIZONTAL OUTLET TO BE PROVIDED WITH STOPPER.

Notes:

1. Notify the Sewer Superintendent 48 hours prior to commencing work.

2. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, as well as the requirements of the Metropolitan Water Reclamation District of Greater Chicago (M.W.R.D.G.C.).
TABLE

<table>
<thead>
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<th>D</th>
<th>T</th>
<th>Do (in)</th>
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<th>Bar Size</th>
<th>No. 4 Bar C Length</th>
<th>Radius</th>
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<td>1.35 sq. in./ft</td>
<td>No. 5</td>
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Notes:
Precast Flat Slab Tops shall conform to the Standard Specifications for Road and Bridge Construction (latest edition). Reinforcement Bars or Welded Wire Fabric shall be in accordance with the Standard Specifications for Road and Bridge Construction (latest edition). Joint configuration and dimensions shall match and fit the riser joint detail lifting devices other than shown may be used subject to approval by the Village. The cost of furnishing and installing the Flat Slab Top shall be included in the unit price for Catch Basins, Manholes, or Valve Vaults.
"NOTE A" - RECONSTRUCTION
More than two (2) feet of conc. masonry will be either added, removed or rebuilt to bring the casing to finished grade.

"NOTE B" - ADJUSTMENT
Two (2) feet or less as approved by the Engineer, of concrete masonry that will be either added, removed, Bituminous Surface Course or rebuilt to bring the casing to the finished grade.

Class SI Concrete around casing, incidental 12" Max.

Mortar bedding

New Concrete masonry.

Compacted backfill or Class SI concrete, incidental

"SEE NOTES A & B ABOVE"

6" Min.

To permit proper mortaring of joints and compaction of backfill material. (Typical)

FINAL ENCASEMENT TO BE
4'-5" SQUARE, CLASS SI CONCRETE

Conc. adjusting rings (8" Max.) if needed.

Two (2) rows of Bituminous gasket material

Concrete bonding agent and quick-setting hydraulic cement to provide a smooth working surface.

Remove existing concrete collar to adjust to grade utilizing precast adjustments and bituminous gaskets as required.

Notes:
1. Construction of storm sewers shall comply with the Standard Specifications for Road and Bridge Construction - Illinois Department of Transportation, the latest edition.
2. Notify the sewer superintendent 48 hours prior to any construction.

SANITARY MANHOLE RECONST. OR ADJUSTMENT

Village of Morton Grove

CONSTRUCTION STANDARDS
SECTION 6

STORM SEWER
Storm Sewer Requirements:

1. Depths may vary as approved by the Village Engineer.

2. Storm sewer lines must be kept separate from sanitary sewer lines.

3. Pavement is to be sawcut full-depth before removal begins.

4. All trench backfill shall comply with City Standard Drawing Numbers T-1 and T-1A.

5. Construction of storm sewers shall comply with the Standard Specifications for Road and Bridge Construction - Illinois Department of Transportation, the latest edition.

6. All storm sewers shall require a drawing and calculations signed and sealed by a Professional Engineer.

7. Notify the sewer superintendent 48 hours prior to any construction.

8. Pipe shall be non-reinforced concrete pipe, reinforced concrete pipe (RCCP), or PVC pipe SDR 26 of the type and class specified by the Standard Specifications for Road and Bridge Construction.

9. The Village does not allow combined storm and sanitary sewers for new construction.
Catch basin shall be constructed with precast reinforced concrete sections.

**SECTION A-A**

Frame & Lid lettered "Storm"
Type & Style to be approved by Village.
Concrete adjusting rings (8" Max.) if needed

Outlet

Half trap with mechanical joint to be installed in combined sewer areas.

6" Reinforced concrete slab 3,500 PSI concrete

Sand Cushion (6" Min.)

Notes:

1. Construction of storm sewers shall comply with the Standard Specifications for Road and Bridge Construction - Illinois Department of Transportation, the latest edition.

