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## CERTIFIED SURVEY MAPS

### INTRODUCTION

Certified Survey Maps (CSMs) are one of the permitted methods of dividing land in the City of Muskego. CSMs are allowed when it is proposed to create four or fewer building sites or parcels, and also when it is proposed to create a land division where all parcels are greater than 1.5 acres in size and no public improvements are required to serve the proposed parcels. Certified Survey Maps must include all of the contiguous land owned by the applicant, unless the land is in excess of 20 acres in size and not intended for development.

### PROCEDURE

1. Pre Application. It is recommended that prior to the filing of an application for the approval of a certified survey map, the applicant consult with the Planning Director and City Engineer in order to obtain advice and assistance. This consultation is neither formal nor mandatory but is intended to inform the applicant of the purpose and objectives of local regulations, the adopted Comprehensive Plan or adopted plan components, and plan implementation ordinances of the City and to otherwise assist the subdivider in planning his development. In so doing, both the subdivider and planning agency may reach mutual conclusions regarding the general program and objectives of the proposed development and it's possible effects on the neighborhood and City.
2. Submit Concept Sketch. The purpose of a conceptual sketch is to gain tentative approval from the Plan Commission prior to expending time and resources on a Certified Survey Map. The approval of the sketch is not binding on the developer or City. Submittal requirements for conceptual sketches are as follows:
  - 18 copies drawn to scale with compass directions shown.
  - Written statement of intent, including information on utility services proposed (if any).
  - Review fee
3. Plan Commission Sketch Review. Any conditions of approval should be noted by the developer and accommodated on the final Certified Survey Map submittal.
4. Wetland Delineation. (If applicable) If wetlands are believed to exist on the property, their exact boundaries must be shown on the final Certified Survey Map. Individuals may apply to receive a wetland delineation for no charge through SEWRPC or hire a private company to do a wetland delineation. A detailed description of the procedure is shown in Chapter 2.
5. Submit Final Certified Survey Map (CSM). Final certified survey maps must include all information required by Wisconsin Statutes and Chapter 18 of the Municipal Code. Submittal requirements for final CSMs are as follows:
  - 18 copies of the certified survey map
  - Developers Deposit in an amount per adopted policy
  - Review fee
  - Request for rezoning (if applicable)

The submittal is forwarded to the City's consulting engineer for review.

6. Adequate Public Facilities Review. Planning department reviews for compliance with Section 17:6.01(3). CSM either received automatic certification or is scheduled for appropriate Committee and Commission reviews.
7. Plan Commission CSM Review. The Plan Commission will review the CSM, and will make a recommendation to Common Council.

8. Public Works Committee Review (If public streets or storm sewer are proposed). The Public Works Committee reviews CSMs which, if approved, will require the installation of new streets, or will require storm water improvements in accordance with Chapter 34 of the Municipal Code. The Construction Plan approval process is detailed separately in the Procedure Guide. Committee action is adopted by the Common Council through approval of meeting minutes. Planning Director provides written certification of Adequate Public Facilities, if required by step 6.
9. Public Utilities Committee Review (If public sewer or water are proposed). The Public Utilities Committee reviews CSMs which, if approved, will require the installation of sanitary sewers or water mains. The Construction Plan approval process is detailed separately in the Procedure Guide. Committee action is adopted by the Common Council through approval of meeting minutes. Planning Director provides written certification of Adequate Public Facilities, if required by step 6.
10. Finance Committee Review (If developers agreement is required). If public improvements are required to be installed, a developers agreement will be drafted by the Planning Department, for review and approval by the Finance Committee. The Finance Committee also reviews the applicant's estimated construction costs, and establishes an amount required to be tendered in the form of a Letter of Credit to secure the applicant's successful completion of public improvements. The adopted Letter of Credit policy is shown in Chapter 2. The Committee's recommendation is forwarded to the Common Council, who will approve the agreement by Resolution.
10. Common Council CSM Review. Within Common Council is required to review all final CSM submittals within 60 days of receipt. The Common Council will review the recommendations of the Plan Commission and any other applicable Committee. Any revisions required by the City's consulting engineer must be made prior to Council action. If the corrections are not complete, the item will be deferred to the next Common Council meeting.
11. Closing Meeting. After Certified Survey Map is approved by the Common Council, the petitioner must bring the original Certified Survey Map with all corrections required by the Common Council, and the moneys owed, to the Planning Department for the necessary signatures and payment of fees.
  - Petitioner must sign Certified Survey Map in front of Notary Public
  - Petitioner must pay all dedication fees
  - Petitioner must submit a digital copy of their CSM (Must follow Muskego's digital file submittal requirements)
  - Petitioner must pay all taxes, bills, assessments, etc.
  - Petitioner must bring a check payable to the Waukesha County Register of Deeds.
  - The Planning Secretary will submit the signed Certified Survey Map to the Waukesha County Register of Deeds along with check.

### **CERTIFIED SURVEY MAP DEADLINES**

*Conceptual Sketch* and Certified Survey map submittal deadlines are 15 days before next scheduled Plan Commission meeting.

If the CSM requires a rezoning, the submittal deadline is 30 days prior to the scheduled Plan Commission meeting.

Plan Commission meetings are the 1<sup>st</sup> and 3<sup>rd</sup> Tuesdays of each month, unless specified.

If Committee action is required, the item will be scheduled for the next available meeting in accordance with the following:

- Public Works Committee, 3<sup>rd</sup> Monday of every month
- Public Utilities Committee, 3<sup>rd</sup> Monday of every month
- Finance Committee, 1<sup>st</sup> and 3<sup>rd</sup> Wednesday and 2<sup>nd</sup> and 4<sup>th</sup> Tuesday of every month

If the CSM is adopted by the Plan Commission and all necessary Committees have reviewed and approved their related issues, the CSM will be on the Common Council Agenda for the next scheduled meeting.

Common Council meetings are the 2<sup>nd</sup> and 4<sup>th</sup> Tuesdays of each month.

Certified Survey Map must be submitted for all signatures and recorded within 30 days of final approval by Common Council

**CERTIFIED SURVEY MAP FEES (for the year 2005)**

*Sketch Fee:* \$100.00. Due at time of submittal for Plan Commission review.

*Certified Survey Map:* \$200.00 plus 11.00 per lot. Due at time of submittal for Plan Commission review.

*GIS Land Records Fee:* \$80.00 per lot or outlot. Due at time of submittal for Plan Commission review.

*GIS Capital Charge:* \$20.00 per lot or outlot. Due at time of submittal for Plan Commission review.

*Rezoning Fee:* \$350.00 (if applicable) plus Developers Deposit. Due at time of submittal for Plan Commission review.

*Developers Deposit:* Due in an amount per policy, shown in Chapter 2. Due at time of submittal for Plan Commission review.

*Plan Review / Routing Fees:* \$65.00 for Public Works Committee, if applicable. \$65.00 for Public Utilities Committee, if applicable. Due at time of submittal for Plan Commission review.

*Developers Agreement Fees:* \$600.00 for drafting and review by Planning staff and Finance Committee, if applicable. Due at time of submittal for Plan Commission review.

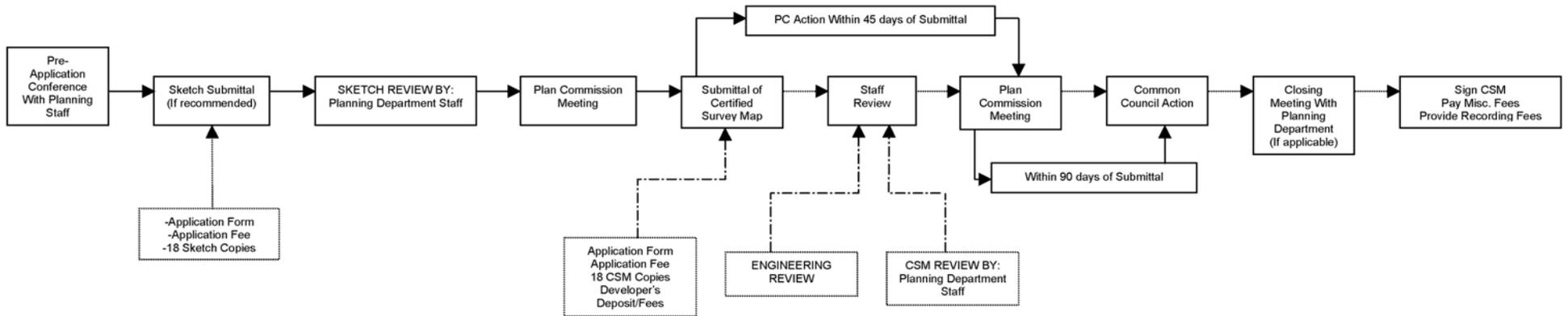
*Park Dedication Fee:* \$1,900.00 for every additional single-family buildable lot or unit created or \$1,400.00 for every multi-family buildable lot or unit created. Due at the time of submittal of original CSM for City signatures.

*Conservation Land Dedication Fee:* \$580.00 per development acre. Due at the time of submittal of original CSM for City signatures.

*Conservation Trail Dedication Fee:* \$60.00 for every additional single-family buildable lot or unit created or \$45.00 for every multi-family buildable lot or unit created. Due at the time of submittal of original CSM for City signatures.

*Waukesha County Register of Deeds:* \$11.00 for 1<sup>st</sup> page and \$2.00 per additional page. Due at the time of submittal of original CSM for City signatures.

**CERTIFIED SURVEY MAP APPROVAL PROCESS**



## SUBDIVISION PLATS

### INTRODUCTION

Preliminary Plat submittal is the first step in dividing land into a large number of smaller parcels. Preliminary Plats must include all of the contiguous land owned by the applicant, unless the land is in excess of 20 acres in size and not intended for development.

### PROCEDURE

1. Pre Application. It is recommended that prior to the filing of an application for the approval of a Preliminary Plat, the applicant consult with the Planning Director and City Engineer in order to obtain advice and assistance. This consultation is neither formal nor mandatory but is intended to inform the applicant of the purpose and objectives of local regulations, the adopted Comprehensive Plan or adopted plan components, and plan implementation ordinances of the City and to otherwise assist the subdivider in planning his development. In so doing, both the subdivider and planning agency may reach mutual conclusions regarding the general program and objectives of the proposed development and it's possible effects on the neighborhood and City.
2. Submit Concept Sketch. The purpose of a conceptual sketch is to gain tentative approval from the Plan Commission prior to expending time and resources on a Preliminary plat. The approval of the sketch is not binding on the developer or City. Submittal requirements for conceptual sketches are as follows:
  - 18 copies drawn to scale with compass directions shown.
  - Written statement of intent, including information on utility services proposed (if any).
  - Review fee
3. Plan Commission Sketch Review. Any conditions of approval should be noted by the developer and accommodated on the Preliminary Plat submittal.
4. Wetland Delineation. (if applicable) If wetlands are believed to exist on the property, their exact boundaries must be shown on the Preliminary Plat. Individuals may apply to receive a wetland delineation for no charge through SEWRPC or hire a private company to do a wetland delineation. A detailed description of the procedure is shown in Chapter 2.
5. Submit Preliminary Plat. The Preliminary Plat must include all information required by Wisconsin Statutes and Chapter 18 of the Municipal Code. Submittal requirements for Preliminary plats are as follows:
  - 39 folded copies of the preliminary plat map
  - Developers Deposit in an amount per adopted policy
  - Review fees
  - Request for rezoning (if applicable)
  - Department of Administration form and fee (We will send in)
  - Waukesha County Plat review form and fee (We will send in)
  - Waukesha County DOT review form (if applicable)
  - Wisconsin DOT review form (if applicable)
  - Wisconsin DNR determination of Navigability (if applicable)
  - Digital copy of plat
  - 18 folded sets of all required plans including:
    - Erosion Control Plan
    - Landscape Plan
    - Grading Plan
    - Sanitary Sewer Plan
    - Watermain Plan

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Road Construction Plan  
Storm Water Management Plan  
Maintenance agreements  
Protective Covenants  
Public Improvement Cost Breakdown

The submittal is forwarded to the City's consulting engineer for review.

6. Adequate Public Facilities Review. Planning department reviews for compliance with Section 17:6.01(3). Preliminary either received automatic certification or is scheduled for appropriate Committee and Commission reviews.
7. Plan Commission Preliminary Plat Review. The Plan Commission will review the Preliminary Plat, and will make a recommendation to Common Council. If a rezoning is required, the Plan Commission will also make a separate recommendation to the Common Council.
8. Rezoning Public Hearing (If required). The Common Council will hold a public hearing on any required rezoning, and will hold a "first reading" or the Ordinance to rezone the subject property. Final action on the rezoning will be approved/denied upon the second reading or approved with a contingency that the rezoning will not go into effect until Final Plat approvals are received. Greater detail of the rezoning process can be found under separate heading in the Procedure Guide.
9. Public Works Committee Plan Review. The Public Works Committee reviews improvement plans for the installation of new streets, grading, and storm water management improvements in accordance with Municipal Code and the adopted Committee policies. The Construction Plan approval process is detailed separately in the Procedure Guide. Committee action is adopted by the Common Council through approval of meeting minutes. Planning Director provides written certification of Adequate Public Facilities, if required by step 6.
10. Public Utilities Committee Plan Review. The Public Utilities Committee reviews improvement plans for the installation of sanitary sewers or water mains. The Construction Plan approval process is detailed separately in the Procedure Guide. Committee action is adopted by the Common Council through approval of meeting minutes. Planning Director provides written certification of Adequate Public Facilities, if required by step 6.
11. Finance Committee Developers Agreement and Security Review. A developer's agreement will be drafted by the Planning Department, for review and approval by the Finance Committee. The Finance Committee also reviews the applicant's estimated construction costs as illustrated in the Public Improvement Cost Breakdown, and establishes an amount required to be tendered in the form of a Letter of Credit to secure the applicant's successful completion of public improvements. The Letter of Credit policy is reviewed in greater detail under separate cover in the Procedure Guide. The Committee's recommendation is forwarded to the Common Council, who will approve the agreement by Resolution.
12. Common Council Review. Within Common Council is required to review all Preliminary Plat submittals within 90 days of receipt. The Common Council will review the recommendations of the Plan Commission and all other applicable Committees. Any plan or plat revisions required by the City's consulting engineer must be made prior to Council action. If the corrections are not complete, the item will be deferred to the next Common Council meeting.
13. Pre-Construction Closing Meeting (optional). After the Common Council approves Preliminary Plat and developer's agreement, the petitioner may proceed with the construction of improvements. *Any improvements constructed under Preliminary Plat status are done entirely at the applicant's sole risk and it is recommended that improvement construction should not begin until Final Plat approval.* To

City of Muskego  
Developers Procedure Manual

proceed with construction at this stage, the applicant must request a Closing meeting. At this meeting the petitioner must submit the following:

- 5 copies of Developers Agreement
- 5 copies of all Developers Agreement exhibits
- 5 copies of Public Improvement Cost Breakdown
- Original Letter of Credit
- All fees due
- DNR Chapter 30 Permit
- MMSD Sanitary Sewer Approval
- DNR Water Approval
- FEMA/DNR/SEWRPC Approval of flood plain modifications, wetlands delineation, and determination of Navigability.

14. Pre-construction meeting policies and procedures can be attained via the Engineering Department.

15. Submit Final Plat. Preliminary Plat approvals are valid for six (6) months from the date of Common Council approval. The applicant may be reasonably assured that the Final Plat will be approved if it is submitted in substantially the same form as the approved Preliminary plat. Final Plat submittals must include the following:

- 39 folded copies of the Plat map
- Submittal fee
- Department of Administration form and fee (We will send in)
- Wisconsin DOT review form (if applicable)

16. Plan Commission Final Plat Review. The Plan Commission will review the Final plat within 45 days of submittal, and will make a recommendation to the common Council.

17. Common Council Final Plat. The Common Council reviews all Final Plats within 60 days of submittal, and either approves, approves with conditions, or rejects the Plat.

18. Pre-Recording Closing Meeting. If the Final Plat is approved, and any required conditions of approvals are met, a closing meeting is scheduled. The Planning Department will send a letter denoting what is needed prior to the closing meeting. The applicant schedules a closing meeting through the Planning Department. The applicant provides the following for the meeting:

- Mylar or Muslin original for signatures
- 5 copies of all signed Developer's Agreements and Maintenance Agreements
- 5 copies of all approved construction plans
- Original Protective Covenants and Restrictions
- Original Letter of Credit in the City approved format (Shown in Next Section)
- Original Certificate of Insurance in City approved form (Shown in Next Section)
- Incorporation documents for Owner's Association
- Digital copy of the plat in City approved format
- Digital copy of construction plans
- All fees paid (Including developer's deposit replenish, park and conservation dedication fee payment, and taxes/special assessments)
- DNR Chapter 30 Permit (If applicable)
- MMSD Sanitary Sewer Approval (If applicable)
- DNR Water Approval (If applicable)
- FEMA/DNR/SEWRPC Approval of flood plain modifications, wetlands delineation, and determination of Navigability (If applicable)

The City provides the following for the meeting:

- 5 copies of all Developers Agreements and Maintenance Agreements

19. Record at Waukesha County. Following the closing meeting, the applicant delivers the following to the Waukesha County Register of Deeds for recording:

- Mylar or Muslin original of signed final plat
- All Developer's Agreements and Maintenance Agreements
- Declarations of Restrictions

20. Filing with City. Following the closing and recording, the applicant must submit the following to the City Planning Office:

- Mylar copy of the Final Plat with all required signatures and recording information affixed
- Recorded copy of all Developer's Agreements and Maintenance Agreements
- Recorded copy of Declarations of Restrictions

### **SUBDIVISION PLAT DEADLINES**

*Conceptual Sketch* deadlines are 15 days before next scheduled Plan Commission meeting.

*Preliminary Plat* deadlines are 45 days before the Plan Commission meeting where action is requested. Rezoning petitions should be submitted concurrent with the Preliminary Plat.

*Final Plat* deadlines are 30 days before the Plan Commission meeting where action is requested.

Plan Commission meetings are the 1<sup>st</sup> and 3<sup>rd</sup> Tuesdays of each month, unless specified.

If Committee action is required, the item will be scheduled for the next available meeting in accordance with the following:

- Public Works Committee, 3<sup>rd</sup> Monday of every month
- Public Utilities Committee, 3<sup>rd</sup> Monday of every month
- Finance Committee, 1<sup>st</sup> and 3<sup>rd</sup> Wednesday and 2<sup>nd</sup> and 4<sup>th</sup> Tuesday of every month

If the Preliminary or Final Plat is approved by the Plan Commission and all necessary Committees have reviewed and approved their related issues, the plat will be on the Common Council Agenda for the next scheduled meeting.

Common Council meetings are the 2<sup>nd</sup> and 4<sup>th</sup> Tuesdays of each month.

Final Plats must be submitted for all signatures and recorded within 30 days of final approval by Common Council

### **SUBDIVISION PLAT FEES (for the year 2005)**

The following list describes all fees, which may be due to the city of Muskego in conjunction with the development of a Preliminary Plat or Final Plat. All fees are not necessarily applicable to every development. Applicants are encouraged to review the Municipal fee structure with the Planning Department and Sewer and Water Utilities.

*Sketch Fee*: \$225.00 for 10 or less lots; \$300.00 for 11 or more lots. Due at time of submittal for Plan Commission review.

*Preliminary Plat:* \$500.00 plus \$11.00 per lot. Due at time of submittal for Plan Commission review.

*Reapplications for approved-but-expired Preliminary Plats:* \$150.00. Due at time of submittal for Plan Commission review.

*Final Plat:* \$400.00 plus \$11.00 per lot. Due at time of submittal for Plan Commission review.

*GIS Land Records Fee:* \$80.00 per lot or outlot. Due at time of submittal for Plan Commission review.

*GIS Capital Charge:* \$20.00 per lot or outlot. Due at time of submittal for Plan Commission review.

*Reapplications for approved-but-expired Final Plats:* \$150.00. Due at time of submittal for Plan Commission review.

*Rezoning Fee:* \$350.00 (if applicable) plus Developers Deposit. Due at time of submittal for Plan Commission review.

*Rezoning involving Planned Unit Developments:* \$1,200.00 in addition to other rezoning fees due. Due at time of submittal for Plan Commission review.

*Amendments to Planned Unit Developments:* \$600.00 in addition to other rezoning fees due. Due at time of submittal for Plan Commission review.

*Rezoning involving Floodplain:* \$345.00 in addition to other rezoning fees due. Due at time of submittal for Plan Commission review.

*Park Dedication Fee:* \$1,900.00 for every additional single-family buildable lot or unit created or \$1,400.00 for every multi-family buildable lot or unit created. Due at the time of submittal of original CSM for City signatures.

*Conservation Land Dedication Fee:* \$580.00 per developed acre. Due at the time of submittal of original CSM for City signatures.

*Conservation Trail Dedication Fee:* \$60.00 for every additional single-family buildable lot or unit created or \$45.00 for every multi-family buildable lot or unit created. Due at the time of submittal of original CSM for City signatures.

*Developers Deposit:* Due in an amount per policy, shown in Chapter 2. Due at time of submittal for Plan Commission review.

*Letter of Credit Administration Fee:* Due in an amount per policy, shown in Chapter 2. Due at time the original Letter of Credit is tendered.

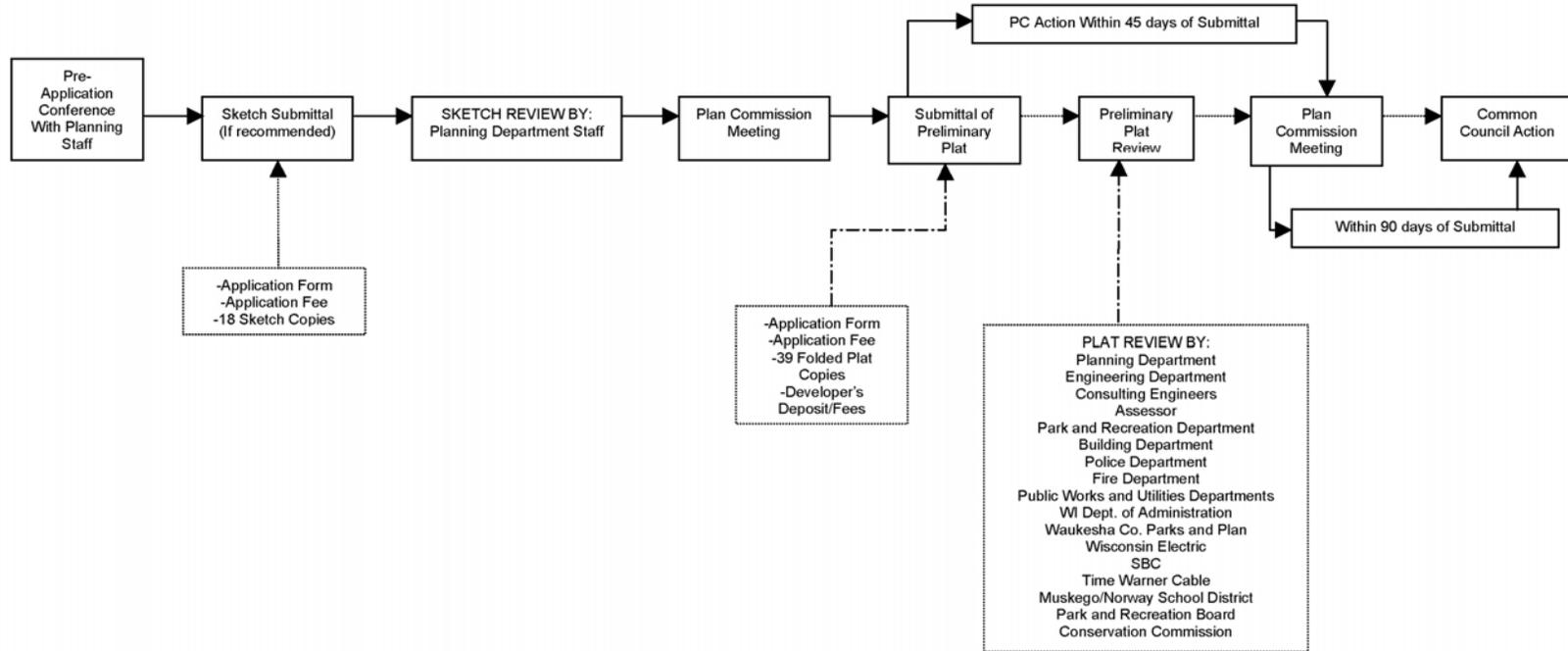
*Plan Review / Routing Fees:* \$65.00 for Public Works Committee and \$65.00 for Public Utilities Committee. Due at time of submittal for Plan Commission review.

*Developers Agreement Fees:* \$600.00 for drafting and review by Planning staff and Finance Committee. Due at time of submittal for Plan Commission review.

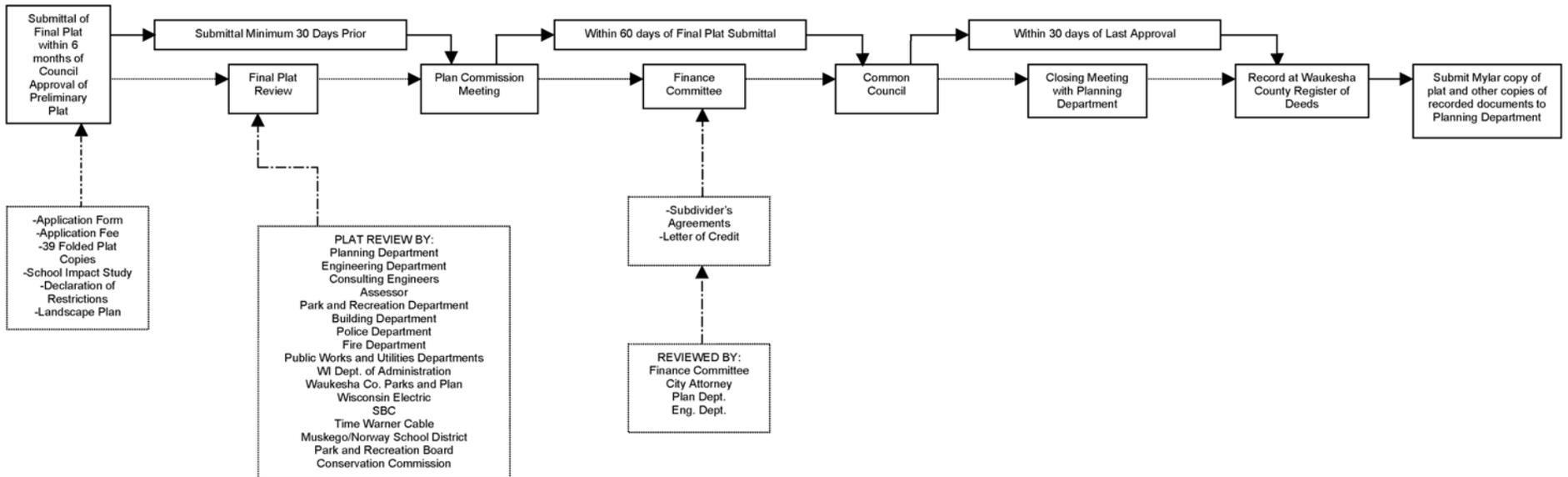
*Stormwater Management Plan Preparation Fee:* \$150.00 for drafting and review by Planning staff and Finance Committee. Due at time of submittal for Plan Commission review.

*Capacity Assessments:* Due for sanitary sewer and water connections in an amount and at time per Public Utilities policy (See Engineering Department for details if applicable).

**PRELIMINARY PLAT APPROVAL PROCESS**



**FINAL PLAT APPROVAL PROCESS**



## SCHOOL IMPACT STUDY

### **INTRODUCTION**

School Impact Studies are required to be submitted with all preliminary Plat submittals. The purpose is to help the Plan Commission, Common Council, and School Board quantify the impact that each development may have on the school system, given certain assumptions.

### **PROCEDURE**

1. Applicant receives policy and outline from Planning Department.
2. Applicant prepares Sections 1-3 required per study outline.
3. Applicant contacts Muskego-Norway School District for guidance in completing *School Attendance* and *Enrollment* items of Sections 4-5 required per study outline.
4. Applicant computes school attendance impact of the proposed development using the multipliers provided and the proposed number of additional households.
5. Applicant submits fifteen (18) copies of the School Impact Study to the Planning Department concurrent with Preliminary Plat submittal.
6. Planning Department forwards copy to Muskego-Norway School District, and includes staff review of the report with the Plan Commission Supplement.

### **AUTHORIZING RESOLUTION**

The following is a copy of the authorizing Resolution, which requires school impact studies for all new developments:

RESOLUTION #P.C. 20-80  
APPROVAL OF OUTLINE FOR SCHOOL IMPACT STUDIES

WHEREAS, the Plan Commission of the City of Muskego has indicated that no subdivision would be approved unless the developer provides the Commission with an acceptable School Impact Study, and

WHEREAS, the attached outline will provide the Commission with an additional tool to determine the affect of a proposed development on the schools in the area.