2. Notify the sewer superintendent 48 hours prior to any construction.

**TYPE "A" CATCH BASIN**

**Village of Morton Grove**

**CONSTRUCTION STANDARDS**

STS - 2
SECTION A-A

Catch basin shall be constructed with precast reinforced concrete sections.

Use "Type A" Catch Basin with trap instead of "Type C" Catch Basin in all combined sewer areas.

Notes:
1. Construction of storm sewers shall comply with the Standard Specifications for Road and Bridge Construction - Illinois Department of Transportation, the latest edition.
2. Notify the sewer superintendent 48 hours prior to any construction.

TYPE "C" CATCH BASIN
Village of Morton Grove
CONSTRUCTION STANDARDS STS - 3
Manhole shall be constructed with precast reinforced concrete sections and offset cones.

Frame & Lid lettered "Storm"
Type & Style to be approved by Village.

Bituminous mastic bed
Conc. adjusting rings (8" Max.)
If needed.

<table>
<thead>
<tr>
<th>DIAMETER MAIN SEWER</th>
<th>DIAMETER MANHOLE</th>
<th>WALL THICKNESS</th>
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<tbody>
<tr>
<td>18&quot; &amp; UNDER</td>
<td>4' - 0&quot;</td>
<td>4&quot;</td>
</tr>
<tr>
<td>21&quot; - 42&quot; INCLUSIVE</td>
<td>5' - 0&quot;</td>
<td>5&quot;</td>
</tr>
<tr>
<td>OVER 42&quot;</td>
<td>AS APPROVED BY VILLAGE</td>
<td></td>
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Notes:
1. Construction of storm sewers shall comply with the Standard Specifications for Road and Bridge Construction - Illinois Department of Transportation, the latest edition.
2. Notify the sewer superintendent 48 hours prior to any construction.

STORM MANHOLE
Village of Morton Grove
CONSTRUCTION STANDARDS
STS - 4
Inlet shall be constructed with precast reinforced concrete sections.

Frame & Lid
Type & Style to be approved by Village.

Gutter or ground Line

Concrete, adjusting rings (6" Max) if needed
See Plan for pipe size and slope

Sand Cushion (6" Min.)

Use "Type A" Catch Basin with trap instead of "Type A" Inlet in all combined sewer areas.

Notes:
1. Construction of storm sewers shall comply with the Standard Specifications for Road and Bridge Construction - Illinois Department of Transportation, the latest edition.
2. Notify the sewer superintendent 48 hours prior to any construction.

TYPE "A" INLET
Village of Morton Grove
CONSTRUCTION STANDARDS
STS - 5
TABLE

<table>
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<tr>
<th>D</th>
<th>T</th>
<th>Do (min)</th>
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<th>Reinforcement &quot;A's&quot; W.W.F. or Bar Size</th>
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NOTES:

Precast Flat Slab Tops shall conform to the Standard Specifications for Road and Bridge Construction (latest edition). Reinforcement Bars or Welded Wire Fabric shall be in accordance with the Standard Specifications for Road and Bridge Construction (latest edition). Joint configuration and dimensions shall match and fit the riser joint detail lifting devices other than shown may be used subject to approval by the Village. The cost of furnishing and installing the Flat Slab Top shall be included in the unit price for Catch Basins, Manholes, or Valve Vaults.
"NOTE A" - RECONSTRUCTION
More than two (2) feet of conc. masonry will be either added, removed or rebuilt to bring the casing to finished grade.

"NOTE B" - ADJUSTMENT
Two (2) feet or less as approved by the Engineer, of concrete masonry that will be either added, removed, Bituminous Surface Course or rebuilt to bring the casing to the finished grade.

Class SI Concrete around casing, Incidental
Leveling Binder Course
12" Max.

New Concrete masonry.
Compacted backfill or Class SI concrete, Incidental

To permit proper mortaring of joints and compaction of grout material.
(Typical)

6" Min.

Final Encasement to be
4"-5" Square, Class SI Concrete

Concrete bonding agent and quick-setting hydraulic cement to provide a smooth working surface.