THEREFORE BE IT RESOLVED, that the Plan Commission of the City of Muskego does hereby reaffirm its decision to require a School Impact Study prior to the approval of all developments.

BE IT FURTHER RESOLVED, that the Plan Commission of the City of Muskego does hereby adopt the attached outline for School Impact Studies.

City of Muskego  
Plan Commission

Adopted March 18, 1980

Defeated \_\_\_\_\_

Deferred Feb. 19, 1980

**STUDY OUTLINE**

1. NAME OF SUBDIVISION \_\_\_\_\_
2. NUMBER OF DWELLINGS \_\_\_\_\_
3. TOTAL ESTIMATED STUDENT POPULATION \_\_\_\_\_
4. WHICH SCHOOL WOULD STUDENTS MOST LIKELY ATTEND?

<u>Name of School</u>	<u>Number of Students</u> (Based on multipliers below)
_____ Elementary	_____
_____ Middle School	_____
_____ High School	_____

5. CAPACITY AND PRESENT SCHOOL ENROLLMENT

<u>Name of School</u>	<u>Capacity</u>	<u>Present Enrollment</u> (Date _____)
_____ Elementary	_____	_____
_____ Middle School	_____	_____
_____ High School	_____	_____

6. ESTIMATED DISTANCE FROM PROPOSED SUBDIVISION

<u>Name of School</u>	<u>Distance</u>
_____ Elementary	_____
_____ Middle School	_____
_____ High School	_____

\*Population Multipliers

Students/Household = .5 single family; .3 multi family  
Elementary School Students per Household = 33% of Total  
Middle School Students per Household = 33% of Total  
High School Students per Household = 33% of Total





## **DEVELOPER'S AGREEMENTS**

### **INTRODUCTION**

A developer's agreement is required any time a project is proposed which involves the construction of public improvements. These are also referred to as Subdivider's Agreements.

### **PROCEDURE**

1. Upon receipt of construction plans, the Planning Department prepares an Agreement. The following Model is used as a basis, and is modified as needed for the specific project.
2. Upon the Planning Department's completion on the Agreement, it is forwarded to the City Attorney for review as to form and content. Copies are also distributed to the Mayor, Clerk-Treasurer, City Engineer, Public Works Superintendent, Utility Superintendent, and Deputy Building Director for review and comment if needed. Upon receipt of comments and revisions as may be necessary, a copy is forwarded to the applicant, and the matter is scheduled for Finance Committee review.
3. Finance Committee reviews the Agreement and either approves, approves with amendments or conditions, or rejects.
4. If Agreement is approved and conditions of approval are met, the Agreement advances to the Common Council for consideration. Common Council approves Developer's Agreements by Resolution.
5. Following Common Council approval, the applicant, Mayor, and Clerk-Treasurer execute five (5) copies of the Agreement. At the time of signing, the applicant must provide:
  - Five (5) copies of all required exhibits.
  - All applicable fees
  - Other documents as necessary (Found in Chapter 1: Pre-Recording Closing Meeting)
6. The petitioner must record the Agreement with the Waukesha County register of Deeds.
7. The original document is returned to the Planning Department following recording. The Planning Secretary files the original.

**MODEL AGREEMENT**

The model on the following pages is used as the basis for all Developers Agreements. Each Agreement will be modified to address the unique circumstances of the project.

**(NAME) SUBDIVISION  
SUBDIVIDER'S AGREEMENT**

This Agreement, made this \_\_\_\_ day of \_\_\_\_\_ by and between \_\_\_\_\_ (the "Subdivider") and the City of Muskego, a municipal corporation of the State of Wisconsin, located in Waukesha County, (the "City").

**W I T N E S S E T H**

WHEREAS, the Subdivider has submitted for approval by the City a proposed Final Plat for (NAME) Subdivision (the "Subdivision"), a part of the lands described as:

(Insert Description Here)

the original of which will be recorded with the Register of Deeds for Waukesha County and a copy of which is on file in the Office of the City Clerk, for which a Final Plat was approved by the City;

WHEREAS, Section 236.13 of the Wisconsin Statutes provides that as a condition of plat approval, the governing body of the City may require that the Subdivider make and install certain public improvements reasonably necessary for the Subdivision and further, may require dedication of public streets, alleys or other ways within the Subdivision, to be conditioned upon the construction of said improvements according to municipal specifications without cost to said municipality; and

WHEREAS, the City's Engineers, the City's Public Works Committee, Public Utility Committee and Finance Committee have duly approved, contingent of certain other approvals, Subdivider's plans and specifications for subdivision improvements, and the City's Plan Commission and Common Council have duly approved the final plat of (NAME) Subdivision contingent upon the execution and performance of this agreement by the Subdivider.

NOW, THEREFORE, in consideration of the covenants herein contained, the parties hereto agree as follows:

**SECTION I : PLATTING**

1. This Subdivider's Agreement addresses the development of \_\_\_\_ parcels platted for \_\_\_\_ family residential use, all being under the Provisions of Chapters 17 and 18 of the Municipal Code, and under the auspices of \_\_\_\_\_ District zoning.
  - a) Single family parcels in this Plat shall conform to the zoning requirements of \_\_\_\_\_ district, being a minimum of \_\_\_\_\_ square feet in area, \_\_\_\_\_ feet in average lot width, having street yard setbacks of \_\_\_\_ feet, side yard offsets of \_\_\_\_\_ feet and \_\_\_\_ feet, and rear yard offsets of \_\_\_\_ feet.
2. Subdivider shall entirely at its expense:
  - a) Concurrent with the execution of this Agreement tender an Irrevocable Standby Letter of Credit in the amount required herein for the construction of improvements required by this Agreement. No construction activity may commence until this Agreement has been executed and recorded, and

the Letter of Credit has been tendered.

- b) Concurrent with the execution of this Agreement, provide the City with title evidence acceptable to the City Attorney showing that upon recording the Plat, the City will have good, indefeasible title to all interests in land dedicated or conveyed to the City by the Plat.
- c) Within six (6) months of approval of this Agreement by the Common Council, the Subdivider shall execute this Agreement, shall cause this Agreement to be recorded at the Waukesha County Register of Deeds, and shall provide City with evidence of recording.
- d) Within six (6) months of approval by all approving authorities and waiver of objection by all objecting authorities, the Subdivider shall cause the final plat of \_\_\_\_\_ to be executed and recorded, and shall provide City with evidence of recording.
- e) Place and install monuments required by State Statute or City Ordinance.

### **SECTION II : PHASING**

Subdivider and City agree that final platting and the installation of public and private improvements described in Section III shall occur in one phase.

### **SECTION III : IMPROVEMENTS**

City shall furnish the Subdivider such permits or easements as may be required to enter upon and install the following described improvements in any public street or public property.

Subdivider shall entirely at its expense:

#### **A. ROADS AND STREETS:**

1. Grade and improve all roads and streets in accordance with the plans and specifications approved by the Public Works Committee on \_\_\_\_\_, including off site improvements necessary to provide such roads and streets, including grading and gravel, curb and gutter, and asphalt street improvements, as approved by the Director of Engineering and Building and Public Works Committee as indicated in the plans and specifications on file with the Engineering and Building Department.
2. Restore any damage to existing pavement, curb, gutter, and landscaping which may result from construction of subdivision improvements.
3. Reimburse the City for the cost of all street signs, street lights, traffic signs and posts, including the cost of their installation.

#### **B. STORM AND SURFACE WATER DRAINAGE AND MASTER GRADING PLAN:**

1. Construct, install, furnish and provide facilities as approved by the Director of Engineering and Building and Public Works Committee on \_\_\_\_\_ for storm and surface water drainage throughout the entire Subdivision and off site improvements as necessary, and a Master Grading Plan providing for sump pump discharge to a tile or storm sewer system, all in accordance with the plans and specifications on file in the Building and Engineering Department. The City retains the right to require the Subdivider to install at Subdivider's cost additional storm drainage and erosion control measures prior to acceptance of improvements by the City of Muskego.
2. Grade and improve all lots, on and off site, in conformance with the Master Grading Plan as approved by the Director of Engineering and Building and Public Works Committee on \_\_\_\_\_ all in

accordance with the plans and specifications on file in the City Building and Engineering Department. Restore with topsoil and seed. Establish dense vegetation.

3. Clean all Storm Sewers prior to acceptance of improvements and the issuance of building permits by the City.
4. Execute and record a Maintenance Agreement in the form attached hereto, which document shall be incorporated herein and made part hereof, as approved by the Director of Engineering and Building and Public Works Committee on \_\_\_\_\_ relating to privately owned storm water appurtenances, and provide proof of recording prior to sale of lots in the Subdivision. Keep and maintain all storm sewers, retention or detention ponds, and surface water drainage features which are outside of the rights-of-way in perpetuity, as provided for in the Maintenance Agreement.

C. SANITARY SEWER:

1. Construct, install, furnish, and provide without cost to City, a complete sanitary sewage collection system throughout the entire Subdivision, and including off site improvements necessary to provide such system, as approved by the Director of Engineering and Building and the Public Utilities Committee on \_\_\_\_\_ all in accordance with the plans, specifications and drawings on file in the City Building and Engineering Department.
2. Complete, to the satisfaction of the Director of Engineering and Building, any remaining punch list items concerning the Sanitary Sewer System prior to the connection of any structure to the sanitary sewer systems.
3. Televisive the sanitary sewer system, repair any defects as determined by the Director of Engineering and Building, and supply video tape to the City of Muskego, and clean all sewer lines prior to the issuance of building permits, and acceptance of improvements by the City.

D. WATERMAIN:

1. Construct, install, furnish, and provide without cost to City, a complete system of water supply and distribution, throughout the entire Subdivision, and including off site improvements necessary to provide such system, as approved by the Director of Engineering and Building and Public Utilities Committee on \_\_\_\_\_ and in accordance with the plans and specifications on file in the City Building and Engineering Department.
2. Apply for all necessary permits to use water from hydrants for construction permits, as may be required by the City.
3. Complete to the satisfaction of the City any punch list items concerning the water system prior to connection of any building to the water system.

E. LANDSCAPING:

1. Preserve existing trees outside of the public right-of-way to the maximum extent possible, when installing the Subdivision improvements. Replace trees in accordance with plans to be approved by the Plan Commission.
2. Remove and lawfully dispose of destroyed trees, brush, tree trunks, shrubs and other natural growth, and all rubbish.
3. Plant street trees without cost to City in accordance with Section 18.60 of the Muskego Land Division Ordinance and the adopted Urban Forestry Management Plan and Urban Forestry Strategic Plan dated March 28, 2000 and adopted by the Common Council on July 11, 2000 and in accordance with

plans to be approved by the Planning Director and City Forester prior to the release of occupancy permits. Planting may be deferred until the time that ninety percent (90%) of the homes have been completed or thirty-six (36) months after installation of the first lift of asphalt, whichever comes first.

F. EROSION CONTROL MEASURES:

1. Submit to the City, an application for a Land Disturbing Permit in accordance with the Erosion Control Plan as approved in accordance with the requirements of Section 29.06 of the City's Erosion Control Ordinance by the Director of Engineering and Building and Public Works Committee on \_\_\_\_\_ and in accordance with the plans and specifications on file in the Building and Engineering Department.
2. Construct, install, furnish and provide without cost to City, a complete system of Erosion Control Devices or measures in specified areas of the Subdivision, on and off-site, in accordance with the Erosion Control Plan as approved by the Director of Engineering and Building and Public Works Committee on \_\_\_\_\_ and in accordance with the plans and specifications on file in the City Building and Engineering Department. No construction or grading can begin until said permit is issued by the City, and no grading shall occur without a two (2) day notice to the City.
3. Install silt fencing in conformance with the approved Erosion Control Plan prior to the grading and construction work. Such fences shall be maintained by the Subdivider until such time as vegetative cover is established in the Subdivision. Install mulching and seeding of all disturbed areas to comply with Municipal Code Chapter 29.

Insure that each individual lot owner obtains a separate erosion control permit at any time that any vegetation is disturbed, and insure that each individual lot owner is responsible for controlling erosion on their subject lot.

**SECTION IV : TIME OF COMPLETION OF IMPROVEMENTS**

The improvements set forth in Section III, except for final surface course of pavement as described herein, shall be completed by the Subdivider within one (1) year from the signing of this Agreement except if an earlier date is provided for in the Agreement. The final surface course of pavement may be deferred until ninety percent (90%) of the homes have been completed, or thirty-six (36) months after the installation of the first lift of asphalt, whichever comes first.

If the final surface course of pavement, is not completed within twelve (12) months of the date of this Agreement, the Subdivider shall extend the Letter of Credit in a form acceptable to the City until such time as the final surface course of pavement is completed.

If the City receives notice of the intention to terminate the Letter of Credit prior to completion of the final surface course pavement, such notice shall be considered a failure to complete improvements in accordance with this agreement and shall entitle the City to immediately draw against the Letter of Credit.

**SECTION V : AS-BUILT CONSTRUCTION PLANS**

Subdivider authorizes the City to prepare all necessary as-built construction plans for improvements to be dedicated to the City. Subdivider agrees to reimburse City for all costs incurred in the preparation and distribution of as-built data, including collection of data, revisions to construction documents and upload of data to City's Geographic Information System, and City may utilize Subdivider's Developers Deposit account for all charges related hereto.

Subdivider authorizes the City to convert digital files submitted by Subdivider pursuant to Section 18.32(3)(i) of the Municipal Code of the City of Muskego and Common Council Resolution No. 196-2002 to any format deemed necessary by City. Subdivider agrees to reimburse City for all costs incurred in said conversions and City may utilize Subdivider's Developers Deposit account for all charges related hereto.

#### **SECTION VI : DEDICATION AND ACCEPTANCE OF IMPROVEMENTS**

Subject to all of the other provisions of this agreement, Subdivider shall, without charge to the City, upon completion of the above described improvements, unconditionally give, grant, convey and fully dedicate the streets, sanitary sewers, watermains, storm water drainage facilities (excluding those facilities which are to be owned and maintained by \_\_\_\_\_ Home Owners Association) to the City, its successors and assigns, forever, free and clear of all encumbrances (except those encumbrances that may be acceptable to the City) whatever together with and including, without limitation because of enumeration, any and all land, buildings, structures, mains, conduits, pipes lines, plant, machinery, equipment, appurtenances and hereditaments which may in any way be a part of or pertain to such improvements and together with any and all necessary easements for access thereto. The City will be receptive to the dedications of improvements, except private storm water drainage facilities, after the first lift of bituminous concrete pavement has been installed, when all said utilities have been completed and approved by the City Engineers and other agencies as applicable.

Dedication shall not constitute acceptance of any improvement by the City. The City shall not accept the dedication of any improvements which do not fully comply with City standards and specifications. Claims of financial hardship by the Subdivider shall not be considered a reason for the City to accept substandard materials or work.

At such time as all improvements are completed and acceptable as called for under this Agreement, and all approvals have been received from regulatory agencies, such improvements shall be accepted by the City by separate Resolution. The Resolution of Acceptance shall be recorded with the Waukesha County Register of Deeds.

The City shall have the right to connect to or integrate other utility facilities with the improvements provided herein without payment, award, or consent required of the Subdivider.

#### **SECTION VII : REMEDIES UPON DEFAULT**

The following shall constitute a default by the Subdivider under this Agreement: If Subdivider should file for bankruptcy or be adjudged bankrupt, or if it should make a general assignment for the benefit of its creditors; if the Subdivider or its general contractors should disregard or otherwise violate any Statutes, Ordinances, regulations, orders, or instructions of the City or any of its employees, agents, committees or commissions; or upon failure of performance by Subdivider or Subdivider's contractor or subcontractors to construct, install, furnish and provide any improvement required under this Agreement; or upon any other Subdivider default or failure to perform under any provision of this Agreement.

Upon the occurrence of a default as defined herein, and without prejudice to any other right or remedy of the City, including the right to damages, the City shall give the Subdivider and its surety or insurer or holder of the financial guarantee provided for pursuant to this Agreement ten (10) days written notice and opportunity to cure. If the default is not cured to the City's sole satisfaction within the ten (10) day period, the City may take possession of the premises and all of the materials thereon, draw upon the Letter of Credit or any other financial guarantee posted or filed by the Subdivider and finish the work by whatever method the City may deem expedient. Subdivider, or its surety in the event of default, shall pay the City the entire cost of completion of the work if funds from the Letter of Credit or other financial guarantee posted or filed by the Subdivider are insufficient to cover the entire cost of completion.

### **SECTION VIII : INSPECTION AND ADMINISTRATIONS FEES**

Subdivider shall pay and reimburse the City in advance of the signing of the Agreement, in accordance with Section 18.14 of the Land Division Ordinance and Ordinance No. 909, and at times specified herein, but in any event, no later than thirty (30) days after billing, all fees, expenses and disbursements which shall be incurred by the City prior to and following the date hereof in connection with or relative to the construction, installation, dedication and acceptance of the improvements covered by Section III, including without limitation by reason of enumeration, design, engineering, preparing, checking and review of designs, plans and specifications, supervision, inspection to insure that construction is in compliance with the applicable plans, specifications, regulations and ordinances; and legal, administrative and fiscal work undertaken to assure and implement such compliance. Failure to pay or reimburse the City in a timely manner may cause the City to cease all construction inspections until such time as all anticipated or outstanding inspection and administration fees have been satisfied.

### **SECTION IX : MISCELLANEOUS REQUIREMENTS**

The Subdivider shall:

1. Easements: Provide any easements on Subdivider's land deeded necessary by the Director of Engineering and Buildings prior to the Final Plat being signed, provided such easements are along lot lines or to the rear of the lots and are not any more restrictive to the building of homes beyond the applicable side yard and offset distances required by the zoning for such lots.
3. Manner of Performance: Cause all construction called for by this Agreement to be carried out and performed in a good and workmanlike manner.

### **SECTION X: GENERAL CONDITIONS AND REGULATIONS**

Municipal Codes and Ordinances: All the provisions of the City's ordinances are incorporated herein by reference, and all such provisions shall bind the parties hereto and be a part of this Agreement as fully as if set forth at length herein. This Agreement and all work and improvements required hereunder shall be performed and carried out in strict accordance with and subject to the provisions of said ordinances.

### **SECTION XI : GUARANTEES:**

The Subdivider shall guarantee the public roads and streets, sanitary sewers, watermains, surface water drainage improvements and all other improvements described in Section III, against defects due to faulty materials or workmanship provided that such defects appear within a period of one (1) year from the date of acceptance. The Subdivider shall pay for any damages to City property resulting from such faulty materials or workmanship. This guarantee shall not be a bar to any action the City might have for negligent workmanship or materials. Wisconsin law on negligence shall govern such situation.

### **SECTION XII : GENERAL INDEMNITY:**

In addition to, and not to the exclusion or prejudice of, any provisions of this agreement or documents incorporated herein by reference, Subdivider shall indemnify and save harmless, and agrees to accept tender of defense and to defend and pay any and all reasonable legal, accounting, consulting, engineering and other expenses relating to the defense of any claim asserted or imposed upon the City its officers, agents, and employees, and independent contractors growing out of this agreement as stated above by any party or parties except those claims asserted by Subdivider against City, its officers, agents and employees in an effort to enforce this Agreement. The Subdivider shall also name as additional

insured on its general liability insurance the City, its officers, agents, and employees, and any independent contractors hired by the City to perform service as to this Subdivision and give the City evidence of the same upon request by the City.

- a) Hold Harmless. The Subdivider shall indemnify and hold harmless the City, its officers, agents, independent contractors, and employees from and against all claims, damages, losses, and expenses, including attorney's fees arising out of or resulting from the performance of the Work, providing that any such claim, damage, loss, or expense (i) is attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Work itself) including the loss of use resulting therefrom, and (ii) is caused in whole or in part by any negligent act or omission of the Subdivider, its officers, agents, independent contractors, and employees or anyone for whose acts any of them may be made liable, regardless of whether or not it is caused in part by a party indemnified herein. In any and all claims against the City, its officers, agents, independent contractors, and employees by the Subdivider, its officers, agents, independent contractors, employees, and anyone directly or indirectly employed by any of them or anyone for whose acts any of they may be held liable, the indemnification obligation under this section shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Subdivider, its officers, agents, independent contractors, employees under Workers' Compensation Acts, disability benefit acts, or other employee benefit acts.
- b) Personal Liability of Public Officials. In carrying out any of the provisions of this Agreement or in exercising any power or authority granted to them thereby, there shall be no personal liability of the City officers, agents, independent contractors, or employees, it being expressly understood and agreed that in such matters they act as agents and representatives of the City.
- c) Indemnification for Environmental Contamination. The Subdivider shall indemnify, defend, and hold City and its officers, agents, independent contractors, and employees harmless from any claims, judgments, damages, penalties, fines, costs, or loss (including reasonable fees for attorneys, consultants, and experts) that arise as a result of the presence or suspected presence in or on the real property dedicated or conveyed to the City by, under, pursuant to, or in connection with the Plat and this Agreement (including but not limited to street right-of-way) of any toxic or hazardous substances arising from any activity occurring prior to the acceptance of all improvements. Without limiting the generality of the foregoing, the indemnification by the Subdivider shall include costs incurred in connection with any site investigation or any remedial, removal, or restoration work required by any local, State, or Federal agencies because of the presence or suspected presence of toxic or hazardous substances on or under the real property, whether the soil, groundwater, air, or any other receptor. The City agrees that it will immediately notify Subdivider of the discovery of any contamination or of any facts or circumstances that reasonably indicate that such contamination may exist in or on the real property. Upon receipt of notice from the City or other entities, Subdivider shall investigate and rectify conditions which indicate the presence of or suspected presence of contamination on the subject property as identified by local, state, or federal agencies in order to comply with applicable laws.

Subdivider shall, at its expense, obtain and carry comprehensive general liability insurance with combined single limits of at least One Million Dollars (\$1,000,000.00) for one person and at least Five Million Dollars (\$5,000,000.00) per occurrence, and at least One Million Dollars (\$1,000,000.00) property damage (or such higher amounts as the City shall from time to time deem reasonable). Such policy shall cover both Subdivider and the City and its agents, employees, and officials, and all insurers shall agree not to cancel or change the same without at least thirty (30) days written notice to the City. A certificate of Subdivider's insurance shall be furnished to the City upon execution of this Agreement. Each such policy shall provide that no act or default of any person other than the City or its agents shall render the policy void as to the City or effect the City's right to recover thereon.

**SECTION XIII : AGREEMENT FOR BENEFIT OF PURCHASERS:**

The Subdivider shall agree that in addition to the City's rights herein, the provisions of this Agreement shall be for the benefit of the purchaser of any lot or any interest in any lot or parcel of land in the Subdivision. Further, that the sale of any lot or parcel shall not release the Subdivider from completing the work provided for under this Agreement, by applicable Ordinances and as set forth in the plans and specifications on file in the City Building and Engineering Department.

**SECTION XIV. CONSTRUCTION PERMITS, ETC...**

The City shall, within its authority:

1. Issue such permits, adopt such resolutions, and execute such documents as may be necessary to permit the Subdivider to construct the improvements in accordance with the plans and specifications called for by this agreement, upon Subdivider's compliance with any deposit provisions or other requirements of the applicable ordinances or regulations.
2. Furnish the Subdivider such permits or easements as may be required to enter upon and install the previous described improvements in any public street or public property.
3. Cooperate with the Subdivider in obtaining similar permits, resolutions and documents as may be necessary from other authorities having jurisdiction in the premises.
4. Make available to the Subdivider or their nominee successors or assigns, permits for the construction of single family residences subject to the provision of Section \_\_\_\_.

**SECTION XV. BUILDING AND OCCUPANCY PERMITS:**

It is expressly understood and agreed that no building permits or occupancy permits shall be issued for any homes until the Director of Engineering and Building has determined that:

1. The sanitary sewer, water and surface water drainage facilities required to serve such homes are connected with an operational system as required herein, and the installation of the bituminous concrete base course pavement has been properly installed, and
2. Deed Restrictions and the Stormwater Management Maintenance Agreement have been recorded, and
3. Video tape of sanitary sewer system has been completed by the Utilities Department, and the results found acceptable by the Utility Superintendent, and
4. Certification is provided to the Director of Engineering and Building by a Registered Land Surveyor that all lot grades conform to the Master Grading Plan, and
5. Negative balance in Developer's Deposit is satisfied unless otherwise authorized by the Planning Director.

It is expressly understood and agreed that no occupancy permits shall be issued for any homes until the Planning Director has determined that:

1. Street Tree Plans as required by Section III E (3) of this Agreement have been approved.

**SECTION XVI. FINANCIAL GUARANTEES:**

1. LETTER OF CREDIT: Concurrent with the execution of this Agreement by the City, the Subdivider shall file with the City a Letter of Credit setting forth terms and conditions approved by the City Attorney and Finance Committee on \_\_\_\_\_ in the amount of \$\_\_\_\_\_ as a guarantee that the required plans, improvements, and improvements will be completed by the Subdivider and his subcontractors no later than one (1) year from signing of the Agreement, except if another date is provided within this Agreement and as a further guarantee that all obligations to the subcontractors for work on the Subdivision are satisfied.
  - a) Invoices: Invoices documenting public improvements addressed and not addressed in the Letter of Credit, but attributable to the subject development shall be provided to the City.
  - b) Reduction Of Letter Of Credit Balance: The Subdivider shall provide Director of Engineering and Building with a written request accompanied by: invoices for work completed for which a release is being requested, breakdown of invoices in the format of the Public Improvement Cost Breakdown form, and signed original lien waivers for all work which is subject of the release request. The Director of Engineering and Building will process all requests in accordance with policies adopted by the Finance Committee, as may be amended from time to time.
2. DEVELOPER'S DEPOSIT: The Subdivider shall maintain a \$\_\_\_\_\_ balance in the Developer's Deposit. No reduction of the Letter of Credit balance shall be entertained until the Developer's Deposit is satisfied unless otherwise authorized by the Common Council following a recommendation of the Finance Committee.
3. PRESERVATION OF ASSESSMENT RIGHTS:
  - a) Waiver of Notice. In addition to other remedies provided to the City by this Agreement, the City shall have the right, without notice or hearing, to impose special assessments for any amount to which the City is entitled by virtue of this Agreement upon the Subdivision. This provision constitutes the Subdivider's consent to the installation by the City of all improvements required by this Agreement and constitutes the Subdivider's waiver of notice and consent to all special assessment proceedings as described in Section 66.0703(7)(b), Wis. Statutes.
  - b) Remedies not exclusive. The City may use any other remedies available to it under the Agreement or in law or equity in addition to, or in lieu of, the remedies provided herein.

#### **SECTION XVII. PARTIES BOUND:**

Subdivider or its assignees shall be bound by the terms of this agreement or any part herein as it applies to any phase of the development. Approval by the City shall not be deemed a waiver as the ultimate responsibility for the proper design and installation of streets improvements, drive and parking areas, water facilities, drainage facilities, ditches, landscaping and all other improvements shall be the Subdividers. The fact that the City or it's engineers, or it's attorney, or it's staff may approve a specific project shall not constitute a waiver, or relieve the Subdivider from ultimate responsibility for the design, performance, and function of the Development and related infrastructure.

#### **SECTION XVIII. AMENDMENTS AND ASSIGNMENT:**

Subdivider shall not assign this Agreement without the written consent of the City. The City and the Subdivider, by mutual consent, may amend this agreement, by written agreement between the City and the Subdivider.

**SECTION XIX : NOTICES AND CORRESPONDENCE**

Unless otherwise stated in this Agreement, the delivery of all notices and correspondence shall only be effective upon being delivered personally, sent by prepaid United States Postal Service certified mail with return receipt requested, sent by facsimile with transmission confirmation, or sent by electronic mail with return receipt requested, to all parties as follows:

**To City:**

Planning Department  
City of Muskego  
POB 749  
W182 S8200 Racine Avenue  
Muskego, WI 53150-0749  
(262) 679-4136  
(262) 679-5614 facsimile

**To Subdivider:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

All notices shall be considered to have been delivered at the time such notices are personally delivered to each party, or three (3) days after the date of postmark on any prepaid certified letter, facsimile transmission, or electronic mail.

Parties to this Agreement shall give fifteen (15) days notice of any change of mailing address, telephone or facsimile number, or electronic mail address. Failure to provide said notice may constitute a default by the party.

**SECTION XX: PARTIES TO THE AGREEMENT**

IN WITNESS HEREOF, Subdivider has caused this Agreement to be signed by their appropriate officers and their seals to be hereunto affixed in duplicate original counterparts on the date and year first written above.

**SUBDIVIDER:**

By: \_\_\_\_\_

By: \_\_\_\_\_

STATE OF WISCONSIN ) SS  
WAUKESHA COUNTY )

PERSONALLY came before me this \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ to me known to be the person who executed the foregoing instrument and acknowledged the same.

\_\_\_\_\_  
Notary Public-State of Wisconsin  
My Commission Expires \_\_\_\_\_

IN WITNESS HEREOF, City has caused this Agreement to be signed by their appropriate officers and their seals to be hereunto affixed in duplicate original counterparts on the date and year first written above.

**CITY OF MUSKEGO:**

BY: \_\_\_\_\_  
[name of mayor], Mayor

BY: \_\_\_\_\_  
[name of clerk], City Clerk/Treasurer

STATE OF WISCONSIN ) SS  
WAUKESHA COUNTY )

PERSONALLY came before me this \_\_\_\_\_ day of \_\_\_\_\_, [year], the above named [name of mayor], Mayor, and [name of clerk], City Clerk/Treasurer, of the above-named municipal corporation City of Muskego, to me known to be the persons executed the foregoing instrument, and to me known to be such Mayor and City Clerk/Treasurer of said municipal corporation, and acknowledged that they executed the foregoing instrument as such officers as the deed of said municipal corporation by its authority and pursuant to the authorization by the Common Council from their meeting on the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Notary Public-State of Wisconsin  
My Commission Expires \_\_\_\_\_

**CERTIFICATION**

This is to certify that the foregoing is a true and correct copy of the Subdivider's Agreement for [name] Subdivision, Muskego, Wisconsin, as entered into on the \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, by and between \_\_\_\_\_ and the City Of Muskego, pursuant to the authorization by the Common Council from their meeting on the \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

BY THE COMMON COUNCIL

\_\_\_\_\_  
[clerk name], CMC  
City Clerk/Treasurer

SUBSCRIBED AND SWORN TO BEFORE ME  
this\_\_ day of \_\_\_\_\_ , \_\_\_\_\_.

\_\_\_\_\_  
(Notary Public)

My commission expires \_\_\_\_\_

## PROTECTIVE COVENANTS

### INTRODUCTION

Developers are encouraged to author Deed restrictions and Protective Covenants in order to assist in the creation of a quality built environment. Protective Covenants are only required by the City when the construction of a Planned Unit Development is proposed to be phased over a number of years. The model declaration, below, is used for all phased Planned Unit Developments.

### PROCEDURE

1. Applicant submits plat documents per Procedure Guide.
2. Plan Department prepares the *Declaration of Restrictions for OPD Projects* using the Model Declaration, below, and modifies it to reflect the unique characteristics of the project.
3. Plan Commission reviews the Declaration concurrent with the Final Plat, and makes a recommendation to Common Council.
4. Common Council reviews the matter concurrent with Final approvals.
5. At the Closing Meeting, the applicant provides the City with a signed and notarized copy of the Declaration.
6. Applicant records the declaration at the Waukesha County Register of Deeds, with original returned to the Planning Department.
7. Planning Department places the original on file.

**MODEL DECLARATION**

DECLARATION OF RESTRICTIONS  
*FOR OPD PROJECTS*

WHEREAS, the undersigned are all of the owners of all of the land described on Exhibit "A" which is attached hereto and made a part hereof; and

WHEREAS, the undersigned have requested the CITY OF MUSKEGO, hereinafter referred to as "CITY", to rezone all of said land to \_\_\_/OPD.; and

WHEREAS, the CITY has approved the concept of such a change; and

WHEREAS, the undersigned now wishes to develop said property in phases; and

WHEREAS, the undersigned wishes the zoning of the phase it now wishes to develop be amended to a zero-zero (00) lot subdivision known as \_\_\_\_\_ shown on Exhibit "B", and

WHEREAS, the proposed phase does not in itself support the zoning change requested, but the property described on Exhibit "A" taken as a whole does support such a change if developed in accord with the concept which has been approved; and

WHEREAS, the undersigned wishes the CITY to enact the \_\_\_ / OPD zoning for the phase now to be developed and is willing to restrict the use of the remaining land to 00 single family lots, 00 duplex lots and 00 eight-family lots.

NOW, THEREFORE, BE IT RESOLVED, for valuable consideration acknowledged by the undersigned, the following;

1. All of the land described on Exhibit "A" is now restricted to be used as land subject to a \_\_\_OPD zoning, subject to the use of land being made in the prior phase or phases and further subject to all necessary future CITY approvals; and
2. No development of the land described in Exhibit "A" other than that in the phase now being rezoned is allowed without future CITY approval; and
3. This restriction, in part, restricts the maximum density to which the remaining lands subject to this restriction can be developed and may require certain open space requirements; and
4. All lands described on Exhibit "A" are subject to all agreements of the undersigned, but not a Subdivider's Agreement.
5. These restrictions are covenants running with the land.

IN WITNESS WHEREOF, the undersigned owners have executed this Declaration of Restrictions this    day  
of       , 200

\_\_\_\_\_

\_\_\_\_\_

STATE OF WISCONSIN    )  
                          )SS.  
COUNTY OF WAUKESHA    )

Personally came before me this    day of       , 200 , the above named \_\_\_\_\_ to me known  
to be the persons who execute the foregoing instrument and acknowledged the same.

\_\_\_\_\_  
NOTARY PUBLIC, STATE OF WI

My Commission expires:\_\_\_\_\_

## DEVELOPER DEPOSIT POLICY

### INTRODUCTION

The Developer's Deposit is used by the City for costs associated with plan checking and other reviews by our consulting engineers, attorneys, planners, etc. The fee may also be used to offset the cost of construction inspections. Upon final acceptance of the improvements, any remaining portion of the Developer's Deposit will be returned to the developer.

### PROCEDURE TO ESTABLISH

1. The developer submits Improvement Plans and / or Construction Plans along with the appropriate review fees. The amount of the Developer Deposit is then determined by the Plan Director or his designee based upon on the size and type of development, as follows:

#### RESIDENTIAL DEVELOPMENTS (INCLUDES MULTI-FAMILY)

1 TO 4 UNITS w/o new infrastructure =	\$ 300
1 TO 4 UNITS w/ new infrastructure =	\$ 2,000
5 TO 10 UNITS =	\$ 4,000
11 TO 25 UNITS =	\$ 7,500
26 TO 50 UNITS =	\$ 10,000
MORE THAN 51 UNITS =	\$ 15,000

#### COMMERCIAL DEVELOPMENTS

UP TO 10,000 SQUARE FEET OF (GLA)	\$ 3,000
FROM 10,001 UP TO 50,000 SQUARE FEET OF (GLA)	\$ 7,500
FROM 50,001 UP TO 100,000 SQUARE FEET OF (GLA)	\$ 10,000
GREATER THAN 100,000 SQUARE FEET OF (GLA)	\$ 15,000

#### REZONING PETITIONS, CONDITIONAL USE GRANT PETITIONS

**Base deposit, plus \$500**

#### WIRELESS COMMUNICATION FACILITIES

New Towers	\$ 5,000
Co Locations	\$ 2,000

#### SPECIAL PROJECTS

Extraterritorial Certified Survey maps:	\$100.00
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Deposits for other projects are as determined by the Planning Director on a case-by-case basis, with a minimum of \$ 100.00

2. The Planning Department will not route plans to the City Engineer or any Committee for review unless the Developers Deposit has been received or (replenished to its required level).
3. The Planning Department will check the status of the Developers Deposit at the time of building permit application. The Developers Deposit must be replenished to its original balance prior to release of building permits for the project. The Plan Director or his designee may waive this requirement.

4. The moneys are deposited into a segregated account for each project. The Plan Director or his designee may require a separate Developer Deposit for each phase of a multiple-phase project.

#### **PROCEDURE TO USE FUNDS**

1. As charges pertaining to the development accrue, the City Finance Department codes the bills so that review costs come out of the Developer Deposit.
2. A copy of all accrued charges is sent to the developer. The City pays the charges from the Developer Deposit. The Finance Department maintains spreadsheets for each individual project account, and provides updates to the developer as bills are paid from the Developers Deposit.

#### **PROCEDURE TO CLOSE ACCOUNT**

1. Sixty days after acceptance of improvements, all charges should be received and processed through the account. At this time the account holder may file a written request for account closure with the Planning Department.
2. Planning Department verifies with Finance Department that there are no outstanding invoices or unpaid charges.
3. If there are no outstanding invoices or charges, Planning Department provides Finance Department with authorization to close account.
4. Finance Department prepares voucher for Finance Committee approval.
5. Upon approval Finance Department issues check for the account balance.

## **WETLAND DELINEATION DEPOSIT POLICY**

### **INTRODUCTION**

Wetland delineations are conducted free of charge by the Southeastern Wisconsin Regional Planning Commission (SEWRPC). Such work is performed only when a property owner makes a request to the City Planning Department, and the City forwards the request to SEWRPC. In exchange for the receipt of this free service, the owner is required to hire a registered land surveyor to immediately record the findings of the Commission. Since SEWRPC does the delineations as a free service, they do them as time allows. On average, it takes about four to six months to schedule this free service.

***NOTE:*** *As an alternate to this policy, a property owner may (at their sole expense and at no cost to the City) hire a private firm to conduct a wetland delineation. All private work must be approved by the Wisconsin DNR and / or Army Corps of Engineers.*

## **LETTER OF CREDIT POLICY**

### **INTRODUCTION**

Any time a private party chooses to construct public improvements, a Letter of Credit is required as security. If the party defaults on their obligations, the City may draw upon the Letter of Credit, and use the monies to complete the project. Letters of Credit are security for the City, and differ from a line of credit, which the party may establish with a lender in order to pay contractors.

The letter of credit amount varies, but in any case must be sufficient to assure that the work can be completed without cost to the City, in the event of default. As the party completes work associated with the Letter of Credit, the risk to the City is reduced, and the party may request a reduction in the City's security.

### **PROCEDURE TO ESTABLISH**

Infrastructure Development can proceed at the Final Plat, CSM, or Final Building Site and Operational Plan (BSO) stage if all construction/improvement plans have been approved

1. The Final Plat, CSM, or BSO plan is approved by the Plan Commission and, where necessary, the Common Council in accordance with the procedure outlined in the Procedure Manual.
2. The Public Improvement Cost Breakdown Sheet is submitted by the party and sent to City Engineers for review. City Engineer recommends revisions if necessary, and forwards to Finance Department who establishes a spreadsheet.
3. Planning Department prepares Subdivider's Agreement for approval by Finance Committee and Common Council.
4. Finance Committee reviews party's proposed cost breakdown, and City Engineer's recommended cost breakdown and approves one of them. Approval of the Public Improvement Cost breakdown establishes Letter of Credit amount (which includes the costs for the City Engineer to review and approve the actual construction of infrastructure).
5. City Attorney reviews the Letter of Credit along with the Subdivider's Agreement for its form and legality.
6. Letter of Credit form and amount are approved by Common Council. All fees are paid, documents signed and recorded.
7. Construction may begin for work approved in that phase (after the pre-construction meeting per policy).

### **PROCEDURE TO REDUCE**

1. As construction proceeds, the City Engineer reviews (inspects) work. This generates a City Engineer bill that is paid from the Developer's Deposit. In the event the party fails to maintain sufficient funds in the Developers Deposit account, the City may seize the amount of money necessary from the Letter of Credit. A copy of this bill or invoice is sent to the party. This City Engineer bill goes to the Finance Committee for approval in accordance with adopted procedures for accounts payable.
2. As work is recommended for approval by the City Engineer, the party provides a written request for "Reduction of Letter of Credit" to the Director of Building and Engineering, for work that is completed. The party also submits the itemized list of improvements installed, along with invoices related thereto

(the City subsequently submits to Public Service Commission for water and sewer improvements), and lien waivers for all work completed which relates to the requested reduction.

3. The Request for Reduction of Letter of Credit is reviewed by the Director of Building and Engineering, to determine if all required items have been submitted. If not, the Director of Building and Engineering informs the developer in writing, and the Request for is not processed. When all required items are received and verified by the Director of Building and Engineering, they are forwarded to the City Engineer to ensure that all work is complete, to ensure that all punch list items are completed to the City's satisfaction, and to ensure that there are enough funds remaining in the Letter of Credit to complete the project.
4. If the Director of Building and Engineering approves the "Reduction of Letter of Credit" a written recommendation is forwarded to the Finance Department along with all documentation required by No. 2 above. Finance Department amends the Public Improvement Cost Breakdown, and forwards copies of all items to Director of Building and Engineering, who puts the Request on the agenda for the Finance Committee.
5. Requests for "Reduction of Letter of Credit" are reviewed by the Finance Committee. Common Council approves the Reduction through the approval of the Finance Committee minutes.
6. Following Common Council approval, a Letter is drafted by Finance Department, signed by the Mayor, and sent to bank to authorize the reduction of the City's security. A copy of the authorization letter is sent to the Planning Department, Building & Engineering Department, and the private party.

#### **PROCEDURE TO EXPIRE**

1. Ninety (90) days prior to the expiration of the Letter of Credit, the financial institution sends the City notification expiration.
2. City sends City Engineer copy of financial institution's letter to verify if it's OK for the Letter of Credit to expire. The Director of Building and Engineering and Planning Director review the project status and confirm that the Letter of Credit may expire.
3. The recommendations of the City Engineer, Building & Engineering Director, and Planning Director regarding the expiration of the Letter of Credit is brought before the Finance Committee for their approval.
4. Common Council approves/denies the expiration of the Letter of Credit through the approval of the Finance Committee minutes.
5. If the Common Council denies the extension of the Letter of Credit, the City will draw on all remaining funds.

**MODEL LETTER OF CREDIT**

The following letter is approved as to form and content. It should be used in all cases, unless another form is approved by the City Attorney, Finance Committee, and Common Council.

[LETTERHEAD OF LENDING INSTITUTION]

Letter of Credit No. \_\_\_\_\_

Amount:        \${amount}

Applicant:        [name of applicant]  
                      [company of applicant]  
                      [address of applicant]  
                      [city, state zip]

Beneficiary:      City of Muskego  
                      Post Office Box 749  
                      W182 S8200 Racine Ave.  
                      Muskego, WI 53150-0749

Dear Sirs:

We hereby issue this irrevocable documentary credit in your favor which is available by beneficiary's draft(s) at sight drawn on *[name of lending institution]*. Each Draft accompanying documents must state "Drawn Under *[name of lending institution]* Documentary Credit No. \_\_\_\_\_."

This Standby Credit is to provide a guarantee to the City of Muskego for the performance of Applicant obligations under that certain agreement dated \_\_\_\_\_, 20\_\_\_\_ [date of closing meeting with the City] between the City of Muskego and Applicant.

**DRAFTS ARE TO BE ACCOMPANIED BY:**

A statement signed by the Mayor of the City of Muskego stating that Applicant has failed to complete the construction of subdivision improvements in accordance with said Agreement or otherwise comply with the obligations of the Agreement. Said statement shall set forth the estimated amount necessary for the City of Muskego to complete such improvements or otherwise comply with the obligations of the Agreement.

**SPECIAL CONDITIONS:**

This Standby Credit will terminate on the \_\_\_ day of \_\_\_\_\_, \_\_\_\_\_ [must be 15 months from date of execution] provided, however, *[name of lending institution]* shall give written notice to the beneficiary of its intention to terminate this standby credit at ninety (90) days prior to the \_\_\_ day of \_\_\_\_\_, \_\_\_\_\_. After said date, this letter of credit can only terminate upon ninety (90) days written notice to the beneficiary. 38

It is hereby agreed by all parties hereto that the reference to "Agreement" is for identification purposes only and such reference shall not be construed in any manner to required *[name of lending institution]*, to inquire into its terms and obligations.

We encourage with you that drafts drawn under and in compliance with the terms of this credit will be duly honored if presented on or before the expiration date. This original Standby Credit must be submitted to us together with any drawings hereunder for our endorsement of any payments effected by us and/or for cancellation.

Sincerely,  
*[name of lending institution]*

\_\_\_\_\_  
BY:

**PUBLIC IMPROVEMENT COST BREAKDOWN**

Indicate the cost of each public improvement to be installed. List amounts for each category and sub-category item. Contractors bid estimates shall be submitted with this breakdown. The City Engineer will review this breakdown and approve a total amount to establish a Letter of Credit.

	Amount
1. Road Construction	
a. Excavation to subgrade	_____
b. Stone base material	_____
c. Bituminous base course pavement	_____
d. Bituminous surface course pavement	_____
e. Concrete pavement	_____
f. Other	_____
TOTAL	_____
2. Site Grading-Landscaping	
a. Lot grading	_____
b. Drainage ditch construction	_____
c. Retention pond construction	_____
d. Parking area construction-incl. pavement	_____
e. Tree & shrub plantings	_____
f. Landscaping as specified by City	_____
g. Erosion control	_____
h. Other	_____
TOTAL	_____
3. Topsoil, Seeding/Sodding	
a. Road ditch area	_____
b. Terrace areas-in R.O.W.	_____
c. Drainage ditches	_____
d. Retention ponds	_____
e. Areas as specified by City	_____
f. Other	_____
TOTAL	_____
4. Concrete Improvements	
a. Curb & gutter	_____
b. Sidewalk	_____
c. Blvd./traffic islands	_____
d. Ditch inverts	_____
e. Other	_____
TOTAL	_____
5. Sanitary Sewer System	
a. Mains, risers & manholes	_____
b. Laterals	_____
c. Dumping station & generator	_____
d. Force main	_____
e. Grinder pumps & chamber- individual dwelling	_____
f. Other	_____
TOTAL	_____

6. Water Main System	
a. Mains, valves, & manholes	_____
b. Hydrants & leads	_____
c. Water services	_____
d. Well & pumphouse	_____
e. Other	_____
TOTAL	_____
7. Storm Sewer System	
a. Mains & manholes	_____
b. Catch basins & leads	_____
c. Culverts	_____
d. Drain tile	_____
e. Headwalls/discharge structures	_____
f. Other	_____
TOTAL	_____
8. Special/Misc. Improvements	
a. Street lights	_____
b. Street signs	_____
c. Signs as specified by City	_____
d. Other	_____
TOTAL	_____
9. Fees	
a. City administration	_____
b. Engineering inspections	_____
(required for all Letters of Credit)	
c. Engineering-as built drawings for w/s	_____
d. Legal	_____
e. Land acquisition	_____
TOTAL	_____
TOTAL PROJECT ESTIMATE	_____

NOTE: At time of submittal of the Letter of Credit, the developer, as per Section 10.8 of the Land Division Ordinance, shall submit an administrative fee per public improvement category in accordance with the adopted fee schedule; excepting the categories of Special/Misc. Improvements and Fees. (Categories 8 & 9)

**MODEL IRREVOCABLE STANDBY DOCUMENTARY CREDIT –  
WIRELESS COMMUNICATION FACILITIES**

[LETTERHEAD OF LENDING INSTITUTION]

Letter of Credit No. [number]

Amount: USD \$[amount]

Date: [date of issuance]

Applicant:

[name]  
[address]

Beneficiary:

CITY OF MUSKEGO  
W182 S8200 RACINE AVENUE  
MUSKEGO, WI 53150-0749

Dear Sirs:

We hereby establish this irrevocable standby Letter of Credit No. [number] in your favor, for an aggregate amount not to exceed the amount indicated above, expiring at the close of business on [expiration date one (1) year from date above] or any automatically extended expiry date.

This Letter of Credit is available with the [name of lending institution] against presentation of your draft at sight drawn on the [name of lending institution] and upon receipt of a written statement signed by the city of Muskego stating that “the communications facilities have not been removed and the premises restored to its previous condition, reasonable wear and tear excepted.”

Our customer advises us that: “This Letter of Credit refers to resolution # PC [resolution number] dated [date of plan commission approval].”

It is a condition of this irrevocable Letter of Credit that it shall be automatically extended without amendment for additional one year periods from the present or each future expiration date, unless at least ninety (90) days prior to such date we send you notice in writing by registered mail, or hand delivery at the above address, that we elect not to renew this Letter of Credit for such additional period.

All correspondence and any drawings hereunder are to be directed to our office at [lending institution mailing address], Attention: [name of department or personnel]. Customer inquiry numbers are [appropriate phone numbers].

We hereby agree with you that drafts drawn under and in compliance with the terms and conditions of this Letter of Credit will be duly honored.

This credit is subject to the uniform customs and practice for Documentary Credit (1993 revision) International Chamber of Commerce, publication no. 500.

The number and the date of our credit and the name of our bank must be quoted on all drafts required.

[name of lending institution]

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Authorized Signature

## **INSURANCE POLICY**

### **INTRODUCTION**

Insurance is required as part of all developer's agreements to insure both the developer and the City, its agents, employees, and officials.

### **PROCEDURE**

1. As stated in the developer's agreement, the developer shall, at its expense, obtain and carry comprehensive general liability insurance with combined single limits of at least One Million Dollars (\$1,000,000.00) for one person and at least Five Million Dollars (\$5,000,000.00) per occurrence, and at least One Million Dollars (\$1,000,000.00) property damage (or such higher amounts as the City shall from time to time deem reasonable).
2. Proof of the insurance shall be provided on the City approved form (Below). The original form shall be provided before the closing meeting, prior to final City signatures being received on recording documents.

### **STANDARD INSURANCE FORM**

The form on the following page must be used as a standard template for all insurance policies.

**CERTIFICATE OF INSURANCE**

**PROJECT:** \_\_\_\_\_

This is to certify that the policies listed below have been issued to the insured named below by the Company(s) indicated below and are in force at this date. The insurance coverages listed will not be canceled, materially changed or renewal refused until at least thirty (30) days written notice has been given to the OWNER.

The holder of this certificate is a party to the Certificate of Insurance pursuant to Subdividers Agreement between City of Muskego and \_\_\_\_\_.

**COMPANIES AFFORDING COVERAGES**

COMPANY <b>A</b>
LETTER
AGENCY NAME:
ADDRESS:
SIGNATURE:
AUTHORIZED REPRESENTATIVE
DATE:

COMPANY <b>C</b>
LETTER
AGENCY NAME:
ADDRESS:
SIGNATURE:
AUTHORIZED REPRESENTATIVE
DATE:

COMPANY <b>B</b>
LETTER
AGENCY NAME:
ADDRESS:
SIGNATURE:
AUTHORIZED REPRESENTATIVE
DATE:

COMPANY <b>D</b>
LETTER
AGENCY NAME:
ADDRESS:
SIGNATURE:
AUTHORIZED REPRESENTATIVE
DATE:

NAME AND ADDRESS OF INSURED:
NAME:
ADDRESS:
NAME AND ADDRESS OF CERTIFICATE HOLDER:
NAME:
ADDRESS:

NAME(S) AND ADDRESS(S) OF ADDITIONALLY INSURED:
NAME: City of Muskego
ADDRESS W182 S8200 Racine Avenue
PO Box 749
Muskego, WI 53150-0749
NAME:
ADDRESS:
NAME:
ADDRESS:
NAME:
ADDRESS

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Company Letter	Type of Insurance	Policy Number	Policy Expiration Date	Limits of Liability in Thousands (000)	
	<b>WORKERS' COMPENSATION AND EMPLOYER'S LIABILITY</b>			Statutory Each Acc Disease-Policy Limit Disease-Each Employee	
	<b>MOTOR VEHICLE LIABILITY</b> <input type="checkbox"/> ANY AUTO <input type="checkbox"/> ALL OWNED AUTOS <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS <input type="checkbox"/> NON-OWNED AUTOS <input type="checkbox"/> GARAGE LIABILITY <input type="checkbox"/>			CSL	
				Bodily Injury (Per Person)	
				Bodily Injury (Per Accident)	
				Property	
	<b>GENERAL LIABILITY</b> <input checked="" type="checkbox"/> COMMERCIAL GEN LIABILITY <input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCURRENCE <input type="checkbox"/> OWNER'S & CONTRACTOR'S PROTECTIVE <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> CONTRACTUAL LIABILITY <input checked="" type="checkbox"/> COMPLETED OPERATIONS			General Aggregate	
				Prods-Comp/Ops Agg.	
				Pers. & Advg. Injury	
				Each Occurrence	
				Fire Damage (Any One Fire)	
				Medical Expense (Any One Person)	
				Contractual Liability	
				Completed Operations	
	<b>EXCESS LIABILITY</b> <input type="checkbox"/> UMBRELLA FORM <input type="checkbox"/> OTHER THAN UMBRELLA FORM			Aggregate	Each Occurrence
				<b>OTHER</b>	

DESCRIPTION OF OPERATIONS/LOCATIONS/VEHICLES/SPECIALTIES

DATE ISSUED \_\_\_\_\_

AUTHORIZED SIGNATURE \_\_\_\_\_



## **MODEL HOME POLICY**

### **INTRODUCTION**

From time to time, the seasonal constraints of Wisconsin's construction season conflict with the City's policy which prohibits the start of home construction prior to the completion of all infrastructure improvements in new subdivisions. The Common Council may grant exceptions to this policy through the execution of a Model Home Agreement.

### **PROCEDURE**

1. During Plat Approval process or during improvement construction process, Applicant makes a written request to the Planning Department for a specified number of model homes.
2. Planning Department reviews the request with City Engineer, Deputy Building Director, Public Works Superintendent, Utility Superintendent, Fire Chief, and Police Chief.
3. If there are objections, the Applicant is advised and the policy as detailed in the Developer's Agreement remains in effect. If there are no objections, Planning Department prepares a Model Home Agreement using the Standard Agreement Template below, modifying the document to reflect the unique circumstances of the project.
4. Finance Committee reviews and acts upon the Agreement, making a recommendation to the Common Council.
5. Common Council acts on the Agreement by Resolution.
6. If approved, Applicant may execute the Agreement and may apply for building permits as stipulated therein.

### **STANDARD AGREEMENT**

The form on the following page is used as a standard template for all Model Home Agreements. Each Agreement is modified by the Planning Department to reflect the unique circumstances of the project.

**DEVELOPMENT**  
**MODEL HOME AGREEMENT – LOTS # , # , AND #**

\_\_\_\_\_, hereinafter referred to as "Subdivider", hereby certifies that Subdivider is platting and constructing \_\_\_\_\_ in the City of Muskego.

\_\_\_\_\_, hereinafter referred to as "Builder", hereby certifies that they understand that Section \_\_\_\_\_ of the Subdivider's Agreement for \_\_\_\_\_ provides that:

"It is expressly understood and agreed that no building permits or occupancy permits shall be issued for any homes until the Director of Engineering and Building has determined that:

1. The sanitary sewer, water main, and surface water drainage facilities required to serve the Property are connected with an operational system as required herein, and installation of the bituminous concrete base course pavement has been properly installed, and
2. Video tape of sanitary sewer system has been completed by the Utilities Department, and the results found acceptable by the Utility Superintendent, and
3. Certification is provided to the Director of Engineering and Building by a Registered Land Surveyor that all lot grades conform to the Master Grading Plan, and
4. Negative balance in Developer's Deposit is satisfied unless otherwise authorized by the Planning Director.

Subdivider and Builder jointly and severally acknowledge notice of the above referenced conditions and any other applicable conditions, laws, rules, or regulations and agrees to assume all risks of satisfaction of those conditions created as a result of the City's issuance of a building permit, and Subdivider and Builder proceeding with construction of model homes prior to satisfaction of said conditions and any other applicable conditions, laws, rules, or regulations.

Subdivider and Builder jointly and severally specifically agree to indemnify and hold the City of Muskego harmless for any costs or damages incurred if an occupancy permit is not issued due to a failure to satisfy the conditions referenced above, and any other applicable conditions, laws, rules, or regulations.

Subdivider and Builder jointly and severally specifically acknowledge that no occupancy permits for any of the model homes, or any other dwelling in \_\_\_\_\_, shall be issued prior to satisfaction of the conditions stated above and any other applicable conditions, laws, rules, or regulations.

The undersigned understand the above and request that the City of Muskego issue a permit to build a model homes for lots # \_\_, # \_\_, and # \_\_ of \_\_\_\_\_.

**SUBDIVIDER:** \_\_\_\_\_

By: \_\_\_\_\_  
\_\_\_\_\_, Manager

STATE OF WISCONSIN ) SS  
WAUKESHA COUNTY )

PERSONALLY came before me this \_\_\_ day of \_\_\_\_\_, 200 \_\_\_\_\_, Manager \_\_\_\_\_, to me known to be the person who executed the foregoing instrument and acknowledged the same.

City of Muskego  
Chapter 2 - Developers Procedure Manual

\_\_\_\_\_  
Notary Public-State of Wisconsin  
My Commission Expires\_\_\_\_\_

**BUILDER :** \_\_\_\_\_

By: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_, President

STATE OF WISCONSIN ) SS  
WAUKESHA COUNTY )

PERSONALLY came before me this \_\_day of \_\_\_\_\_, 200 \_\_\_\_\_, President  
\_\_\_\_\_, to me known to be the person who executed the foregoing instrument and  
acknowledged the same.