Remove existing concrete collar adjust to grade utilizing precast adjustments and bituminous gaskets as required.

Notes:
1. Construction of storm sewers shall comply with the Standard Specifications for Road and Bridge Construction - Illinois Department of Transportation, the latest edition.

2. Notify the sewer superintendent 48 hours prior to any construction.
SECTION 7

WATER
Water Main Requirements For New Construction:

1. Minimum Depth - 5'6" to the top of pipe.


3. Fire Hydrant spacing shall not exceed 300 lineal feet.


5. All pipe joints shall be push joints with mechanical joint fittings and shall conform to ANSI A21.10 (AWWA-C110).

6. Gate valves must be installed at each branch main connection and elsewhere, as required, to allow adequate isolation of individual sections for maintenance.

7. All testing shall be done against bulkheads to prevent possible contamination of the Village water system. Tie into the Village system will be done after all testing has passed.

8. All testing shall be done in accordance with Section 41-2.12 of the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition, and shall be paid for by the contractor.

9. Pavement is to be sawcut full depth before removal begins.

10. All water main construction shall require a drawing and calculations signed and sealed by a Professional Engineer.

11. Notify the Water Superintendent 48 hours prior to commencing work.


13. For Water Main tie-ins see Standard W4 and W5.
Notes:

1. Fire service to private properties are to be combined with domestic service. Both fire services and domestic services must be metered separately.

2. Fire hydrant spacing shall not exceed 300 lineal feet.

3. Notify the Water Superintendent 48 hours prior to commencing work.

4. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.

FIRE HYDRANT ASSEMBLY

Village of Morton Grove

CONSTRUCTION STANDARDS
Notes:
1. All blocks must bear against undisturbed earth.
2. Arrows indicate direction of thrust.
3. All thrust blocks are to be 3,000 PSI concrete.
5. Notify the Water Superintendent 48 hours prior to commencing work.
6. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.

THRUST BLOCK INSTALLATIONS
Village of Morton Grove
CONSTRUCTION STANDARDS
Notes:

1. Notify the Water Superintendent 72 hours prior to commencing work.

2. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.

3. All taps will be done by a qualified contractor approved by the Village and are to be inspected by the Village of Morton Grove Water Department, both during and after tapping.

4. Domestic and fire services may be common. The domestic and fire services must be metered separately.

WATER SERVICE  REVISED 4/12/04

Village of Morton Grove

CONSTRUCTION STANDARDS
SECTION A-A

VERTICAL BEND

Notes:
1. Notify the Water Superintendent 48 hours prior to commencing work.
2. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.
Notes:

1. Notify the Water Superintendent 48 hours prior to commencing work.

2. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.

3. All water vaults shall be water tight.

4. No other utilities besides water are allowed inside the water vault. If any utilities are found inside the water vault they shall be relocated at the contractor’s expense.

VALVE VAULT AT PRESSURE CONNECTION

Village of Morton Grove

CONSTRUCTION STANDARDS W-5
Concrete adjusting rings (8" Max.) if needed

SECTION A-A

Ground Line

2'-0"

2'-6'(4.0 Dia)

3'-9'(5 Dia)

Steps 16" o.c

A

A

Valve as specified

6" Reinforced concrete slab
3,500 PSI concrete

Concrete supports

Sand Cushion (6" Min.)

Notes:

1. Notify the Water Superintendent 48 hours prior to commencing work.

2. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.

3. All water vaults shall be water tight.

4. No other utilities besides water are allowed inside the water vault. If any utilities are found inside the water vault they shall be relocated at the contractor's expense.

VALVE VAULT

Village of Morton Grove

CONSTRUCTION STANDARDS W - 6
NOTES:

1. X- Size of pipe being installed times 7 and rounded up to the nearest foot.

2. Notify the Water Superintendent 48 hours prior to commencing work.

3. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.

4. All taps will be done by a qualified contractor approved by the Village and are to be inspected by the Village of Morton Grove Water Department, both during and after tapping.