\_\_\_\_\_  
Notary Public-State of Wisconsin  
My Commission Expires\_\_\_\_\_

## **GENERAL DRAFTING STANDARDS**

These standards apply to all plans unless otherwise authorized by the City of Muskego.

1. Plans shall be prepared on sheets measuring 36" across and 22" to 24" high unless otherwise specified under plan preparation standards.
2. Title blocks conforming to the City Standards shall be located in the lower right hand corner, without a profile background and readable from the 36" side of the sheet. Location of ends of improvement shall be given by distance and direction from nearest cross street.
3. Seal and signature of the professional engineer who prepared the plans shall be affixed immediately adjacent to the title block.
4. Plan view shall be located above the profile view on plan-profile drawings and the two views shall be in alignment vertically whenever possible.
5. No drafting shall be done on the side on which the profile lines are printed.
6. Elevations shall be based on the U.S.G.S. Datum. The benchmarks used on the project shall be indicated on the cover sheet and on each sheet where they appear.
7. Scale of the plans shall be 1"=50', or 1"=40', horizontal and 1"=5', or 1"=4', vertical, excepting details which shall be 1"=20' or larger. Scale of details shall be clearly noted.
8. Date of drawing and date of last revision shall be shown.
9. Lot, block and easement lines shall be shown.
10. Lot and block numbers, and subdivision name or key numbers of unplatted lands shall be shown.
11. Street names shall be shown.
12. North direction shall be to the top or to the right of the sheet and indicated by an arrow and the letter "N".
13. Street centerline shall be indicated.
14. Stationing shall be from left to right.
15. When plans are continued on an additional sheet, plan view shall overlap by a minimum of one hundred (100) feet and shall include match lines.

## **MASTER GRADING PLAN PREPARATION STANDARDS**

### **GENERAL**

1. All master grading plan sheets shall be bound in a set.
2. The name of the person who prepared the plans shall be shown.
3. Scale of the plans shall be either 1"=100' or larger.

PLAN

1. The information under this heading shall be shown within the development and within 200 feet of the boundaries of the development.
2. Existing 2' contour lines shall be shown as a light dashed line and labeled at least once per contour with its elevation.
3. Proposed 2' contour lines where different from existing, shall be shown as a heavy dashed line also labeled with the proposed elevation.
4. The ten (10) foot interval, whether existing or proposed, shall be drawn with a heavier line so as to be readily discernible.
5. Yard grades shall be indicated at the building setback line for all lots.
6. Proposed finished elevations to 0.1 of a foot at all lot corners and at a point along a lot line (rear and side) between proposed houses shall be shown.
7. Location and elevations of storm drainage facilities, either existing or proposed, which will affect or will be affected by the proposed site grading plan.
8. Off-site grading necessary for, or related to, proposed grading, including existing and proposed elevations shall be shown.
9. Any other information pertinent to grading shall be shown and labeled.

## **SANITARY SEWER AND WATERMAIN CONSTRUCTION PLANS**

### **GENERAL**

1. Sanitary sewer and Watermain shall be shown on the same sheets and bound in one set.
2. Locations within street shall conform to the City Standard cross-section and shall be dimensioned on the plan view.
3. Minimum depth for Watermain shall be 6 feet to inside crown of pipe from finished grade.
4. Water appurtenance locations shall be as follows:

Hydrants Centerline shall be four (4) feet from the back of the curb. Centerline shall be three (3) feet from street right-of-way line when a rural cross-section is used at intersections, and 5 feet from adjoining street line extended away from intersection (usually 35 feet from the centerline of the intersecting road).

- at far end of cul-de-sac at a lot line
- mid-block locations at a lot line extended
- no more than 388 feet apart
- centerline of nozzle elevation shall be shown

Valves must be butterfly valves at Intersections 20 feet from adjoining street line extended away from intersection(usually 50 feet from the centerline of the intersecting road)

- on hydrant branches immediately next to the tee
- on all branch lines at intersections
- no more than 800 feet apart

Air Vents. (Size to be reviewed by City) at temporary ends of Watermain at high points in line when no hydrant is present

5. Elevations of sewer and water shall refer to flowline or invert of pipe. Percentage grades and grade break locations shall be labeled in the profile. All elevations shall be based upon USGS datum.

## PLAN VIEW

### Sanitary Sewer and Water Main

1. Pipe diameter, manhole or fitting center-to-center length and lateral spacing shall be dimensioned.
2. Manholes, hydrants, and valves shall be numbered.

### Other Improvements

1. Existing and/or proposed underground improvements shall be indicated in accord with the City's Standard Legend and the size labeled.
2. Existing surface improvements shall be indicated with solid light lines and labeled.

## PROFILE VIEW

### Sanitary Sewer and Watermain

1. Draw pipe as two lines indicating crown and flowline of pipe.
2. Flowline elevations shall be shown at manholes, fittings, and breaks in grade. Elevations shall be based upon USGS datum.
3. Grades shall be indicated in percentage (preferable) or feet per foot to the nearest .001 of a foot.
4. Manhole or fitting center-to-center length, and riser length shall be dimensioned.
5. Pipe material, strength and diameter shall be labeled.
6. Elevations of manhole rim and hydrant nozzle shall be indicated.
7. Areas of spoil backfill shall be dimensioned and labeled. Unlabeled areas shall require gravel backfill.
8. Manholes and hydrants shall be numbered.
9. Minimum grade of 8" diameter sewers shall be 0.42%.
10. A minimum of 0.10' drop shall be designed into all straight through manholes. A minimum of 0.25' drop shall be designed into all manholes with a deflection greater than 30 degrees.

### Other Improvements

1. Proposed street centerline grade shall be drawn.
2. Crossings with existing or proposed underground improvements shall be drawn with the name, diameter, elevation and station indicated.

### Existing Features

1. Existing street centerline profile shall be drawn.
2. Existing and proposed profile over proposed utility shall be shown if not proposed to be located within roadway.
3. Elevations of existing basement floors of buildings to be served shall be shown.

## **STORM SEWER, DITCHES AND PAVING PLANS**

### GENERAL

1. Storm sewer, ditch grades and paving shall be shown on the same sheets and bound in one set.
2. Cross-section and location shall conform to the City Standard cross-section and shall be shown and dimensioned on the plan view.
3. Elevations shall refer to:
  - Ditch lines - flowline or invert
  - Storm sewer - flowline or invert of pipe
  - Paving - finished grade
4. Inlets at intersections shall be immediately adjacent to the end of the radius.

### PLAN VIEW

#### Storm Sewer

1. Pipe diameter, slope and manhole center-to-center length shall be dimensioned. Pipe material type and class shall be shown.
2. Concrete cradles shall be drawn and dimensioned where needed.
3. Manholes and inlets shall be shown in accordance with the City Standards.
4. Manholes and inlets shall be numbered.

#### Paving

1. Sump pump discharge lines located 4 feet behind curb.
2. Clean outs as per standard detail located at all bends and at the end of all lines, with a maximum 200 feet spacing.

City of Muskego  
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3. Stations shall be indicated by tick marks along the centerline and every even numbered station shall be labeled.
4. Corner radii shall be dimensioned to the back of curb.
5. Flange lines and back-of-curb lines shall be drawn.
6. Flange or top of curb elevations shall be indicated at all curved curb and gutter sections, cul-de-sacs, and warped pavement sections from beginning to end and not farther apart than 25 feet.

Ditches

1. All ditch grades of less than 0.75% or greater than 5% shall have concrete inverts.

Other Improvements

1. Existing and/or proposed underground improvements shall be indicated in accordance with the City Standards and the size labeled.
2. Existing surface improvements shall be shown in accordance with City Standard Legend and the type labeled.

PROFILE VIEW

1. Draw pipe as two lines indicating crown and flowline of pipe.
2. Flowline elevations shall be shown at manholes and inlets. Elevations shall be shown in USGS datum.
3. Grades shall be indicated in percentage (preferable) or feet per foot to the nearest .001 of a foot.
4. Manhole center-to-center length shall be dimensioned. Inlet leads shall be a minimum of 12" diameter.
5. Sewer pipe type, strength and diameter shall be indicated.
6. Elevations of manhole rim and inlet gutter shall be indicated.
7. Areas of spoil Backfill shall be dimensioned and labeled. Unlabeled areas shall require gravel Backfill.
8. Catch basins with sumps are not allowed unless authorized by the City.
9. Sump pump discharge lines shall be 48 inches deep minimum.

Ditches

1. All proposed ditches must be shown together with existing profile over proposed ditch and all existing or proposed utilities crossing or in the ditch area.

Paving

1. All stations shall coincide with accented vertical lines.
2. Proposed finished centerline grade shall be drawn as a heavy line.

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3. Elevations and stations shall be given at intersections, street lines extended, and at 1/4 points along vertical curves, and the low or high point of the vertical curve when curb and gutter is to be built.
4. Street widths shall be as specified by City Standard.

Other Improvements

1. Storm sewer crossings with existing or proposed underground improvements shall be drawn with the name, diameter, elevation and station indicated.

Existing Features

1. Grade profiles shall be shown only at centerline provided that an acceptable master grading plan has been prepared and approved for the project.

### **STANDARD CROSS SECTIONS**

Please note that the dimensions shown are minimum standard designs and the City will review alternative designs.

In addition, the following design standards are to be used as guidelines.

#### Watermain

1. Generally on the east or north of the sanitary sewer. Not less than 10 ft. from the sanitary sewer.
2. All valves shall be butterfly valves and shall be a minimum 2 feet clear of the front flange or the back of the curb.
3. A main valve shall be installed on all branch lines (i.e.: 3 valves at all tees 4 valves at all crosses).
4. All hydrant tees shall be anchor tees or the hydrant valves shall be rodded to the tee.
5. Hydrants shall be located at 3 feet from the right-of-way line (Rural) or 4 feet from the right-of way-line. (Urban)
6. Hydrants shall be set near property lines but generally not more than 400 feet apart.
7. Valve boxes within the pavement shall be set at the bituminous base course pavement grade.

#### Sanitary Sewer

1. Generally within 5 feet of the centerline of the street.
2. preferred to have no angle points in easements. Paved access drive shall be provided to access manhole(s) in easement if angle point is necessary.
3. Manhole rims shall be set to finish pavement grade.

#### Storm Sewer

1. Generally on the west and south sides.
2. Inlet spacing generally not to exceed 400 feet.
3. Small diameter, 6 inch, PVC Sump pump discharge line to be installed along all lots not directly fronting on storm sewer. The locations of this discharge line is to be uniform throughout the development but shall comply with the DNR required 8 feet separation from the Watermain. In previous developments this discharge line has been located at 1 foot inside the right-of way-line, within a 5 foot easement along the lot. Location is now required to be 4 feet behind the curb and gutter.
4. Clean outs shall be installed at all bends and at maximum 200 feet spacing.
5. Tracer wires shall be installed on all sump lines.

#### Street Construction

1. The subgrade shall not be approved by the City until properly graded and compacted.

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2. The crushed limestone base shall extend a minimum of 6 inches behind the curb and shall be a minimum 6 inches thick at the back of curb.
3. The City currently uses only the standard mountable concrete gutter.
4. The 4" bituminous base course shall be installed in two - 2 inch thick courses with an approved tack coat between courses.
5. Snow plow wedges shall be installed around all manholes. The wedges shall not be less than 4 feet wide and shall meet with the approval of the Superintendent of Public Works.
6. The bituminous base course pavement must be in place through a minimum of one entire winter season before the 1-1/2 inch thick bituminous surface course pavement can be installed.
7. The final bituminous surface course pavement shall be deferred until 90% of the homes have been completed. The developer may seek the City's approval to delay the surface course installation further, but he/she will be required to increase the Letter of Credit until said surface course pavement has been installed and approved.

Backfill and Compaction

1. All trenches in the proposed road section or within 3 feet of the back of curb shall be backfilled with 3/4" crushed state gradation #2 limestone with mechanical compaction in maximum 1 foot thick lifts and shall be compacted with a machine-mounted compactor.
2. All other trenches may use spoil material with compaction by flushing with the approval of the City.
3. Road Openings within the public right-of-way, which are to be back-filled with slurry to five feet beyond the edge of pavement.
4. Approved slurry material shall be compacted with a machine-mounted compactor.
5. The Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition shall be used.

## COMMITTEE APPROVAL PROCESS - CONSTRUCTION PLANS

1. Three (3) copies of each plan shall be submitted to the Planning Department for distribution to the City Engineer, the City's Consultant, and the Building File. The deadline for submittal is twenty (20) days prior to Utility Meeting and twenty (20) days prior to Public Works Committee Meeting.
2. In no case will plans be accepted without the Developer Deposit in the proper amount as required by policy.
3. In no case will plans be accepted or reviewed by the City Engineer or consulting engineers without first being submitted to the Planning Department. **Plans shall not be submitted directly to the City's consulting engineer.**
4. In no case will plans be accepted unless all required improvement plans are included with the submittal. Plans will not be reviewed on a piecemeal basis. The submittal shall include: grading plans, drainage and stormwater management plans (including all associated calculations), public improvement plans including (streets, sanitary sewer, storm sewer, water and other utilities) and erosion control plan.
5. If the applicant requests a Pre-submittal meeting between the City's consulting engineer, the meeting must be requested through the Planning Department. All such meetings must be authorized by the Planning Department, and must be held at City Hall unless otherwise authorized. There will be a fee for this meeting (in accordance with the Developers Deposit policy) depending on the scope and length of the meeting.
6. There will no longer be a review of so called "pre-final" or "preliminary" construction plans for review by *only the City Engineer and / or consulting engineer*. All Preliminary plan submittals shall be transmitted to the Planning Department for distribution to all City reviewers for their comments (*The Planning Department functions as the coordinator of plan review*). These preliminary comments will be sent to the Planning Department for compilation prior to transmittal to the applicant. Multiple reviews may be necessary and all comments from the reviewers shall be forwarded to the Planning Department. The Planning Department then compiles the comments and forwards them to the applicant.
7. Each copy of the plans shall be stamped and signed by the registered professional, and shall have a drawing and/or revision date in order for it to be accepted and routed for review.
8. The Planning Department will transmit the full set of "final" construction / improvement plans to the reviewers. The City Engineer will transmit to the outside approving agencies. Once the review is complete, the City Engineer notifies the Mayor's Secretary to schedule the plans for review by the appropriate committee (Public Utilities, Public Works, Finance). Committee action will be scheduled only if a clean review by the City Engineer is received, or if policy decisions requiring Committee action are needed.
9. It will be the applicant's responsibility to contact the Mayor's Secretary, to confirm the date, time, and location of the committee meeting.

## **REQUIREMENTS FOR FINAL APPROVAL**

### **SANITARY SEWER EXTENSION**

1. SEWRPC 208 Letter
2. DNR Sewer Extension Form, DNR Form 3400-59 (latest revision).
3. Sewer Computation Form (as applicable)
4. DNR Acknowledgement of Receipt, DNR Form 3400-105 (latest revision)
5. DNR Specifications Form, DNR Form 3400-95 (latest revision)
6. Fast-Track Project Approval Request, DNR Form 3400-160 (only if requesting fast-track)
7. Sanitary Sewer System Map(s) (Ruekert & Mielke, Inc. maintains originals, some developer's engineers borrow the originals to update (add) the new extensions and return the originals to Ruekert & Mielke, Inc.)
8. Sanitary Sewer Plans
  - Six (6) copies of the sanitary sewer plans.
  - If the proposed extension includes sanitary sewer mains larger than 8 inches in diameter: Two copies of the Design Calculation sheet(s).
  - If the proposed extension includes a lift station: Four copies of the Specifications and Design
9. A minimum of three copies of each plan is also needed. (One copy for the project file, one copy for the construction record set and one copy for the inspector.)

### **WATER MAIN EXTENSION**

1. Water Main Extension Submittal Checklist, DNR Form 3300-66 (latest revision).
2. DNR Acknowledgement of Receipt, DNR Form 3400-105 (latest revision)
3. Water Main Plans – Two (2) Sets
4. Specifications, if not already on file or not Standard Specifications for sewer and water construction in Wisconsin (latest edition).
5. Fire Flow Calculations (Ruekert & Mielke, Inc. usually supplies these calculations).

Ruekert & Mielke has the entire water system in one computer program which is updated with each additional project.

A minimum of three copies of each plan is also needed. (One copy for the project file, one copy for the construction record set and one copy for the inspector.)

### **STORM SEWER, SITE GRADING & EROSION CONTROL**

1. Two (2) sets of storm sewer plans and calculations.

2. Two (2) copies of the storm water management plan, which shall meet MMSD Chapter 13 requirements.

## **CONSTRUCTION SPECIFICATIONS**

### **INTRODUCTION**

The City of Muskego has developed and implemented a set of standards for the construction of public improvements. The following document details the standards adopted by the various bodies which include Plan Commission, Public Works Committee, Public Utilities Committee, and the Common Council.

### **STANDARD ENGINEERING SPECIFICATIONS**

See the document attached after page 5-5 titled "*Standard Specifications*" for detailed engineering requirements.

### **STREET TREE REQUIREMENTS**

The Land Division Ordinance requires subdividers to plant the species and number of trees as approved by the Plan Commission, on all streets proposed to be dedicated.

Street tree and landscaping plans shall be submitted to the Planning Department. Plans must meet the specifications outlined in the "Street Tree and Landscaping Guidelines for Subdivisions" document available from the Planning Department.

Trees shall be spaced one per every fifty feet (average) of frontage, shall be located outside of the City street right-of-way and within five feet of the front lot line (on the lot) adjacent to City streets within and adjacent to the subdivision. A diversity of trees shall be used such that no more than 35% of the plantings are represented by a single species.

Trees shall be selected from the recommended streets trees list. All trees shall be 8 to 10 feet in height and no less than a minimum of 1 ½ inch caliper at the point on the trunk 12 inches above grade after planting.

Letters of credit for all street trees shall be in effect for 18 months after planting.

## **PLAN REVIEW AND CONSTRUCTION REVIEW FEES**

### **PLAN SUBMITTALS**

All costs involved in the review of preliminary submittals by the City Planner, Engineer or Attorney shall be paid for by the developer. The developer shall establish a Developer's Deposit account pursuant to this policy. When and if the Developers Deposit account is depleted, additional funds will be requested by the City prior to completing the review process.

### **CONSTRUCTION INSPECTION**

All construction shall be reviewed by the City Engineer or his designee and paid for by the developer.

### **CONSTRUCTION AS-BUILT DRAWINGS**

The costs for preparation of construction as-built drawings shall be paid for by the developer. The costs for preparation of the as-built drawings will be billed at actual costs, and include the costs incurred by the City for uploading the data to the Geographic Information System.

### **PUNCH LIST AND CONSTRUCTION REVIEW COSTS**

All construction review services performed after substantial and final completion dates (or such dates as modified by client approved time extensions) will be charged to the contractor, i.e., if substantial included mains as operational and the contractor did not get an extension, he would be billed for all construction review services until mains were operational.

## INSPECTIONS

### CONSTRUCTION REVIEW

CONSTRUCTION REVIEW WILL BE REQUIRED:

After all approvals and permits have been received from the City, City Engineer and all other approving agencies and copies have been submitted to the City, the following table of construction review will be followed:

1. All calls for construction review shall be a minimum 3 working days in advance; 4 working days is the maximum time lapse between call and response. (Failure for proper notification from the time phone call was received may mean a delay in project start up or completion).
2. The following work requires full time construction review:
  - a) All sanitary sewer, storm sewer and Watermain installation
  - b) All sanitary lateral and water service installation
  - c) Utility trench compaction
  - d) All testing of sewer and water mains
  - e) All asphalt paving
  - f) All culvert installation
  - g) All concrete work

The following items require inspection before proceeding any further on the next construction phase of a project NOTE: The cost of testing materials will be the developer's responsibility.

- a) Manhole invert (bench) pouring
- b) Storm sewer structures
- c) Subgrade (blue tops are required)
  - I. Width
  - II. Compaction
  - III. Profile
- d) Gravel base
  - I. 1-1/2" crushed limestone TB
  - II. 3/4" crushed limestone TB
  - III. Width
  - IV. Depth
  - V. Compaction
  - VI. Profile & cross-section

### PUNCHLISTS

Construction reviews typically include a maximum of two punch list construction review inspections (excluding the final or acceptance of construction review with the City)

A time limit of (two weeks) will be set for repairs to a punch list, unless extended By the City due to weather.

### ACCEPTANCE OF IMPROVEMENTS PROCESS

1. Developer requests in writing to the Planning Department that Public Improvements are dedicated to the City.

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2. City Planning Department contacts City Engineer to determine whether all improvements are acceptable and whether all punch list items are corrected.
3. City Engineer responds.
4. Request is placed on the Public Works, Public Utilities, and Finance Committees for their approval.
5. If all committees approve, Common Council passes resolution accepting improvements.
6. Within 60 days of acceptance, final invoices and billings are deducted from the Developer's Deposit and all funds in the Developers Deposit and Letter of Credit are released.

**SAMPLE RESOLUTION**

RESOLUTION NO XXX-2005  
ACCEPTANCE OF IMPROVEMENTS  
SUBDIVISION

WHEREAS, Section \* of the \* Subdivider's Agreement dated \*, requires the developer to complete the improvements required in the Agreement and dedicate the same to the City, and

WHEREAS, the City shall accept said dedication if said improvements have been completed as required by the Subdivider's Agreement and as required by applicable City ordinances and other applicable laws and as approved by the City Engineers, and

WHEREAS, the Planning Department has advised that all of the above requirements have been met, and

WHEREAS, the Finance Committee has recommended acceptance of the improvements.

NOW, THEREFORE, BE IT RESOLVED that the Common Council of the City of Muskego, upon the recommendation of the Finance Committee, does hereby accept the dedication of improvements in accordance with the \* Subdivider's Agreement dated \*.

DATED THIS \_\_\_\_ DAY OF \_\_\_\_\_, \_\_\_\_\_

FINANCE COMMITTEE

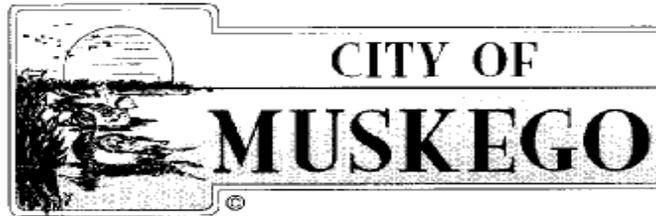
\_\_\_\_\_  
Ald.

\_\_\_\_\_  
Ald.

\_\_\_\_\_  
Ald.

ATTEST:

\_\_\_\_\_  
City Clerk



# **STANDARD SPECIFICATIONS**

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- #1B- Standard Urban Cross Section- Collector Street
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- #2A- Standard Mountable Curb & Gutter
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- #7C- Interim Pavement Cross Section (Wedge)

**CITY OF MUSKEGO**  
**STANDARD SPECIFICATIONS**

**SECTION 02500 - ROADWAY AND APPURTENANCES**

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Earthwork.
- B. Base course.
- C. Pavement and surface course.
- D. Incidental construction.
  - 1. Curb and gutter.
  - 2. Sidewalks
  - 3. Drive approaches.
  - 4. Pavement sawing.
  - 5. Pavement markings.
  - 6. Drainage facilities.
  - 7. Signs
  - 8. Traffic control.
  - 9. Guardrails
  - 10. Retaining walls.
  - 11. Restoration

1.02 SUBMITTALS

- A. Base compaction test reports required.
- B. Subbase compaction test reports required.
- C. Paving mix delivery tickets.
  - 1. Asphaltic materials:
    - a. Furnish ticket before placing material.
    - b. Display on ticket:
      - 1) Project.
      - 2) Date.
      - 3) Time.
      - 4) Ticket number.
      - 5) Type of mix.
      - 6) Gross weight.
      - 7) Tare weight.
      - 8) Net weight.
      - 9) Job total.
  - 2. Concrete.
    - a. Furnish tickets after delivery.
    - b. Display on ticket:
      - 1) Project.
      - 2) Date.
      - 3) Time.
      - 4) Ticket number.
      - 5) Class of concrete.
      - 6) Grade of concrete.

- 7) Cement Weight.
- 8) Fly Ash type and weight.
- 9) Fine aggregate weight.
- 10) Coarse aggregate weight.
- 11) Gallons of water.
- 12) Time water was added.
- 13) Additives.

D. Base course delivery tickets that display:

1. Project.
2. Date.
3. Ticket number.
4. Type of material.
5. Gross weight.
6. Tare weight.
7. Net weight.
8. Job total.

E. Base course sieve analysis from one certified laboratory 7 days before placing material.

F. Written concrete cylinder compression test results.

### 1.03 REFERENCES

A. State Specifications: Standard Specifications for Highway and Structure Construction, State of Wisconsin Department of Transportation, 2003 Edition.

B. Code: Muskego Municipal Code.

### 1.04 REGULATORY REQUIREMENTS

A. Pay for local county or state permits for Work on right-of-ways. Damage to pavements and to all property, public and private, due to this Work shall be repaired to same condition before construction by CONTRACTOR.

## PART 2 - PRODUCTS

### 2.01 EMBANKMENTS

A. Follow State Specifications 207. Do not use logs, stumps, brush, perishable material, frozen material or humus-bearing materials. No large stones or lumps within 2 feet of the surface within a one-to-one slope distance of the edge of shoulder.

### 2.02 BASE COURSE

A. Base Course: State Specification 301,305.

1. Lower Base Course: 4 Inches of 1 ¼" Crushed Limestone T.B. Gradation No. 1
2. Upper Base Course: 4 Inches of ¾" Crushed Limestone T.B. Gradation No. 2
3. Alternate: Crushed Concrete: As approved by owner
  - a. Lower Base Course: 4 Inches of 1 ¼" Crushed Concrete
  - b. Upper Base Course: 4 Inches of ¾" Crushed Concrete

## 2.03 ASPHALTIC CONCRETE PAVEMENT

- A. Binder course: State Specification 450,455,460 and:
  - 1. Binder gradation E-3 19mm
  - 2. Maximum recycled material content: 25 percent
  - 3. Asphalt material: AC, PG 58-28
  - 4. Asphalt Mix Design: State Specification 460.2.7
- B. Surface course: State Specification 450,455,460 and:
  - 1. Surface gradation E-3 12.5 mm
  - 2. Maximum recycled material content: 20 percent
  - 3. Asphaltic material: AC, PG 58-28Asphalt Mix Design: State Specification 460.2.7
- C. Tack coat: State Specification 455.3.2. Asphaltic material dependent on weather conditions.

## 2.04 CONCRETE PAVEMENT

- A. Concrete: State Specifications 415,501, GRADE A-FA with:
  - 1. Slump:
    - a. Hand consolidated: 1 to 3 inch.
    - b. Vibratory consolidation: 1 to 2 1/2 inches.
  - 2. Compressive strength: 3500 pounds per square inch minimum.
  - 3. Admixtures:
    - a. Set retarder: State Specifications 501.2.3.2.
    - b. Water reducer: State Specifications 501.2.3.3.
    - c. Air entrainment: State Specifications 501.2.2.
  - 4. High Early Strength Concrete: State Specifications 501.
- B. Steel reinforcement: State Specifications 505 and:
  - 1. Deformed tie bars:
    - a. Grade: 40.
    - b. Length: 2 feet.
    - c. Epoxy coated.
    - d. Size: No. 4.
  - 2. Metal chairs: Stainless steel.
  - 3. Dowel bars: Smooth and:
    - a. Grade: 40.
    - b. Length: 2 feet.
    - c. Size: 6.
    - d. Epoxy coated.
  - 4. Joint sealant: Hot poured elastic.

## 2.05 INCIDENTAL CONSTRUCTION

- A. Concrete curb and gutter: GRADE A-FA. State Specifications 601. Do not add calcium chloride.
- B. Concrete sidewalks: GRADE A-FA. State Specifications 602. Do not add calcium chloride.
- C. Driveways.
  - 1. Concrete: State Specifications 501&416. Do not add calcium chloride.
  - 2. Asphaltic concrete: State Specifications 450,455,460, surface course if directed by CITY.
  - 3. High early strength concrete; if directed by CITY.

- D. Pavement marking: State Specifications 646, as directed by CITY and:
  - 1. Hot paint.
  - 2. Hot thermoplastic.
  - 3. Cold preformed plastic.
  - 4. Epoxy.
  - 5. Glass spheres.
  - 6. Temporary pavement marking:
    - a. Removable tape.
    - b. Reflectorized paint.
    - c. Reflectorized tape.
  - 7. Permanent raised markers:
    - a. One way white.
    - b. One way red.
    - c. Two way red-white.
    - d. Two way yellow.

- E. Drainage facilities:
  - 1. Culvert pipe. See 02600 for new installations.
  - 2. Replace existing pipe in kind as directed by CITY.

- F. Signs: State Specifications 637 Type I.
  - 1. Posts: State Specifications 633,634,635.
  - 2. See: details for end of roads.

G. Traffic Control: State Specifications 643.

H. Guard Rails: State Specifications 614.

I. Restoration. See 02900.

## 2.06 SOURCE QUALITY CONTROL

- A. Quality Management Program: State Specification 460.2.8
  - a. CONTRACTOR shall be responsible for all source quality control and QMP testing required in accordance with the QMP Guide/Procedure Manual. CONTRACTOR shall provide the following:
    - 1. Quality Control Plan
    - 2. Quality Control Documentation
    - 3. Quality Control Testing Prior to Placement
    - 4. Quality Control Testing during Placement.
    - 5. The Contractor shall be responsible for all nuclear density testing required for the road portion of the project. Testing shall conform State Specification 460.3.3
  - b. Cost for all testing shall be included in the per ton, per square yard or per lineal foot unit price.
- B. Concrete paving materials scale: State Specification 415.
- C. Base course materials scale: State Specifications 301,305.

## PART 3 - EXECUTION

### 3.01 EARTHWORK

- A. Clearing and Grubbing: Follow State Specifications 201.

- B. Removing old culverts and bridges. Follow State Specifications 203.
- C. Removing miscellaneous structures. Follow State Specifications 204 for:
  - 1. Curb and gutter.
  - 2. Asphaltic concrete pavement.
  - 3. Sidewalk.
  - 4. Guardrail.
  - 5. Other structures. Remove manholes, inlets, wells to 3 feet below existing or finished grade, whichever is lower.
  - 6. Follow Municipal Code Chapter 30 for tanks and building.
- D. Roadway and drainage excavation. Follow State Specifications 205 for:
  - 1. Unclassified excavation.
  - 2. Rock excavation.
  - 3. Marsh excavation.
  - 4. Excavation below subgrade backfill with: crushed aggregate base course material.
  - 5. Overhaul: No allowance for overhaul.
- E. Embankment: Follow State Specifications 207.
  - 1. Maximum layer thickness: 8 inches.
  - 2. Compaction: Standard.
    - a. 95 percent of maximum density determined by Modified Proctor.
    - b. Allow CITY to inspect prepared subgrade and to witness proof roll test by fully loaded dump truck. Truck shall be a quad-axle with minimum total weight of 70,000 pounds. Reconstruct where deflection is greater than 1/2 inch.
- F. Preparation of roadway foundation: Follow State Specifications 211.

### 3.02 BASE COURSE

- A. Crushed aggregate base course: Follow State Specifications 301,305.
  - 1. Compaction: Standard.
    - a. 95 percent of maximum density determined by Modified Proctor.
    - b. Allow CITY to inspect prepared base course and to witness proof roll test by a fully loaded dump truck. Truck shall be a quad-axle with minimum total weight of 70,000 pounds. Reconstruct where deflection is greater than 1/2 inch. Reconstruct where deflection is greater than 1/2 inch.
  - 2. Allowable deviation from design grade: 1/2 inch
  - 3. Manholes: Set to finish course elevation.
  - 4. Valve Boxes & Inlets: Set to binder elevation.

### 3.03 PAVEMENT AND SURFACE COURSES

- A. Tack coat: Follow State Specification 455.3.2.
  - 1. Apply at 0.1 gallons per square yard.
  - 2. Apply between each layer of asphaltic concrete.
  - 3. Allow to cure before paving.
- B. Mill butt joints: Mill and dispose of 2 inches or as directed by CITY of existing pavement at locations shown. Minimum width 4 feet.
- C. Asphaltic concrete pavement: Follow State Specifications 450,455,460.
  - 1. Maximum variations:
    - a. 1/8 inch across a 5 foot straight edge.
    - b. Thickness: Within 1/4 inch of design.
    - c. Finish elevation: Within 1/2 inch of design.
  - 2. Temperatures:

- a. Delivered binder course: 225 degrees Fahrenheit minimum.
  - b. Delivered surface course: 250 degrees Fahrenheit minimum.
  - c. Asphaltic concrete at placement: Between 235 and 330 degrees Fahrenheit.
  - d. Subgrade: Above 32 degrees Fahrenheit.
3. Layer thickness:
    - a. Binder: 4 inch - 2 lifts. with tack between each lift
    - b. Surface: 1 1/2 inch lift.
    - c. Resurface: as directed by CITY.
    - d. Maximum lift thickness: 2 1/2 inches.
  4. Compaction: Follow State Specifications Section 450.3.2.6 Maximum Density Method.
  5. Use 30 foot ski to achieve uniform surface.
  6. When interim binder pavement is to be used, wedging around manholes and curb face shall follow. Interim Inlets shall be used. See standard details #7A, 7B, & 7C in appendix.

### 3.04. CONCRETE PAVEMENT

- A. Follow State Specification 415.
- B. Placement delays.
  1. If less than 30 minutes: Cover unfinished end with wet burlap.
  2. If greater than 30 minutes: Install construction joint.
  3. If concrete attains initial set: Install construction joint.
  4. If finishing equipment breaks down: Discontinue placement.
  5. If finishing and curing operations can not be kept within their time sequence: Discontinue placement.
- C. Maximum delivery time:
  1. Below 60 degrees Fahrenheit: 1-1/2 hours.
  2. Above 60 degrees Fahrenheit: 1 hour.
  3. Begins with addition of water to cement or cement to aggregates. Time ends when completely discharged.
  4. Extend time above 60 degrees Fahrenheit to 1-1/2 hours with approved retarder.
- D. Joints.
  1. Saw cut joints to prevent surface shrinkage cracks within 24 hours.
  2. Spacing: 10 feet minimum and as shown on Drawings.
  3. Longitudinal: 3 feet on center placed at mid depth of slab.
  4. Transverse: 2 feet on center placed at mid depth of slab.
  5. Width: 1/4 inch.
- E. Curing: Apply impervious coating. Follow State Specification 415.3.12.
- F. Cold weather concreting.
  1. Do not place below 35 degrees Fahrenheit.
  2. Do not place on frozen grade.
  3. Cover completed Work: Follow State Specifications 415.5.14.
- G. Testing:
  1. Follow State Specifications 501.
  2. Perform slump test.
  3. Measure air entrainment: Follow State Specifications 501, AASHTO T152.
  3. Cast 6 inch diameter by 12 inch high compression strength cylinders at CONTRACTORS cost.
  4. Cast 3 test cylinders for every 100 cubic yards placed.
  5. Allow ENGINEER to observe field testing.
  6. Test cylinders in lab at CONTRACTORS cost:

- a. 1 at 7 days.
    - b. 2 at 28 days.
    - c. Follow State Specifications 501, AASHTO T22 and T23.
  - H. Opening to traffic: Permitted when design compressive strength achieved by lab test samples and with ENGINEER's approval.
- 3.05 INCIDENTAL CONSTRUCTION
- A. Concrete curb and gutter: Follow State Specification 601.
    - 1. Joints.
      - a. Construct expansion joints at:
        - 1) 3 feet from inlets or catch basins.
        - 2) End of curves.
        - 3) 150 feet maximum intervals.
      - b. Construct contraction joints at 10 feet spacing.
        - 1) Minimum spacing: 6 feet.
        - 2) Maximum spacing: 20 feet.
        - 3) Match abutting concrete joints.
    - 2. Handicap ramp. Follow State Specification 416 & 601. Provide at all corners of intersections.
    - 3. Curing:
      - a. Apply impervious coating within one hour of placement.
      - b. Coat all sides of curb including exposed surface after forms removed.
      - c. Apply two coats in perpendicular directions.
  - B. Sidewalks: Follow State Specifications 602.
    - 1. Joints.
      - a. Provide expansion joints abutting existing construction and structures with 1/2 inch expansion joint filler.
      - b. Provide contraction joints at spacing equal to width of walk and:
        - 1) Minimum 3 feet.
        - 2) Maximum 12 feet.
    - 2. Handicap ramps: Follow State Specifications 416 & 601.
    - 3. Curing:
      - a. Apply impervious coating within one hour of placement.
      - b. Coat all sides of curb including exposed surface after forms removed.
      - c. Apply two coats in perpendicular directions.
  - C. Drive approaches: Follow State Specifications 416.
    - 1. Joints.
      - a. Expansion Joints abutting curb or walk: Use 1/2 inch expansion joint filler.
      - b. Contraction Joints: Locate at midpoint of drive, perpendicular to curb.
        - 1) Minimum spacing 6 feet.
        - 2) Maximum spacing 12 feet.
    - 2. Curing.
      - a. Apply impervious coating within one hour of placement.
      - b. Coat all sides of curb including exposed surface after forms removed.
      - c. Apply two coats in perpendicular directions.
  - D. Pavement sawing. Follow State Specifications 690. Cut depth: full pavement thickness.
  - E. Pavement marking: Follow State Specifications 646.
    - 1. Pavement surface temperature:
      - a. Painted: Above 35 degrees Fahrenheit.
      - b. Hot thermoplastic: Above 60 degrees Fahrenheit.
      - c. Epoxy: Above 50 degrees Fahrenheit.
    - 2. Provide clean pavement to ensure proper bonding.

3. Provide temporary centerline marking at 50 foot interval between paving operations and application of final pavement marking.
  4. Temporary pavement marking: Follow State Specification 649 and Drawings.
- F. Drainage facilities:
1. Pipe culverts: Follow 02600.
- G. Signs: Follow State Specifications 637.
1. Relocating signs: Follow State Specifications 638.
- H. Traffic control: Follow State Specification 643.
1. Warning lights: Type A.
- I. Guardrail: Follow State Specification 614.

END OF SECTION

**CITY OF MUSKEGO**  
**STANDARD SPECIFICATIONS**

**SECTION 02600 – BURIED PIPELINES**

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Water mains, control and distribution appurtenances.
- B. Sanitary sewer mains, force mains and maintenance and collection appurtenances.
- C. Storm sewer mains maintenance and collection appurtenances.
- D. Bedding and backfill.
- E. Televising sanitary sewers.
- F. Casing pipe.

1.02 REFERENCES

- A. SWS: Standard Specifications for Sewer and Water Construction in Wisconsin, Sixth Edition.
- B. State Specifications: State Specifications: Standard Specifications for Highway and Structure Construction, State of Wisconsin Department of Transportation, 2003 Edition.
- C. Code: Muskego Municipal Code.

1.03 SUBMITTALS

- A. Provide to CITY Engineering and Utility Departments:
  - 1. Water main safe sample test reports.
  - 2. Sewer Mandrel test reports.
  - 3. Sewer Vacuum test reports.

PART 2 - PRODUCTS

2.01 WATER MAIN AND RESERVOIR OVERFLOW PIPING

- A. Pipe, 2-1/2 inch and larger. Provide one type from following:
  - 1. Ductile iron:
    - a. AWWA C-151, thickness Class 52 with cement lining.
    - b. Tyton gasketed joint pipe.
    - c. Cable bond connectors.
    - d. SWS 8.18.0.
    - e. Polyethylene Film wrap per SWS 8.21.0.
    - f. Detector wire required per 2.01(M).
    - g. Warning Tape per 2.01(L).
  - 2. PVC:

- a. For 4 through 12 inch diameter: AWWA C-900, Class 150 pressure pipe with DR 18 or less.
  - b. Integral elastomeric bell and spigot joints.
  - c. SWS 8.20.0.
  - d. Detector wire required per 2.01(M).
  - e. Warning Tape per 2.01(L).
3. PVC:
- a. For 14 through 36 inch diameter: AWWA C-905, Class 150 pressure pipe with DR 18 or less.
  - b. Integral elastomeric bell and spigot joints
  - c. SWS 8.20.0
  - d. Detector wire required per 2.01(M).
  - e. Warning Tape per 2.01(L).
- B. Butterfly valves:
- 1. AWWA C-504 including:
    - a. Mechanical joint ends.
    - b. Turn counterclockwise to open.
    - c. 2 inch square operating nut.
    - d. All stainless steel hardware.
    - e. Epoxy Coated interior and exterior surfaces per AWWA C-550
  - 2. Clow M&H 450.
  - 3. Pratt Groundhog HP250.
  - 4. Mueller Lineseal XP
  - 5. K-Flo Wolverine 506
  - 6. SWS 8.28.0.
- C. Resilient seat gate valves (use with tapping tees only):
- 1. AWWA C-515 including:
    - a. Nonrising stem.
    - b. Mechanical joint.
    - c. Actuator: wrench nut.
    - d. Opens counterclockwise.
    - e. Stem seals: O-ring.
    - f. Epoxy interior and exterior coating per ANSI/AWWA C550.
    - g. 250 p.s.i.g operating rating
    - h. SWS 8.27.0.
    - i. All stainless steel hardware.
  - 2. Clow M&H Valve Company 4067-01.
  - 3. American Flow Control Series 2500.
  - 4. Kennedy 4571.
  - 5. Clow F-6100.
- D. Valve enclosures:
- 1. Boxes:
    - a. Cast iron assembly, size DD, cover marked "water".
    - b. Manufacturers:
      - i. Tyler 6860S
      - ii. Sigma VB630DD,
      - iii. Star VB DHD DW.
    - c. SWS 8.29.0.
    - d. Valve box adaptors: Adaptors, Inc.
  - 2. Manholes:
    - a. Precast.
    - b. Frame: Per SWS File No. 40 or 40A.
    - c. 60 inch diameter (minimum).
- E. Valve stem extenders (for valves greater than 10' bury depth):

1. Securely attached to valve operating nut.
2. Extend to 4 feet (plus or minus 3 inches) below finished grade.
3. Provide solid shaft.
4. Stainless steel.
5. Epoxy coated iron with stainless steel pins or bolt.
6. Spacer ring at 3 inch below operating nut.
7. Set screws: Conical pointed, 2 minimum.
8. One piece unit construction

F. Hydrant assembly:

1. AWWA C-502 and SWS 8.26.0:
  - a. Bury depth: 6 foot minimum.
  - b. Opens counterclockwise.
  - c. Break-flange.
  - d. 5-1/4 inch minimum main valve opening, 2 each National Standard 2-1/2 inch hose nozzle and one 4-1/2 inch pumper nozzle.
  - e. Painted red.
  - f. Mechanical joint connection.
  - g. Barrel extensions: Same manufacturer as hydrants.
  - h. Installation per 3.01(D).
2. Clow Medalion
3. American Flow Control. Waterous Pacer WB-67-250
4. Kennedy Guardian K-81.
5. Hydrant lead:
  - a. Ductile iron Class 52.
  - b. PVC AWWA C-900 Class 150 SDR 18 or less.
6. Marker Flag:
  - a. "HYDRAFINDER".
  - b. 5 feet long.
  - c. Fiberglass, red and white.
  - d. Springload action.

G. Fittings: SWS 8.22.0.

1. Joints:
  - a. Buried: Mechanical.
  - b. In structures: Flanged.
2. Pressure rating:
  - a. Full body: 250 PSI.
  - b. Compact: 350 PSI.
3. Material:
  - a. Ductile iron:
    - 1) Class 52 wall thickness.
    - 2) Bituminous exterior coating per ANSI/AWWA C110/A21.10.
    - 3) Cement lined and bituminous coated interior per ANSI/AWWA C104/A21.4.
    - 4) Cor-Blue tee bolts.

H. Service lines, valves and fittings.

1. Lines, 2 inch and smaller (1-1/4 inch minimum):
  - a. Type K copper tubing. Do not use compression fittings.
2. Corporation valves for copper:
  - a. Flared fitting. Must withstand 150 PSI pressure test.
  - b. Mueller B-25000
  - c. Ford F-5600
  - d. A.Y. McDonald 4701.
3. Curb valves for copper:
  - a. Must withstand 150 PSI pressure test.
  - b. Mueller B-25154
  - c. Ford B22-M
  - d. A.Y. McDonald 6104

4. Curb boxes:
    - a. Screw-on style.
    - b. Mueller H-10300
    - c. Ford EM 2-65-56
    - d. A.Y. McDonald 5614.
  5. Teflon tape on threaded joints.
  6. Valve stem extenders
    - a. Securely attached to valve operating nut.
    - b. Extend to 2 feet (plus or minus 3 inches) below finished grade.
    - c. Provide solid shaft.
    - d. Stainless steel.
    - e. Epoxy coated iron with stainless steel pins or bolt.
- I. PVC main tapping saddle for service lines 2-inch and smaller:
1. Wide Band Single Piece Body.
  2. Stainless steel
  3. Cascade CS-22
  4. Cascade CSC-2
  5. Mueller SS Series.
- J. Tapping sleeves with gate valve 16 inch and under:
1. Stainless steel with ductile iron flange.
  2. Cascade CST-SL
  3. Romac 306
  4. Smith Blair 372
- K. Air release assemblies:
1. In valve box: SWS 4.12.0
  2. In vault: SWS 4.11.0., except provide HS20 load-rated flat top slab.
- L. Warning tape:
1. "TERRA TAPE STANDARD 250" by Reef Industries, Inc. or "Shieldtec: by Empire Level Manufacturing Corporation.
  2. Tape shall read: "CAUTION - WATER LINE BURIED BELOW".
  3. Color: Blue.
  4. Width: 3 inches.
- M. Detector wire:
1. Direct burial rated insulated AWS #12 copper conductor.
  2. Splices: Plymouth Plyflex low voltage splice kit. Graybar catalog number 2635.
  3. Color: Blue.
- N. Buttress concrete: Class F SWS 8.35.3. Use one of the following:
1. Ready-mixed.
  2. Job site mixed above grade.
- O. Restrained joints:
1. Strapping following SWS 4.9.0.
  2. EBAA Iron Megalug.
  3. Star Pipe Products Allgrip 3600.
- P. Location boxes:
1. Top section valve box, size DD, 26-inch length.
  2. Cover marked "water".
  3. Hardwood blocking.
  4. Per Detail Drawing #4C.
- 2.02 GRAVITY SANITARY SEWER
- A. Pipe. Use one type from following:

1. Polyvinyl chloride and fittings solid wall:
    - a. 4 inch through 15 inch and bury depth 16' or less: Type PSM, ASTM D-3034, SDR 35.
    - b. 4 inch through 15 inch and bury depth 16' thru 22': Type PSM, ASTM D-3034, SDR 18.
    - c. SWS 8.3.0 and 8.10.0.
  2. Reinforced concrete:
    - a. 18 inch and larger or bury depth 22' or greater: Circular Pipe, ASTM C-76, wall thickness C, Class as per drawings.
    - b. Joints: Type R-4 Air Test Gasket, ASTM C-361.
    - c. SWS 8.3.0 and 8.6.0.
- B. Pressure-rated pipe. Use one type from following:
1. Polyvinyl chloride pipe:
    - a. 4 inch through 12 inch AWWA C900 SDR18 or less.
    - b. 14 inch and 16 inch AWWA C905 SDR18 or less.
  2. 18 inch and larger: Concrete.
  3. Fittings for PVC pipe shall follow SWS 8.22 and:
    - a. Joints:
      - 1) Buried:
        - a. Mechanical.
        - b. Push-on.
      - 2) In structures: Flanged.
    - b. Pressure rating:
      - 1) Full body: 250 PSI.
      - 2) Compact: 350 PSI.
    - c. Material ductile iron:
      - 1) Class 52 wall thickness.
      - 2) Bituminous exterior coating per ANSI/AWWA C110/A21.10.
      - 3) Cement lined and bituminous coated interior per ANSI/AWWA C104/A21.4.
      - 4) Cor-Blue tee bolts.
    - d. Material PVC Pressure Fittings:
      - 1) AWWA C907 for water.
      - 2) PVC cell classification 12454-B per ASTM D1784 with minimum design basis 4,000 psi.
      - 3) Pressure class must match pipe.
      - 4) Third party certified to CSA B1373.
      - 5) Conform to AWWA C900/C905.
      - 6) SDR18 or less.
      - 7) Blue Brute.
- C. Bulkhead and Plug: SWS 3.2.25.
- D. Structures:
1. Manholes: SWS 3.5.0. and 8.39.0.
  2. Frame: SWS File No. 14A approximate weight 385 pounds.
    - a. Neenah R-1661-B (non-modernized).
    - b. East Jordan 1641.
  3. Cover: Self sealing, concealed pick hole, no vents. SWS File No. 14B, approximate weight 108 pounds.
    - a. Bolt-down covers required outside of pavement areas.
  4. Internal rubber sleeves for frame/chimney seal:
    - a. Cretex Specialty Products.
    - b. NPC FlexRib Seal
  5. Pipe to manhole connection: Follow SWS 3.5.7.
    - a. NPC Kor-N-Seal High Pressure Series
  6. Frame and chimney sealants: SWS 8.42.0.
  7. Flat decks - HS20 loading.

8. External joint wrap manholes.
    - a. Follow SWS 3.2.12.
    - b. MacWrap External Joint Sealer
    - c. Esky Wrap
    - d. Caddilloc Inc.
  9. Anchored manhole frame and cover: SWS File No. 32.
- E. Risers:
1. SWS 3.2.26.
  2. Flexible riser to flexible main greater than 6 feet, or main greater than 16 feet deep, see Standard Details #5B & #5C.
- F. Laterals:
1. SWS 5.3.10 and 5.3.11 and same material as main.
  2. 6 inch.
  3. Test tee with plugs.
  4. Connection to main: Wyes.
  5. Adapt pressure rated pipe to SDR35 with manufactured (molded) fittings.
- G. Warning tape:
1. "TERRA TAPE STANDARD 250" by Reef Industries, Inc. or "Shieldtec" by Empire Level Manufacturing Corporation.
  2. Tape shall read: "CAUTION - BURIED SANITARY SEWER".
  3. Color: Orange.
  4. Width: 3 inches.

## 2.03 SANITARY SEWER FORCE MAIN

- A. Pipe. Use one type from following:
1. PVC Class 150, AWWA C-900, SDR 18 or less with integral bell and spigot joints with an elastomeric seal.
  2. Ductile iron:
    - a. SWS 8.18.0.
    - b. AWWA thickness Class.
    - c. Bell and spigot push-on joint SWS 8.18.2.
    - d. Exterior/lining: Ceramic epoxy
      1. Nominal Thickness: 40 mils.
      2. All cut ends and bell fittings protected with factory supplied field applied touch-up coating.
      3. Protecto 401.
    - e. Polyethylene film wrap: SWS 8.21.0.
  3. Polyethylene:
    - a. Material designation: PPI PE3408.
    - b. Material classification: Type III, Class C, Category 5, Grade P34.
    - c. Cell classification: 345434C per ASTM D3350.
    - d. Pressure class: As shown on Drawings.
- B. Fittings for ductile iron and PVC pipe:
1. Joints:
    - a. Buried: Mechanical.
    - b. In structures: Flanged.
  2. Pressure Rating:
    - a. Full body: 250 PSI.
    - b. Compact: 350 PSI.
  3. Material:
    - a. Ductile iron:
      - 1) Class 52 wall thickness.
      - 2) Bituminous exterior coating per ANSI/AWWA C110/A21.10.
      - 3) Interior lining: Ceramic epoxy

- a. Nominal Thickness: 40 mils.
    - b. All cut ends and bell fittings protected with factory supplied field applied touch-up coating.
    - c. Protecto 401.
  - 4) Buried: Cor-Blue tee bolts. Exposed: Stainless steel.
- C. Restrained joints:
  - 1. Strapping following SWS 4.9.0.
  - 2. EBAA Iron Megalug
  - 3. Star Pipe Products Allgrip 3600.
- D. Fittings for polyethylene pipe:
  - 1. ASTM D3261.
  - 2. Pressure class:
    - a. Molded fittings: Match pipe.
    - b. Fabricated fittings: Increase pressure rating one class.
  - 3. Butt fused or flanged.
  - 4. Exposed: Molded flange adaptor with ductile iron or stainless steel backup ring and stainless steel bolts.
  - 5. Buried: Molded mechanical restrained joint adaptor with stainless steel internal stiffener and ductile iron or stainless steel backup ring with Cor-Ten hardware.
- E. Plug valves.
  - 1. Manufacturers: (Valves 8" and less)
    - a. DeZurik Series 100.
    - b. Val-Matic Cam-Centric.
 Manufacturers: (Valves greater than 8")
    - a. DeZurik Series 100 or other OWNER approved series.
    - b. No equal or substitutions permitted.
  - 2. Valve boxes:
    - a. Cast iron, size DD, cover marked "sewer".
    - b. Manufacturers:
      - 1. Tyler 6860S
      - 2. Sigma VB630DD
      - 3. Star VB DHD DW.
    - c. SWS 8.29.0.
    - d. Valve box adaptors: Adaptors, Inc.
  - 3. Actuator: Rotary gear type for valves 8 inches and larger.
  - 4. Valve stem extenders:
    - a. Securely attached to valve operating nut.
    - b. Extend to 2 feet (plus or minus 3 inches) below finished grade.
    - c. Provide solid shaft.
    - d. Stainless steel.
    - e. Epoxy coated iron with stainless steel pins or bolts.
    - f. Spacer ring at 3 inch below operating nut.
    - e. Set screws: Conical pointed, 2 minimum
    - f. One Piece unit construction
- F. Structures:
  - 1. Valve manholes: SWS 3.5.0 and 8.39.0.
  - 2. Frame: SWS File No. 14A. Approximate weight 385 pounds.
    - a. Neenah 1660 (non-modernized).
    - b. East Jordan 1641.
  - 3. Cover: Self sealing, concealed pick hole, no vents. SWS File No. 14B, approximate weight 108 pounds. Bolt down as required by City.
  - 6. Internal rubber sleeves for frame/chimney seal:
    - a. Cretex Specialty Products.
    - b. NPC FlexRib Seal
  - 5. Pipe to manhole connection: Follow SWS 3.5.7.
  - 6. Frame and chimney sealants: SWS 8.42.0.

7. Flat decks - HS20 loading.
8. Frame adjusting rings: Schneider Fuel & Supply.
9. External joint wrap:
  - a. Follow SWS 3.2.12.
  - b. Mac Wrap external joint sealers.
  - c. Esky Wrap
  - d. Caddilloc Inc
10. Anchored manhole frame and cover: SWS File No. 32.

G. Air release assemblies:

1. In valve box: SWS 4.12.0 except include:
  - a. Valve stem extenders.
  - b. Lid: marked "sewer".
  - c. Drain stop: Female iron pipe inlet and flared copper outlet. Ford B21-333.
  - d. Drain stop: A.Y. McDonald 6105 with A.Y. McDonald 4753 copper flare by male iron pipe thread.
2. In vault: SWS 4.11.0, except provide HS20 load-rated flat top slab.

H. Warning tape:

1. "TERRA TAPE STANDARD 250" by Reef Industries, Inc..
2. Tape shall read: "CAUTION - BURIED PRESSURE SEWAGE FORCE MAIN".
3. Color: Orange.
4. Width: 3 inches.

I. Detector wire:

1. Direct burial rated insulated AWS #12 copper conductor.
2. Splices: Plymouth Plyflex low voltage splice kit. Graybar catalog number 2635.
4. Use different color insulation for each pipeline.
  - a. Color: Orange

J. Location boxes:

1. Top section valve box, size DD, 26-inch length.
2. Cover marked "sewer".
3. Hardwood blocking.
4. Per Standard Detail #5A.

## 2.04 SANITARY PRESSURE SEWER

A. Pipe. Use one type from following:

1. Polyethylene:
  - a. Class 160.
  - b. ASTM Ds2239.
  - c. SDR 11 HDPE.
2. PVC:
  - a. SDR 18
  - b. SCHED 40.D.W.V.

B. Fittings for polyethylene pipe:

1. ASTM D3261.
  - a. Molded fittings: Match pipe.
  - b. Fabricated fittings: Increase pressure rating one class.
2. Pressure class:
3. Butt fused or flanged
4. Exposed: Molded flange adaptor with ductile iron or stainless steel backup ring.
5. Buried: Molded mechanical restrained joint adaptor with stainless steel internal stiffener and ductile iron or stainless steel backup ring with Cor-Ten hardware.
6. Threaded transition fittings.
  - a. Stainless steel HDPE.
  - b. Brass to HDPE.
  - c. HDPE same as sanitary pressure sewer material.