5. Domestic and fire services may be common. The domestic and fire services must be metered separately.

6. This Service Connection Detail is to be used for domestic service and fire service for all commercial property.
1. Fire hydrants shall be Waterous Pacer with National Standard hose thread.

2. Notify the Water Superintendent 48 hours prior to commencing work.

3. All material and workmanship shall conform to the Standard Specifications for Water and Sewer Main Construction in Illinois, latest edition.

4. Fire hydrant spacing shall not exceed 300 lineal feet.
SECTION 8

WATER AND SEWER

SEPARATION REQUIREMENTS
Proposed water main below existing sewer line with 18" minimum separation.

Notes:

1. Construct backfill per Village Standard T-1 & T-1A.

2. Provide adequate support for existing sewer line to prevent damage due to settlement.

3. Point loads shall not be allowed between water main casing and sewer.

4. All casings shall be steel.

Existing Sewer Line

Casing: See Note 2 & 4

Proposed Water Main

10' 18' 18" Minimum

Proposed water main below existing sewer line with less than 18" minimum separation.

Existing Sewer Line

Proposed Water Main

Less than 18"

NOT ALLOWED

Must Maintain 18" Vertical Separation

(VERTICAL SEPARATION)

WATER AND SEWER SEPARATION REQUIREMENT

Village of Morton Grove

CONSTRUCTION STANDARDS

SEP - 1
Proposed water main above existing sewer line with 18" minimum separation.

Notes:
1. Construct Backfill per Village Standard T-1 & T-1A.

Proposed water main above existing sewer line with less than 18" separation.

Notes:
1. Construct Backfill per Vill. Standard T-1 & T-1A.
2. Provide adequate support for existing sewer line to prevent damage due to settlement.
3. Point loads shall not be allowed between water main casing and sewer.
4. All casings shall be steel.
Proposed sewer line below existing water main with 18" minimum separation.

Notes:
1. Provide adequate support for Existing Water Main to prevent damage due to settlement of sewer trench.
2. Maintain 18" minimum vertical separation for 10 feet horizontally.

Proposed sewer line below existing water main with less than 18" separation.

Notes:
1. Construct Backfill per Village Standard T - 1 & T - 1A.
2. Provide adequate support for proposed water main to prevent damage due to settlement.
3. Point loads shall not be allowed between water main casing and sewer.
4. All casings shall be steel.
5a. Construct 20' of proposed sewer with water main material and pressure test or;
5b. Use 20' of steel casing for proposed sewer and seal ends of casing.

(VERTICAL SEPARATION)
WATER AND SEWER SEPARATION REQUIREMENT
Village of Morton Grove
CONSTRUCTION STANDARDS SEP - 3
Existing water main below proposed sewer line with 18" minimum separation. Existing water main below proposed sewer line with less than the 18" minimum separation.

Notes:

1. Construct backfill per Village Standard T-1 & T-1A.

2. Provide adequate support for existing water main to prevent damage due to settlement.

3. Point loads shall not be allowed between water main casing and sewer.

4. All casings shall be steel.

5a. Construct 20' of proposed sewer with water main material and pressure test or;

   b. Use 20' of steel casing for proposed sewer and seal ends of casing.

(VERTICAL SEPARATION)

WATER AND SEWER SEPARATION REQUIREMENT

Village of Morton Grove

CONSTRUCTION STANDARDS

SEP - 4
Proposed sewer (or water) is located 10 feet or more from existing water (or sewer).

Proposed or Existing Sewer Line

Proposed or Existing Water Main

10' Horizontal

PLAN VIEW

Proposed sewer (or water) is located less than 10 feet from existing water (or sewer).

Waterline Existing or Proposed

Undisturbed Soil

18" Minimum

Sewer Line Existing or Proposed

(HORIZONTAL SEPARATION)

WATER AND SEWER SEPARATION REQUIREMENTS

Village of Morton Grove

CONSTRUCTION STANDARDS

SEP - 5