- d. ASTM 2513D.
  - C. Material PVC Pressure Fittings:
    - 1. AWWA C907 for water.
    - 2. PVC cell classification 12454-B per ASTM D1784 with minimum design basis 4,000 psi.
    - 3. Pressure class must match pipe.
    - 4. Third party certified to CSA B1373.
    - 5. Conform to AWWA C900/C905.
    - 6. SDR18 or less.
    - 7. Blue Brute.
  - D. Sanitary pressure laterals:
    - 1. Pipe material same as pressure sewer.
    - 2. Curb valves.
      - a. Must withstand 150 psi pressure test.
      - b. Mueller H-10287.
      - c. Ford B11-M.
      - d. A.Y. McDonald 6105.
    - 3. Curb boxes.
      - a. Screw on style.
      - b. Plain lid or "sewer".
      - b. Mueller H-10300-99002.
      - c. Ford EM 2-65-57R.
      - d. A.Y. McDonald 5615.
    - 4. Teflon tape on threaded joints.
    - 5. Valve stem extension (also known as stationary rod or shut off rod).
  - E. Air release assemblies:
    - 1. Valve Box: SWS 4.12.0.
      - a. Valve stem extenders.
      - b. Plain lid or "sewer".
    - 2. Drain stop.
      - a. F.I.P. inlet.
      - b. Flared copper outlet.
      - c. Ford B21-333.
      - d. A.Y. McDonald 6105 with A.Y. McDonald 4753 copper flare by M.I.P. thread.
  - F. Warning tape:
    - 1. "TERRA TAPE STANDARD 250" by Reef Industries, Inc. or "Shieldtec" by Empire Level Manufacturing Corporation.
    - 2. Tape shall read : "CAUTION-BURIED PRESSURE SEWAGE FORCE MAIN."
    - 3. Color: Orange.
    - 4. Width: 3 inches.
  - G. Detector wire:
    - 1. Direct burial rated insulated AWS #12 copper conductor.
    - 2. Splices: Plymouth Plyflex low voltage splice kit. Graybar catalog number 2635.
    - 3. Use different color insulation for each pipeline.
      - a. Color: Orange
  - H. Location boxes:
    - 1. Top section valve box, size DD, 26-inch length.
    - 2. Cover marked "sewer".
    - 3. Hardwood blocking.
    - 4. Per Standard Detail #5A.
- 2.05 STORM SEWER
- A. Main lines:

1. Reinforced concrete pipe (RCP): ASTM C-76 and SWS 8.6.0 with Mastic or rubber-gasket ASTM C-443 joints.
  2. Nonreinforced concrete pipe: SWS 8.5.0.
  3. Reinforced concrete horizontal elliptical pipe: ASTM C-507 and SWS 8.6.0.
  4. Provide Internal Safety Cage at all outlet pipes 15 inch or greater.
- B. Sump lines and sump line cleanouts:
1. SWS 8.10.0.
  2. PVC SDR 35.
  3. Cleanout frost sleeves: Neenah R1977.
  4. See Standard Details #6A, #6B, #6C.
  5. Follow 2.03.I. for detector wire.
- C. Structures:
1. Manholes: SWS 3.5.0 and 8.39.0.
  2. Inlet frame and cover: Neenah R-3501R with Type C grate.
  3. Inlet: SWS 3.6.0 for precast.
  4. Manhole frame and cover: Neenah R-2471D open grate, approximate weight 500 pounds.
  5. Concrete block: State Specifications 519.2.2 (salt resistant pink block.).
  6. Inlet and catch basin mortar: State Specifications 519.2.3.
  7. Flat Decks: HS20 Design Loading.
- D. Rural section culverts when approved by the CITY.
1. Road crossing culverts: minimum 18 inch diameter.
  2. Driveway culverts: minimum 15 inch diameter.
  3. Arch pipe equivalent may be used.
  4. Gauge: Follow DOT minimums per size.
  5. Materials:
    - a. Reinforced Concrete: State Specification 522.2
    - b. Reinforced Concrete Horizontal Elliptical: State Specification 523.2.
- E. Apron endwalls: State Specifications Sections 520 through 525 for apron endwalls and same material as pipe.
- F. Pipe grates: SWS 8.16.0. Lead paint shall not be used.
- G. Storm Drain Markers:
1. Markers manufactured by Almetek Industries, Inc.-Available from City of Muskego.
  2. Markers installed adjacent to all storm inlets at time of final curb pour.
  3. Shall be installed using supplied hardware into wet concrete on upslope of curb head flush with surface.

## 2.06 BEDDING AND COVER MATERIALS

- A. Limestone chips: SWS 6.43.2.
- B. Around and over Underground Facilities: Follow respective owner's requirements.
- C. Polyethylene pipe embedment: Sand. SWS 6.43.2.
- D. Cover: Same material as bedding.
- E. Crushed stone screenings, follow SWS 8.43.2(b), water main, storm sewer or force main, and allowed with CITY approval for sanitary sewer.

## 2.07 BACKFILL

- A. Spoil: SWS 8.43.5.

- B. Aggregate slurry: SWS 8.43.8.
- C. Crushed road gravel: 3/4 inch crushed road gravel state gradation No. 2
- D. Crushed stone screenings in accordance SWS 843.2.(b).

#### 2.08 CASING PIPE

- A. Material: ASTM A-53 steel, Grade B, 35000 PSI minimum yield strength.
- B. Dimensions:
  - 1. Follow SWS drawing file no. 49.
  - 2. Follow Permit requirements.
- C. Cellular concrete fill: SWS 8.35.5.

#### 2.09 SURFACE RESTORATION

- A. Pavement: See 02500.
- B. Lawn: See 02900.
- C. Curb and gutter: See 02500.
- D. Concrete sidewalk: See 02500.

#### 2.10 INSULATION

- A. SWS 8.50.0.

### PART 3 - EXECUTION

#### 3.01 WATER MAIN INSTALLATION

- A. Follow SWS Part IV.
- B. Ductile iron:
  - 1. Provide electric continuity using strapping or metallic retainer glands.
  - 2. Wrap ductile iron pipe and fittings with polyethylene film.
  - 3. Provide detector wire.
    - a. Color: Blue
  - 4. Provide strapping on all mechanical joints on water mains 16" and larger.
- C. PVC pipe:
  - 1. Remove beveled pipe end at connections to mechanical joint or flanged fittings.
  - 2. Use tapping saddles for services for service lines 2 inch and smaller.
  - 3. Provide detector wire.
    - a. Color: Blue
  - 4. Provide strapping for all mechanical joints on water mains 16" and larger.
- D. Hydrants:
  - 1. Secure hydrant valves directly to main lines with one of following:
    - a. Mechanical joint anchoring type hydrant tees.
    - b. Strapping.
    - c. EBAA Iron Megalug or Star Pipe Products Allgrip devices.
  - 2. Provide minimum 6 foot cover over lead.
  - 3. Position centerline of lowest hydrant outlet nozzle 20 inches (plus or minus 2) above finish grade.

4. Use six foot original height assembly with adjustment sections to appropriate height above grade.
  5. Provide detector wire same as mainline pipe detector wire color.
  6. Provide concrete buttresses at each hydrant unless strapped per SWS 4.9.0
- E. Buttresses: Follow SWS 4.3.13.
- F. Services.
1. Wet tap service connections at normal operating system pressure.
  2. Lateral locations on Drawings are tentative. Actual locations shall be marked by property owners with wooden stakes.
  3. For 2 inch and smaller follow SWS Part V and:
    - a. Provide curb stop and box at right-of-way line.
    - b. Provide 2 by 6 inch hardwood marker at curb box location from invert of service to 2 feet above finished grade.
    - c. Provide tail piece. Follow SWS File No. 51 drawing.
  4. For 2-1/2 inch and larger follow SWS Part IV and V and:
    - a. Provide tee connection.
    - b. Anchor valve to tee with anchor tee or strapping.
    - c. Provide plug and buttress.
    - d. Provide 2 by 6 inch hardwood marker at end of service from invert of service to 2 feet above finished grade.
- G. Pressure test main line before and after services 2-inch and smaller are installed. Follow SWS 4.15.0.
- H. Disinfect pipelines: SWS 4.16.0.
- I. Bacteriological testing shall be done after successful pressure test by: CONTRACTOR with Wisconsin DNR-certified independent laboratory.
- J. Water wasted from pipeline that may reach bodies of surface water may not contain any substances in concentrations that adversely affect the water as determined by the Wisconsin Administrative Code NR 105 and 106. For chlorine, no total residual chlorine may be measured in water being discharged to a surface water. Advise UTILITY of proposed discharge schedule to arrange DNR-required measurements.
- K. Connections to existing mains and services: Make after all services are installed, tests passed, and safe sample report is submitted and approved by UTILITY.

### 3.02 GRAVITY SANITARY SEWER INSTALLATION

- A. Before starting, install and brace bulkhead and/or plug in the connection to existing sewer. Leave in place until new sewer has been cleaned and accepted. After first span of sewer is installed, install a second plug in the discharge pipe of the first upstream manhole. Anchor installed plugs. Verify condition of plugs with on-site review technician daily and prior to precipitation events.
- B. Follow SWS Part III.
- C. Set manhole frames to finish grade after placement of curb and gutter and before asphalt placement.
- D. Laterals. Follow SWS Part V and:
  1. 1/4 inch per foot maximum slope.
  2. Provide 2 by 6 inch hardwood marker at end of lateral from invert of lateral to 2 feet above finish grade.
  3. Lateral locations on Drawings are tentative. Actual locations shall be marked by property owners with wooden stakes.

- 4. Provide test tee at end of lateral or right-of-way line, whichever is further.
- E. Air test: SWS 3.7.3.
- F. Go-No-Go Test: SWS 3.2.6(i)4.
- G. Manhole chimney seals.
  - 1. Prepare chimney, cone, mortar, and frame following seal manufacturer's requirements.
  - 2. Install seals with AASHTO M-198-type B butyl rubber caulk.
  - 3. Test seals in CITY's presence following SWS 3.5.4(f)1.a.
  - 4. Install seals with an approved hydraulic installation tool to ensure positive seal.
- H. Manhole vacuum test.
  - 1. Follow SWS 3.7.6. and MMSD rules, Chapter 2.
  - 2. Test after backfilling.
- I. Manhole correction period tests: Water test all seals. Follow SWS 3.5.4(f)1.a.
- J. Televising and videotaping of mains. Shall be videotaped by the Muskego Sewer UTILITY after:
  - 1. Manhole benches installed.
  - 2. After binder course placement and prior to surface course placement.
  - 3. Pipework successfully tested.
  - 4. Lines are thoroughly cleaned.
  - 5. Contact UTILITY Department at 262-679-4128 after completion of 1-4 to schedule.
  - 6. Prior to acceptance for use.

### 3.03 SANITARY SEWER FORCE MAIN INSTALLATION

- A. Follow SWS Part IV (Delete 4.3.12.).
- B. Pressure test. Follow SWS 4.15.2 except test at pipe pressure rating or 150 PSI whichever is less.
- C. Polyethylene:
  - 1. Butt-fuse joints following ASTM D2657 and manufacturer's recommendations.
  - 2. Connect to flanged pipe with molded flange adaptor with ductile iron backup ring.
  - 3. Install following ASTM D2321, SWS, and manufacturer's recommendations.
  - 4. Provide embedment material from 6 inches below pipe to 12 inches above top of pipe and compact to 85 percent Standard Proctor density (AASHTO T-99).

### 3.04 SANITARY SEWER PRESSURE MAIN INSTALLATION

- A. Follow SWS Part IV (Delete 4.3.12.)
- B. Pressure test. Follow SWS 4.15.2 except test at pipe pressure rating or 150 PSI whichever is less.
- C. Polyethylene:
  - 1. Butt-fuse joints following ASTM D2657 and manufacturer's recommendations.
  - 2. Connect to flanged pipe with molded flange adaptor with ductile iron backup ring.
  - 3. Install following ASTM D2321, SWS, and manufacturer's recommendations.
  - 4. Provide embedment material from 6 inches below pipe to 12 inches above top of pipe and compact to 85 percent Standard Proctor density (AASHTO T-99).

### 3.05 STORM SEWER INSTALLATION

- A. Follow SWS Part III.

- B. Set manhole frames to finish grade after placement of curb and gutter and before asphalt placement or final grading if in terrace area.
  - C. Set inlet frames to interim grade per City standard detail #7A.
  - D. Catch basin or inlet frames may not be corbelled to meet curb and gutter. Catch basin or inlet structures shall be replaced if the offset is greater than 1 inch.
  - E. Sump lines.
    - 1. Pitch to inlet or manhole.
    - 2. Bed and cover PVC following SWS 3.2.6.i.
    - 3. Provide detector wire.
      - a. Color: Yellow
  - F. End grates to be placed on all outlets 15 inches and greater.
  - G. All apron endwall inlets shall have trash racks.
- 3.06 RURAL SECTION – CULVERTS: If Permitted By City.
- A. Follow State Specifications: 520.3, except 520.3.1
  - B. Driveways:
    - 1. Private entrance and temporary culverts. Provide minimum 6 inches of 3/8 inch crushed stone chips below pipe.
    - 2. Provide concrete headwalls.
  - C. Road crossing culverts:
    - 1. Provide minimum 6 inches of 3/4 inch crushed stone chips below pipe.
- 3.07 LOCATION AIDS
- A. Warning tape: Place 18 inches below finished grade for:
    - 1. All force mains.
    - 2. All water mains.
    - 3. All sump lines.
    - 4. All sanitary pressure sewers.
  - B. Detector wire:
    - 1. Attach with tape to:
      - a. All force mains.
        - i. Color: Green
      - b. All water mains.
        - i. Color: Blue
      - d. All sump lines.
        - i. Color: Yellow
 All sanitary pressure sewers.
      - i. Color: Green
    - 2. Do not splice between location boxes without CITY's approval.
  - C. Install location boxes at:
    - 1. 1000 feet maximum intervals.
    - 2. At every hydrant.
    - 3. For sump lines install detector wire in each frost sleeve.
  - D. Demonstrate continuity of detector wires to CITY. Provide a temporary above-ground wire between adjacent location boxes. Connect ohm meter in a series loop with detector wire and above-ground wire. Circuit resistance shall not exceed 5 ohms. Sump line continuity shall be done prior to backfilling inlets or catch basins.
- 3.08 CASING PIPE

- A. Follow SWS drawing file no. 49.
- B. Fill annular space in casing pipe with cellular concrete.
- C. Provide bulkheads at each end of casing pipe.
- D. For sewer pipe follow SWS 2.4.0.
- E. For water pipe follow SWS 4.13.2.
- F. Required for all stream crossings.

### 3.09 EXCAVATED MATERIAL

- A. Excavated Material: Deliver surplus excavated material to CITY designated locations within 4 radial miles from Work. If CITY designates in writing that disposal be made more than 4 radial miles from the Work, CONTRACTOR will be paid for that portion of the haul exceeding 4 radial miles by Change Order. Surplus excavated material for which CITY does not designate a disposal site shall be disposed at CONTRACTOR's cost. After delivery to the designated location, such material shall be graded level by CONTRACTOR.

### 3.10 CLEANUP

- A. Clean dirt and construction material from haul roads:
  1. At end of each working day.
  2. As needed during the day to avoid creating hazards or complaints.
  3. As requested by CITY.
  4. In accordance with Municipal Code Chapter 29.

### 3.11 INSULATION

- A. Follow SWS 4.17.2 when depth of cover is less than 5 feet over sanitary sewer, water main and force main.
- B. Follow SWS 4.17.2. when depth of cover is less than 4 feet over sump lines.

### 3.12 BEDDING AND COVER

- A. Follow SWS 3.2.6(b) Class B.

### 3.13 TRENCH BACKFILLING AND CONSOLIDATION

- A. Material:
  1. New or proposed roadway: From 5 feet behind back of curb or edge of pavement in paved areas and driveways:
    - a. Aggregate slurry.
    - b. Crushed stone screenings.
    - c. Top 12 inches 1-1/2 inch T.B. crushed limestone.
  2. In existing roadways:
    - a. Aggregate slurry.
  3. Other areas: Spoil.
  4. Around and over Underground Facilities: Follow respective owner's requirements.
- B. Consolidation:
  1. Mechanically compact trench backfill. Follow SWS 2.6.14(b), except CONTRACTOR shall pay for compaction testing.

### 3.14 SURFACE RESTORATION

- A. Pavement: See 02500.
- B. Lawn: See 02900.
- C. Curb and gutter: See 02500.
- D. Concrete sidewalk: See 02500.

3.15 CLEARING AND GRUBBING

- A. Follow SWS 2.2.15. Prune damaged trees and apply approved tree dressing to cut.

END OF SECTION

**CITY OF MUSKEGO**  
**STANDARD SPECIFICATIONS**

**SECTION 02900 - LANDSCAPING**

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Topsoil.
- B. Seeding.
- C. Sod.
- D. Fertilizing.
- E. Maintenance.
- F. Restoration of utility company trenches.

1.02 REFERENCES

- A. State Specifications: Standard Specifications for Highway and Structure Construction, State of Wisconsin Department of Transportation, 2003 Edition.
- B. ASNS: American Standard for Nursery Stock, ANSI; Z60.1 by the American Association of Nurserymen.

1.03 SUBMITTALS

- A. Seed bag certification tags showing grass species, mix composition, and weed content.
- B. Instructions for continuing CITY maintenance.
  - 1. Seeded lawn.
  - 2. Sodded lawn.

1.04 DEFINITIONS

- A. Weeds: Dandelion, Jimsonweed, Quackgrass, Horsetail, Morning Glory, Rush Grass, Mustard, Lambsquarter, Chickweed, Cress, Crabgrass, Canadian Thistle, Nutgrass, Poison Oak, Blackberry, Tansy, Ragwort, Bermuda Grass, Johnson Grass, Poison Ivy, Nut Sedge, Nimble Will, Bindweed, Bent Grass, Wild Garlic, Perennial Sorrel, and Brome Grass.

PART 2 - PRODUCTS

2.01 WATER

- A. State Specifications 632.2.5.

2.02 TOPSOIL

- A. State Specifications 625.2.

- B. Screened: Mechanically screened free of weeds, sticks, branches and stones greater than 1/2 inch diameter.

### 2.03 SEEDING MATERIALS

- A. Permanent seed:
  - 1. State Specifications 630.2.1. seed mix No. 40. Use Blue Tag certified seed. Each seed lot will be subject to sampling and testing by the State Seed and Testing Laboratory.
  - 2. State specifications 630.2.1. seed mix No. 5 only at the direction of the CITY.
- B. Temporary seed: State Specifications 630.2.1.5.1.2.
- C. Fertilizer: State Specifications 629.2.1 Type B.
- D. Erosion control mats.

### 2.04 SODDING MATERIALS

- A. Sod: State Specifications 631.2.1.
- B. Fertilizer: State Specifications 629.2.1 Type B.
- C. Netting or fabric for sod reinforcement: State Specifications 631.3.3.
- D. Anchorage stakes: State Specifications 631.3.3.

## PART 3 - EXECUTION

### 3.01 TOPSOIL

- A. Preparation:
  - 1. Eliminate uneven areas and low spots. Remove debris, roots, branches, stones in excess of 1/2 inch in size.
  - 2. Scarify subgrade to 3 inches depth where topsoil is scheduled and where equipment used for hauling and spreading topsoil has compacted subsoil.
- B. Placement schedule:
  - 1. Seeding and sod subgrade depth: 4 inches.
- C. Installation:
  - 1. Use topsoil in relatively dry state. Place during dry weather.
  - 2. Fine grade topsoil eliminating rough or low areas. Maintain levels, profiles, and contours of subgrade.
  - 3. Remove stone, roots, grass, weeds, debris, and foreign material while spreading.
  - 4. Manually spread topsoil around trees, plants and building to prevent damage.
  - 5. Lightly compact placed topsoil, so as to negate any detrimental differential settling.
  - 6. Remove surplus subsoil and topsoil from site. Leave stockpile areas ready to receive landscaping.
  - 7. Import topsoil if on site stripped topsoil is not adequate.
- D. Finish grade tolerance: Plus or minus 1/2 inch.

### 3.02 SEEDING

- A. Preparation:
  - 1. Before seeding, disk, harrow, drag and rake to form a level and loose seed bed. Lightly roll before final raking, to locate soft spots and mounds.
  - 2. Notify ENGINEER to allow inspection after fine grading and before seeding.

- B. Store seed following State Specification 630.2.1.4.
- C. Permanent installation:
  - 1. Use sowing method A following State Specifications 630.3.
  - 2. Use the following sowing rate for seeds:
    - a. Seed mix no. 40: 2 pounds per 1000 square feet.
    - b. Temporary: 2 pounds per 1000 square feet.
  - 3. Fertilize following State Specifications 629.3.1 for Type B.
  - 4. Mulch using State Specifications 627.3 Method B wide out tack.
  - 5. Protect seeded areas to prevent damage to completed installation.
  - 6. Place erosion control mats as directed by the CITY.
- D. Maintenance:
  - 1. Maintain seeded areas for 2 months after grass has shown "a catch" or uniform stand verified by CITY. Lawn areas shall receive at least two 2 inch mowings before acceptance.
  - 2. Reseed areas which fail to show adequate catch. Bare spots shall not exceed 1 square feet in area and not exceed 3 percent of the total seeded areas.
  - 3. Reseed areas which do not show a satisfactory stand of established grass, or areas which show erosion, dead grass, or other defects, to produce established, satisfactory grass.
  - 4. Correct damage resulting from erosion, gullies, washouts, or other causes by filling with topsoil, tamping, refertilizing, and reseeding, if damage occurs before Work acceptance.
  - 5. Repair ruts from traffic during seeding, mulching, and maintenance by filling with topsoil, tamping, refertilizing, and reseeding.
  - 6. Protect grass areas during maintenance period.
  - 7. Request inspection by CITY at end of maintenance period.

### 3.03 SODDING

- A. Preparation:
  - 1. Prepare earth bed per State Specifications 631.3.1.
  - 2. Apply fertilizer following State Specifications 631.3.4 for Type B.
- B. Installation:
  - 1. Sod. Follow State Specifications 631.3.2.
  - 2. Staking and cleanup. Follow State Specifications 631.3.3.
  - 3. Repair and resod damage resulting from erosion, gullies, washouts or other causes.
  - 4. Protect the sodded areas during the maintenance period. Maintain sodded areas by watering for 10 days. Resod and maintain areas that dry out or fail to establish.
  - 5. At end of maintenance period, request inspection by CITY. Resod areas which do not show a satisfactory establishment of grass, or areas which show erosion, dead grass, or other defects, to produce established, satisfactory grass.

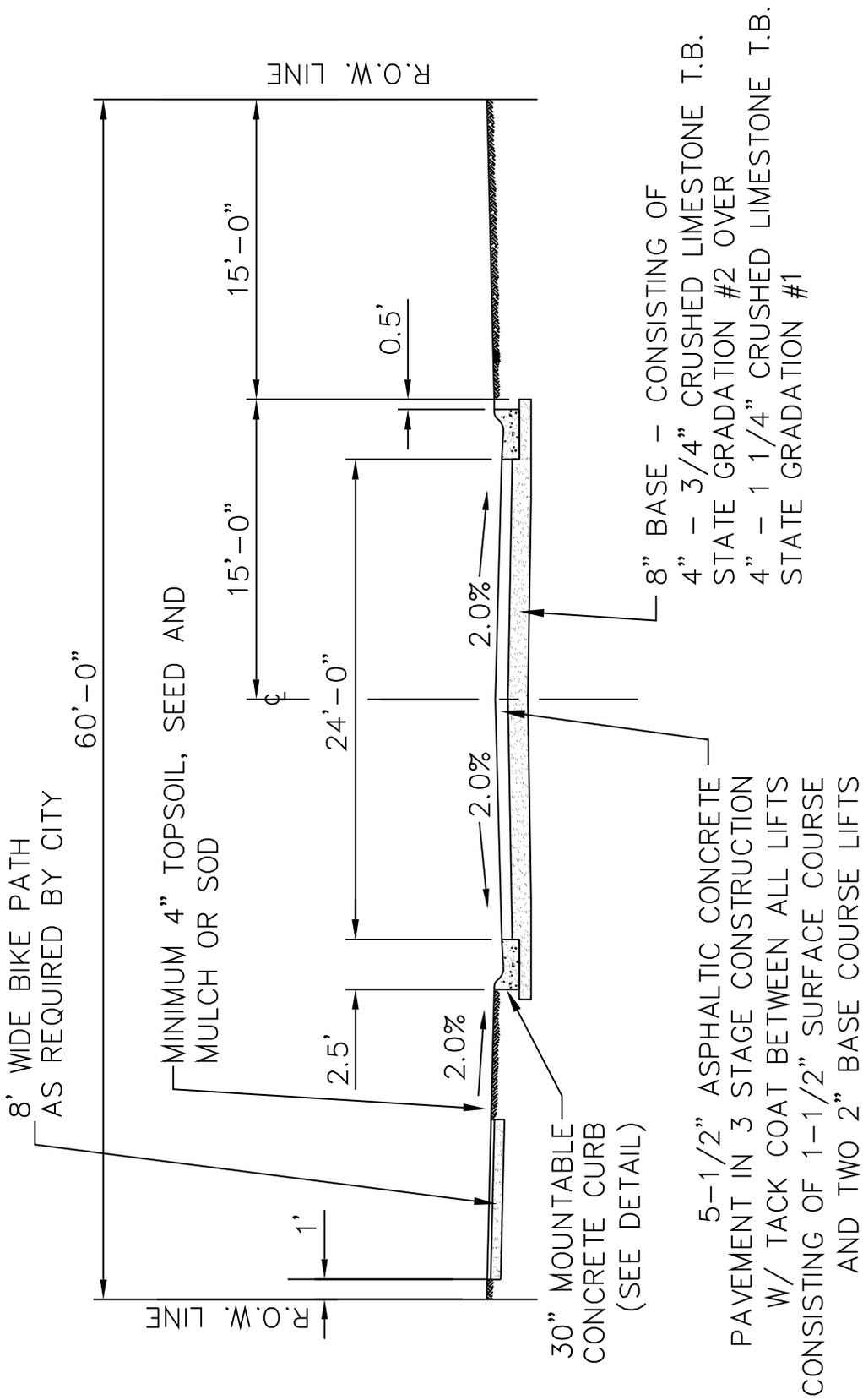
END OF SECTION



## STANDARD URBAN CROSS SECTION MINOR STREETS

REVISED: AUGUST, 2003

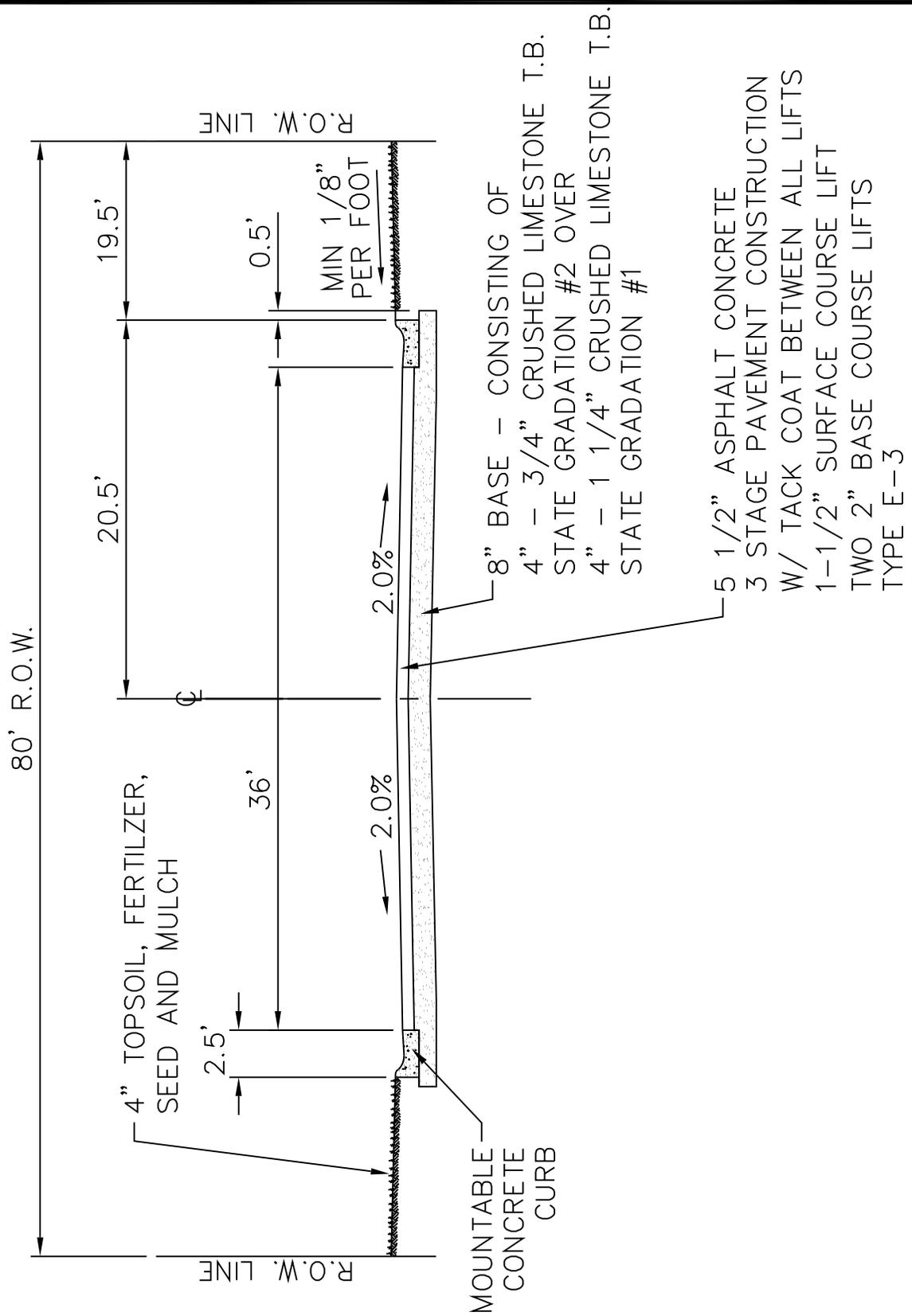
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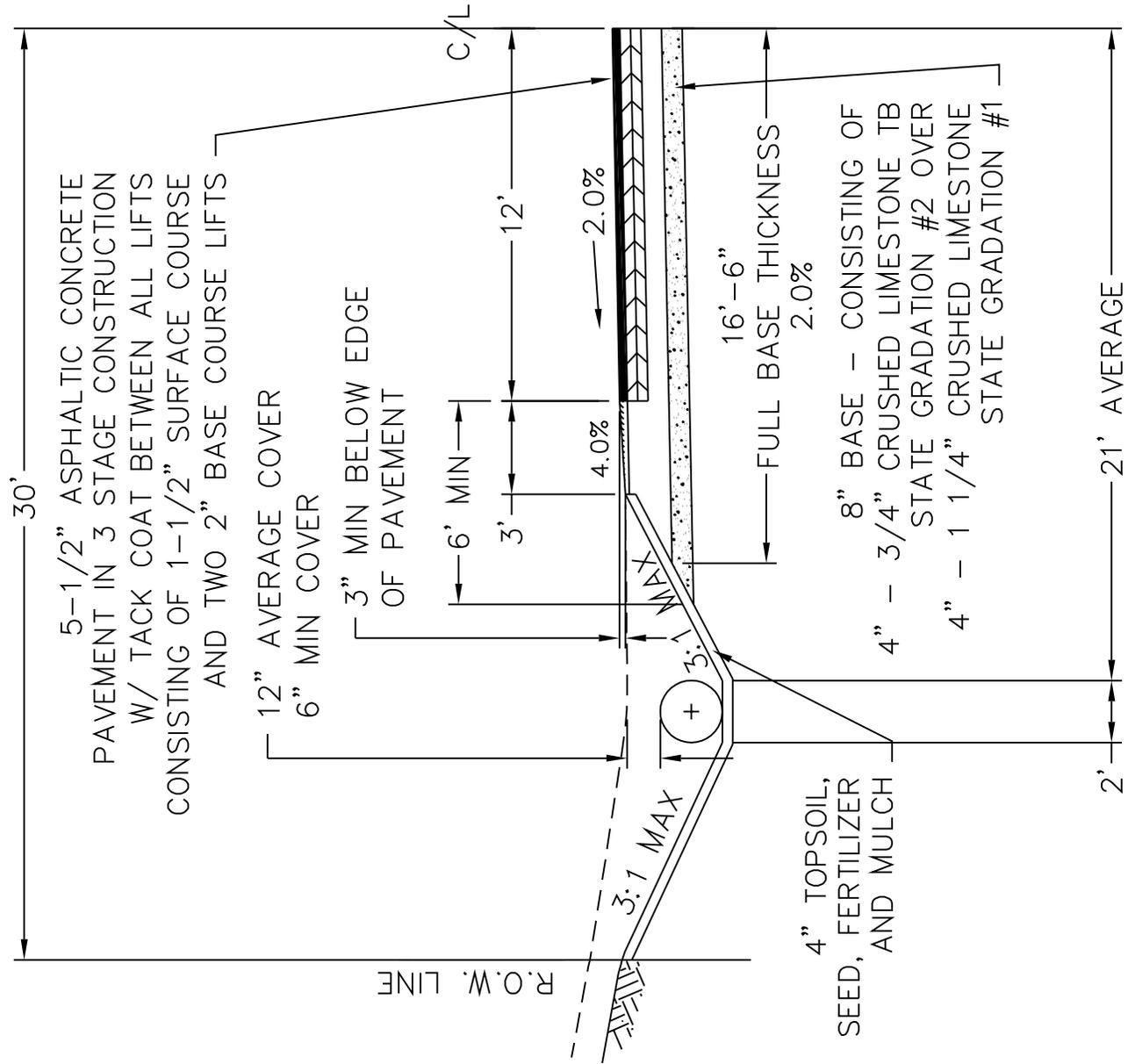




## STANDARD URBAN CROSS-SECTION COLLECTOR STREET

REVISED: AUGUST, 2003





**TYPICAL LOCAL ROAD  
RURAL SECTION**

REVISED: JULY, 2001

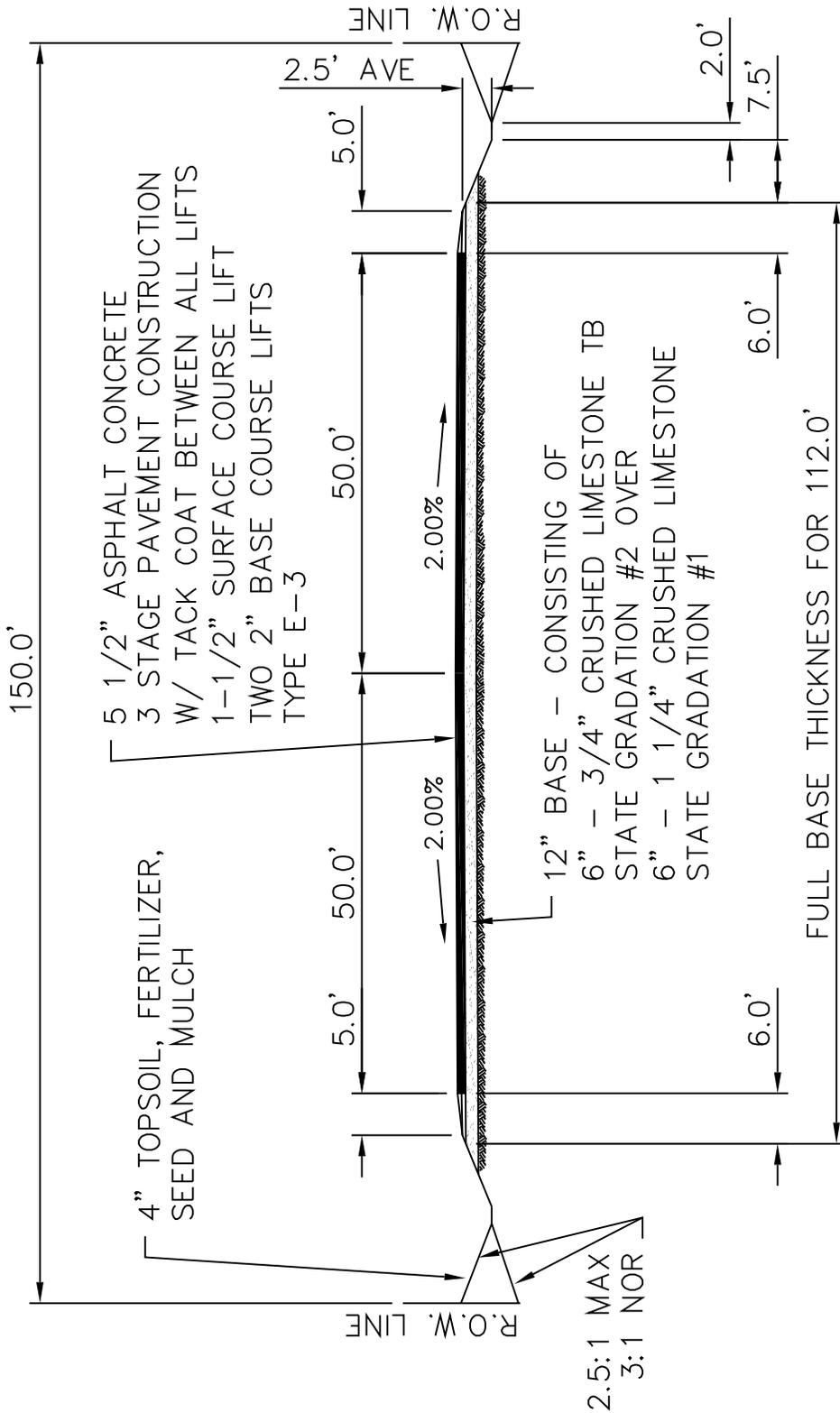


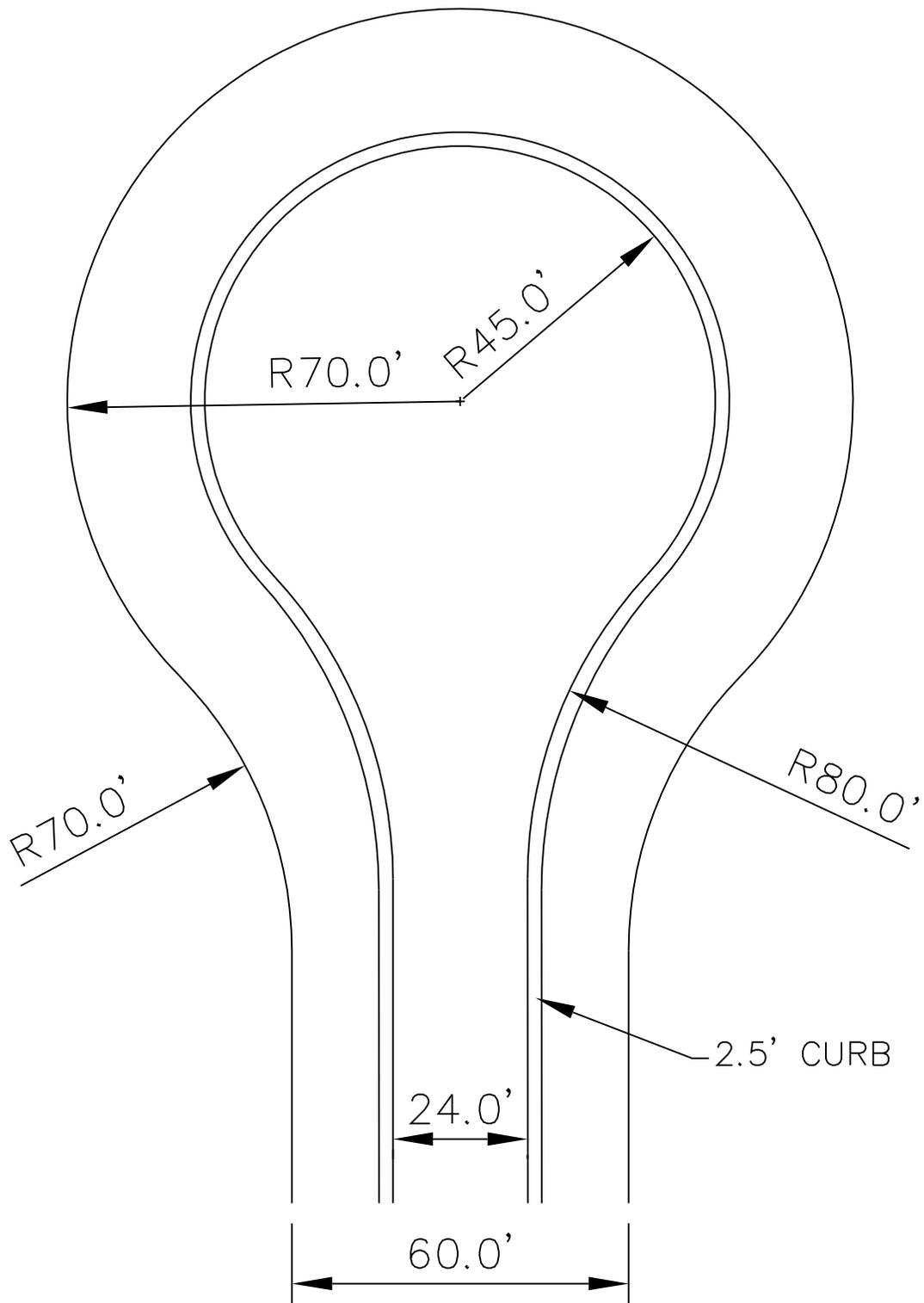
CITY OF

MUSKEGO

**COMMERCIAL CUL-DE-SAC  
RURAL SECTION**

REVISED: AUGUST, 2003



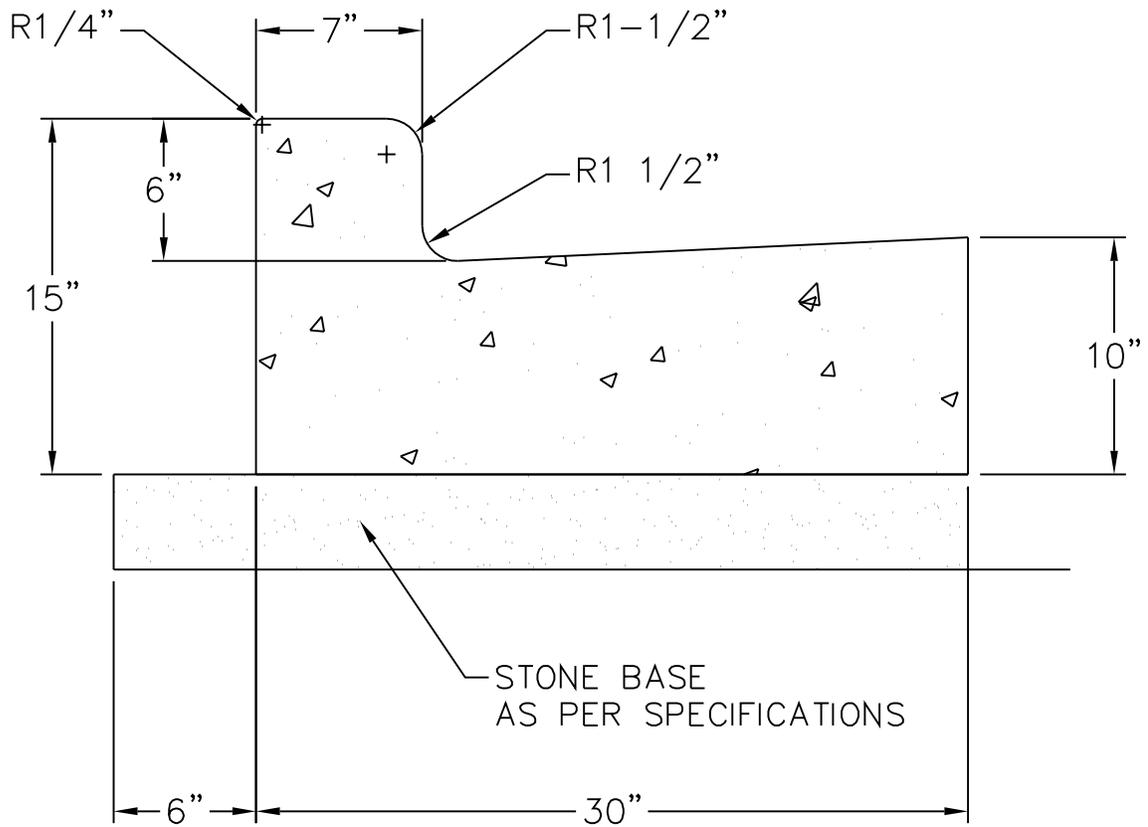


**STANDARD URBAN CUL-DE-SAC  
MINOR STREETS**

REVISED: AUGUST, 2003

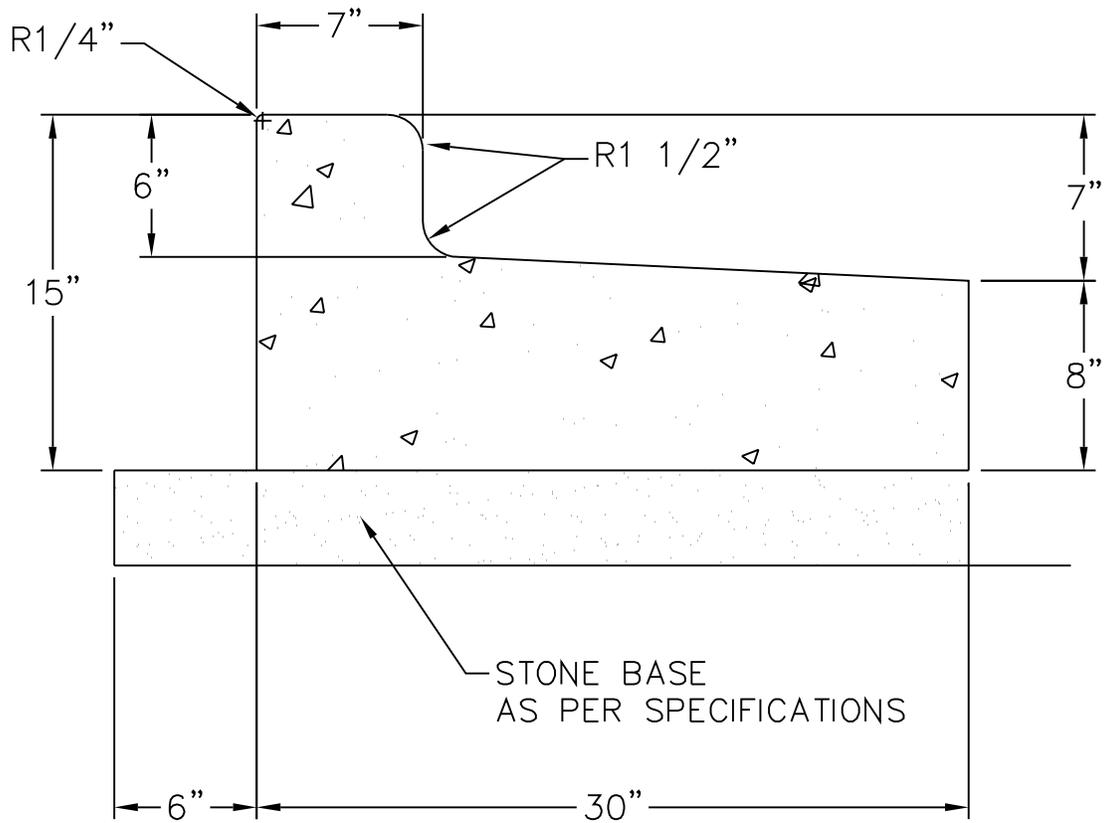
#1E





**STANDARD VERTICAL FACE  
 CONCRETE CURB & GUTTER  
 WHERE SPECIFIED BY CITY**

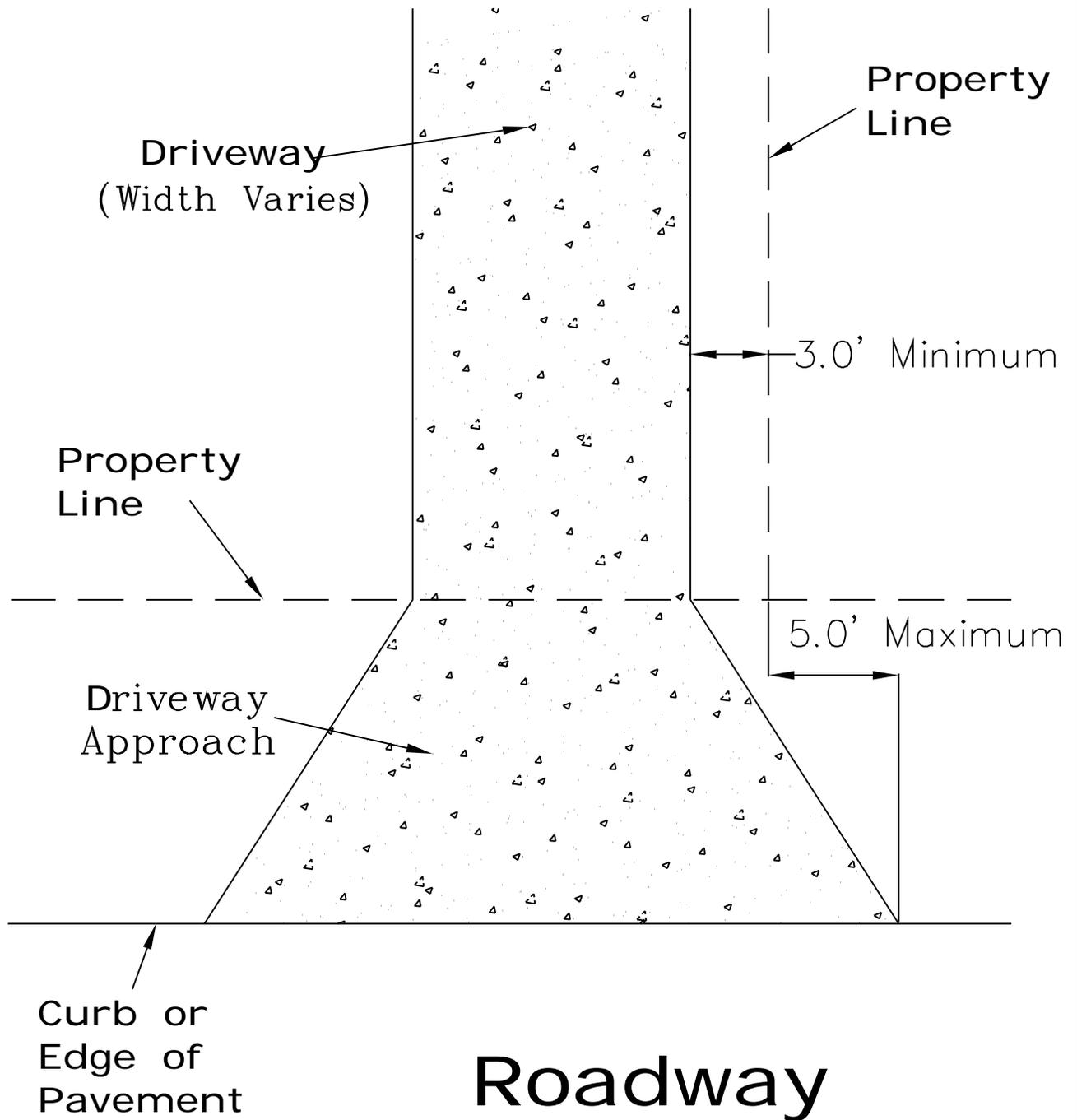
REVISED: JULY, 2001



**STANDARD VERTICAL FACE REVERSE PAN  
CONCRETE CURB & GUTTER FOR ISLAND**

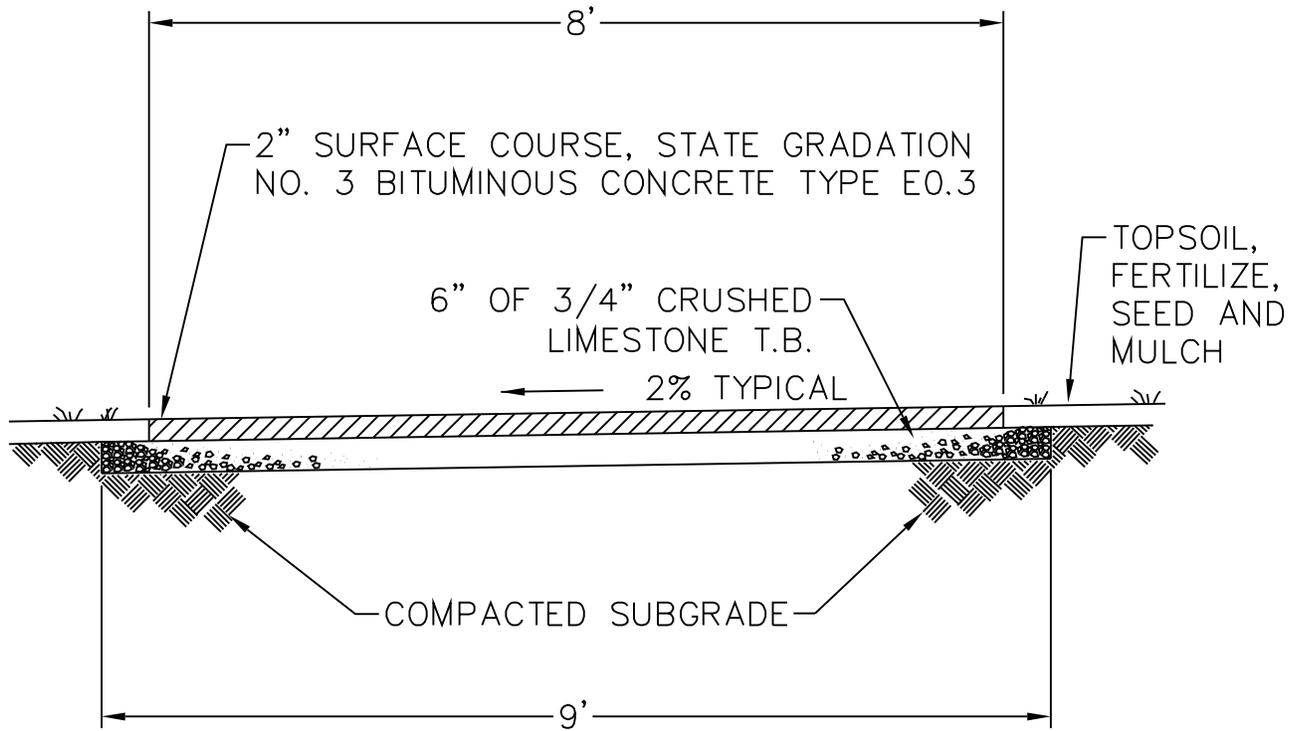
REVISED: JULY, 2001

#2C



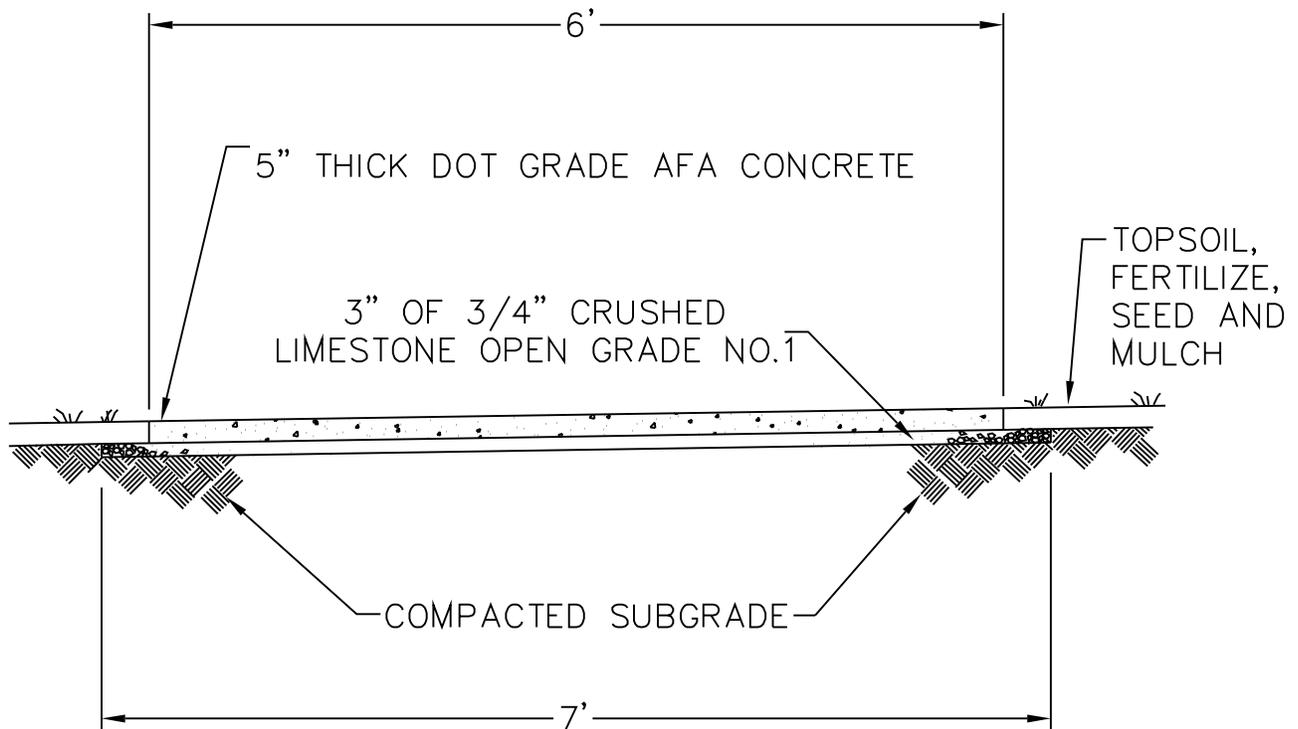
TYPICAL DRIVEWAY APPROACH

REVISED: AUGUST, 2003



**TYPICAL RECREATIONAL TRAIL- ASPHALT**

REVISED: AUGUST, 2003



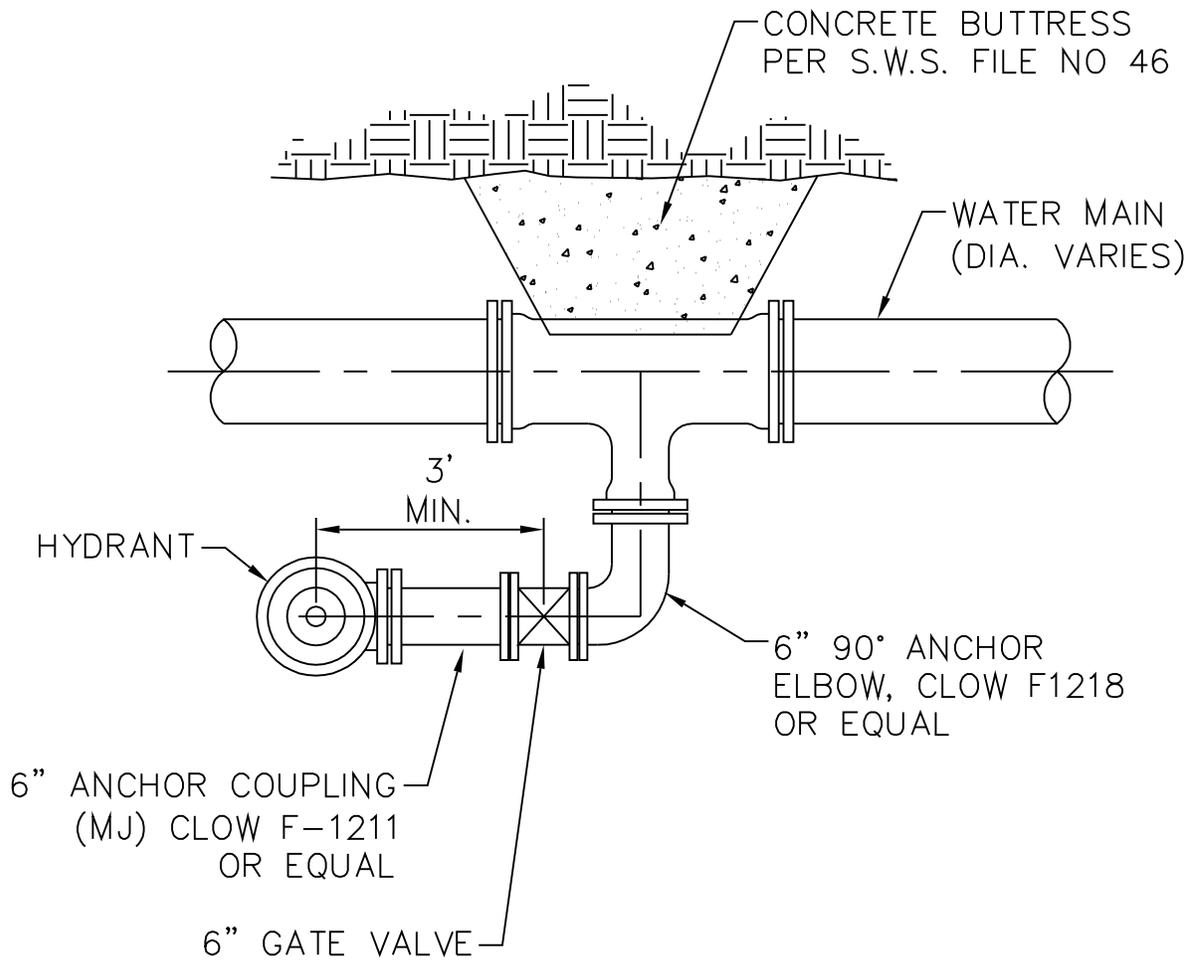
1. Joint Spacing Shall Be 5' On Center.
2. Finish Shall Be Perpendicular To Travel.
3. Felt Shall Be Placed At All Driveway Abutments.
4. Edges Shall Be Tooled.



### TYPICAL PEDESTRIAN PATH- CONCRETE

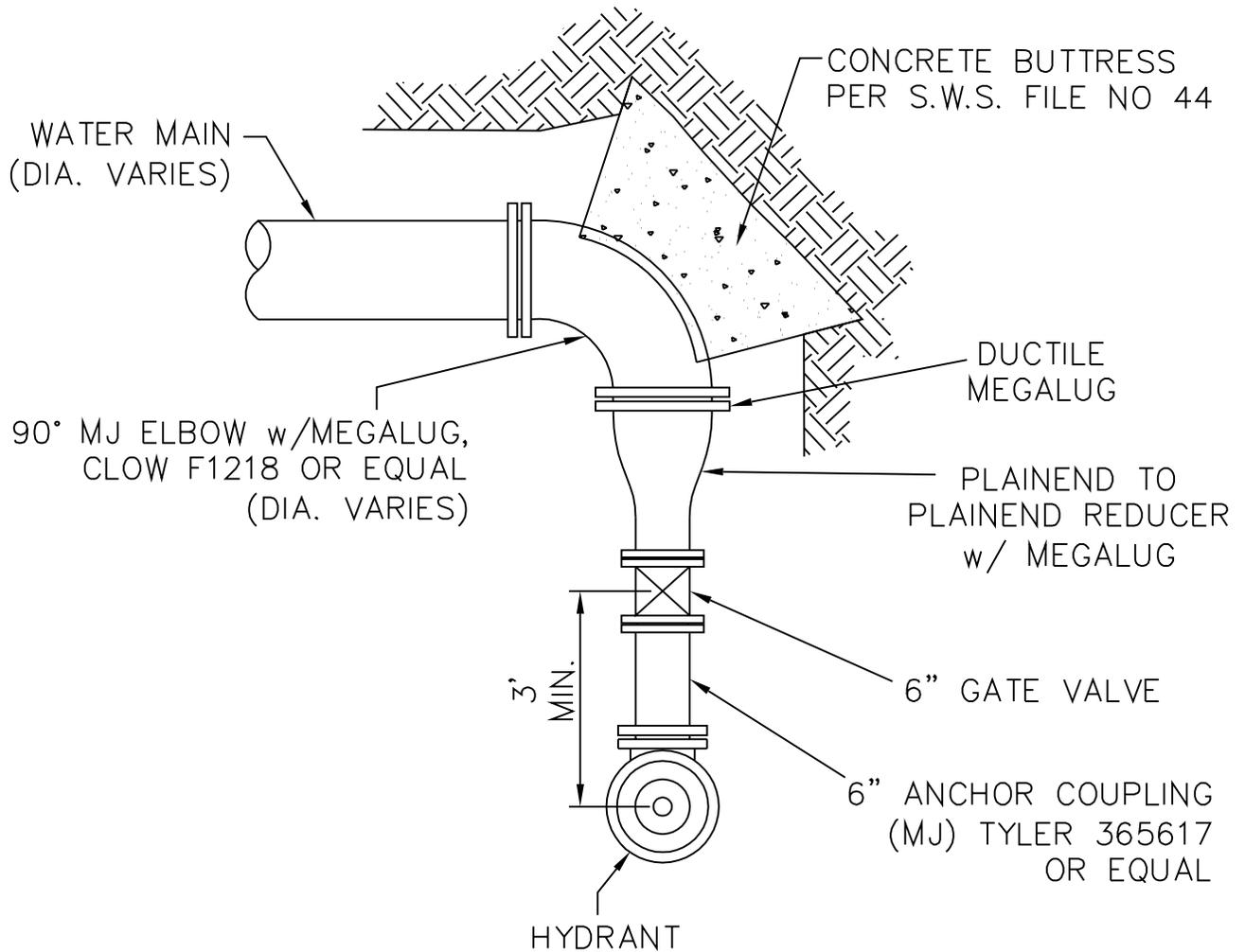
REVISED: NOVEMBER, 2002

#3B



## HYDRANT BRANCH

REVISED: JULY, 2001

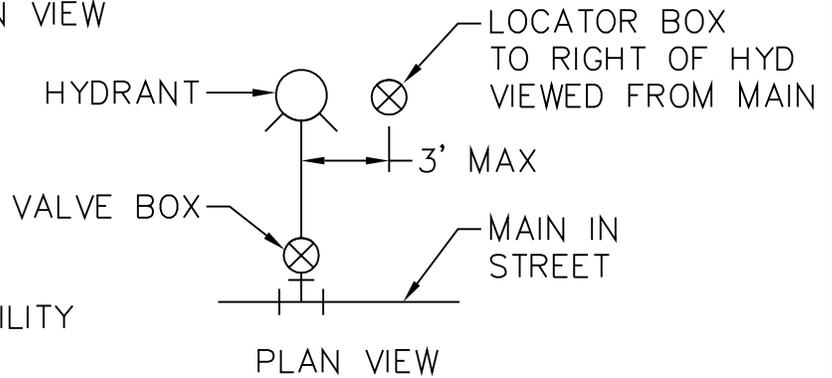
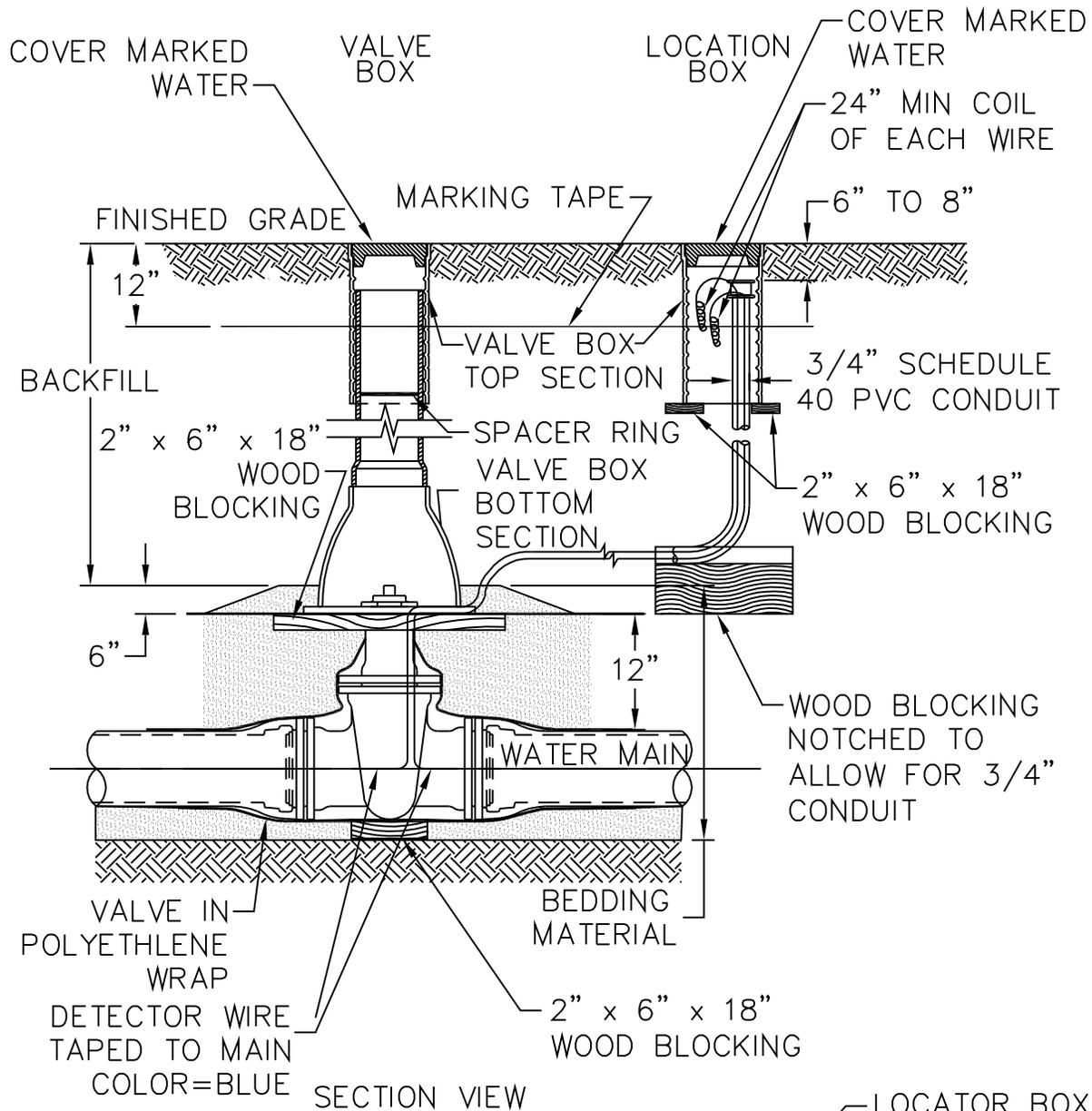


**HYDRANT- TERMINATION POINT**



REVISED: MARCH, 2003

#4B

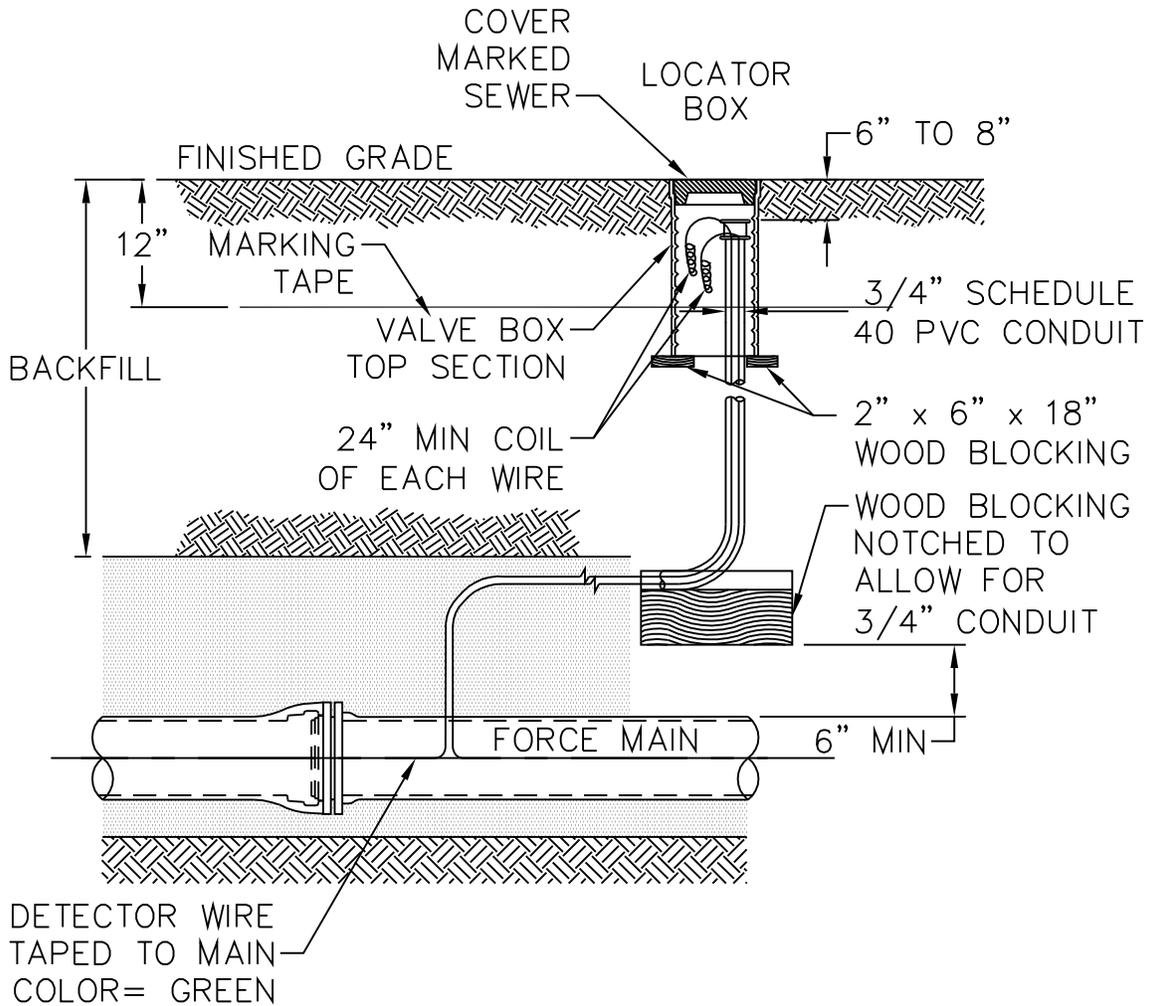


- SPACING:
1. AT EVERY HYDRANT
  2. 1000 FT. MAXIMUM
  3. AS DIRECTED BY CITY UTILITY SUPERINTENDANT



## DETECTOR WIRE & LOCATION BOX WATER MAIN

REVISED: AUGUST, 2003



SPACING:

1. 1000 FT. MAXIMUM
2. AS DIRECTED BY CITY UTILITY SUPERINTENDENT

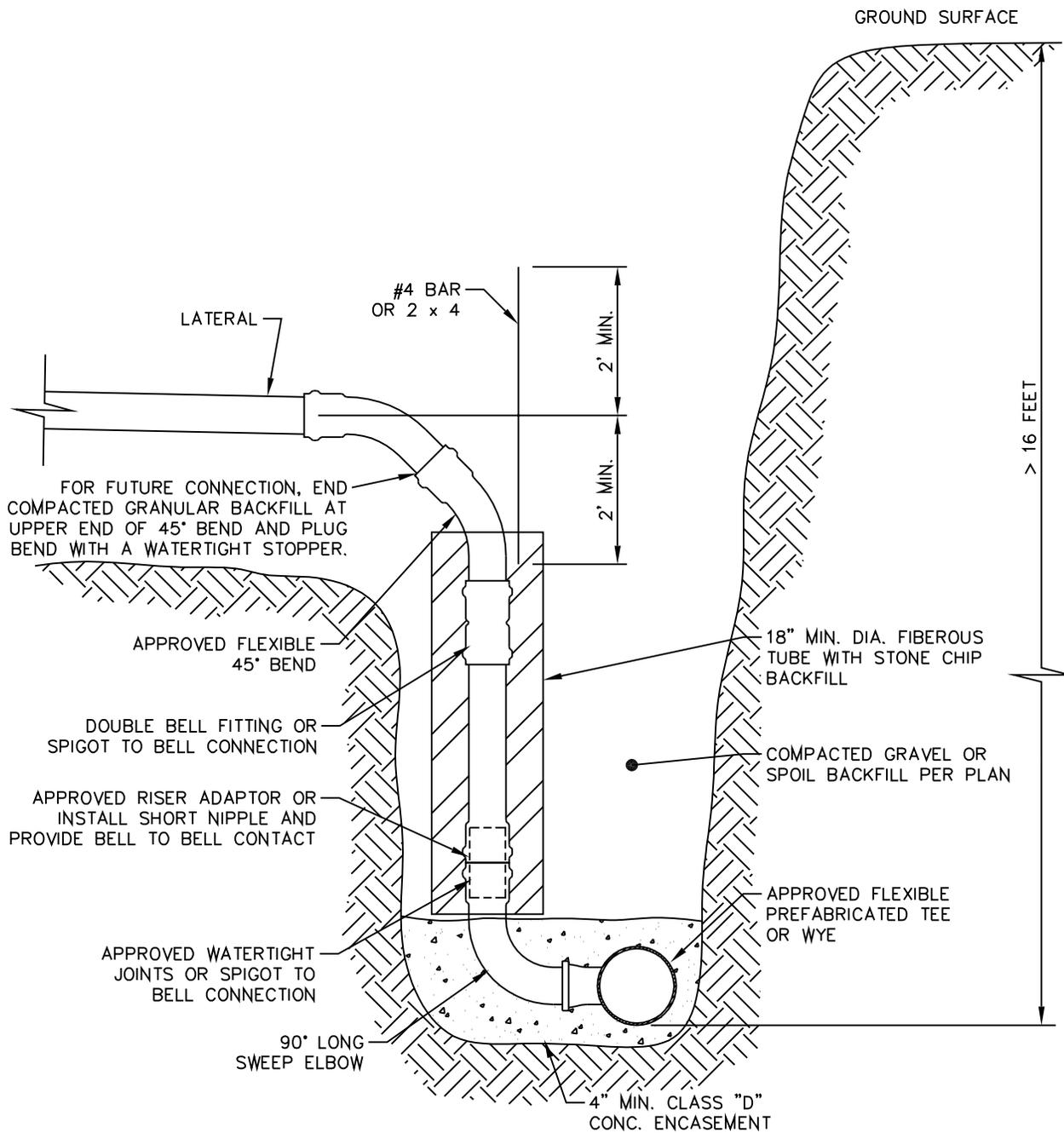


**DETECTOR WIRE & LOCATION BOX  
FORCE MAIN OR PRESSURE SEWER**

REVISED: AUGUST, 2003

#5A





**RISER DETAIL- 90 DEGREE  
FLEXIBLE RISER TO FLEXIBLE MAIN  
GREATER THAN 16 FEET DEEP**

REVISED: August, 2003

D.I. FROST SLEEVE (NEENAH R-1977 OR APPROVED EQUAL)

THREADED COUPLING & RECESSED CAP

6" PVC PIPE (ASTM D3034 SDR 35)

6"X6"X6" WYE

FIN. GRADE

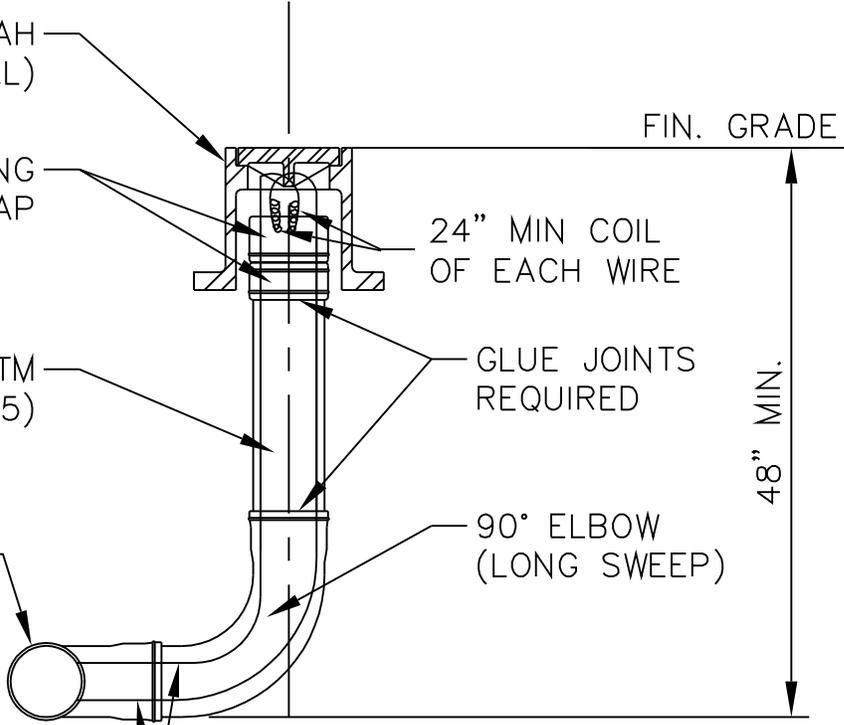
24" MIN COIL OF EACH WIRE

GLUE JOINTS REQUIRED

90° ELBOW (LONG SWEEP)

48" MIN.

DETECTOR WIRE TAPED TO MAIN COLOR=GREEN



### SUMP LINE INLINE CLEANOUT

REVISED: AUGUST, 2003

D.I. FROST SLEEVE (NEENAH R-1977 OR APPROVED EQUAL)

THREADED COUPLING & RECESSED CAP

6" PVC PIPE (ASTM D3034 SDR 35)

FIN. GRADE

24" MIN COIL OF EACH WIRE

GLUE JOINTS REQUIRED

90° ELBOW (LONG SWEEP)

48" MIN

DETECTOR WIRE TAPED TO MAIN COLOR=GREEN

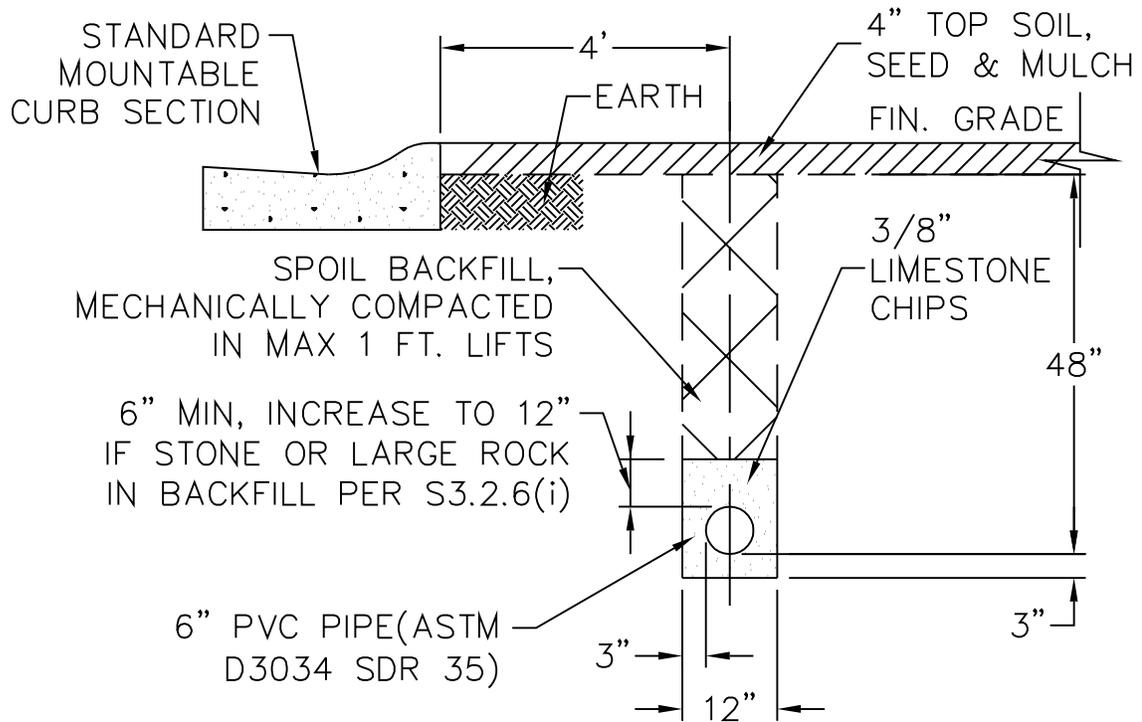
NOTE ALL PIPES MUST HAVE PITCH TO THE INLET OR MANHOLE. INSULATION AS PER COMM 82 IS REQUIRED WHEN THE 48 IN. BURY DEPTH CAN'T BE ACHIEVED. ANY INSTALLATION LESS THEN 48 IN. MUST BE APPROVED BY THE CITY BEFORE CONSTRUCTION.



### SUMP LINE END OF LINE CLEANOUT

REVISED: August, 2003

#6B



NOTE DETECTOR WIRE REQUIRED COLOR=GREEN

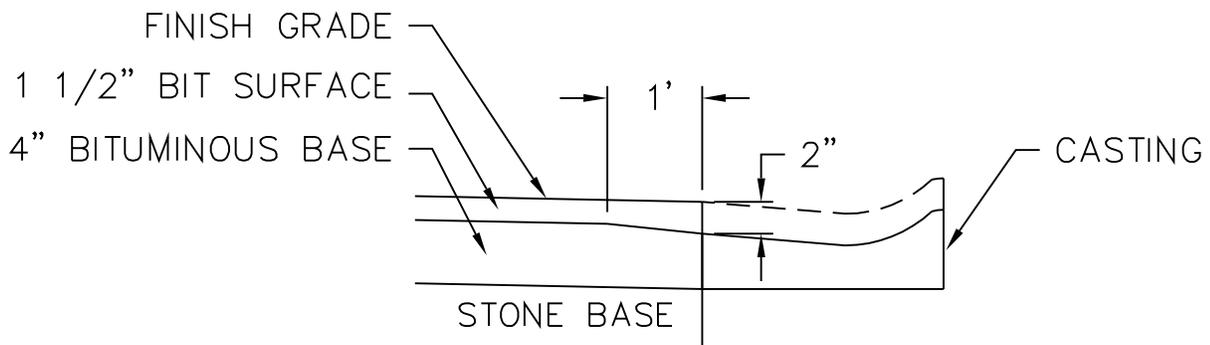
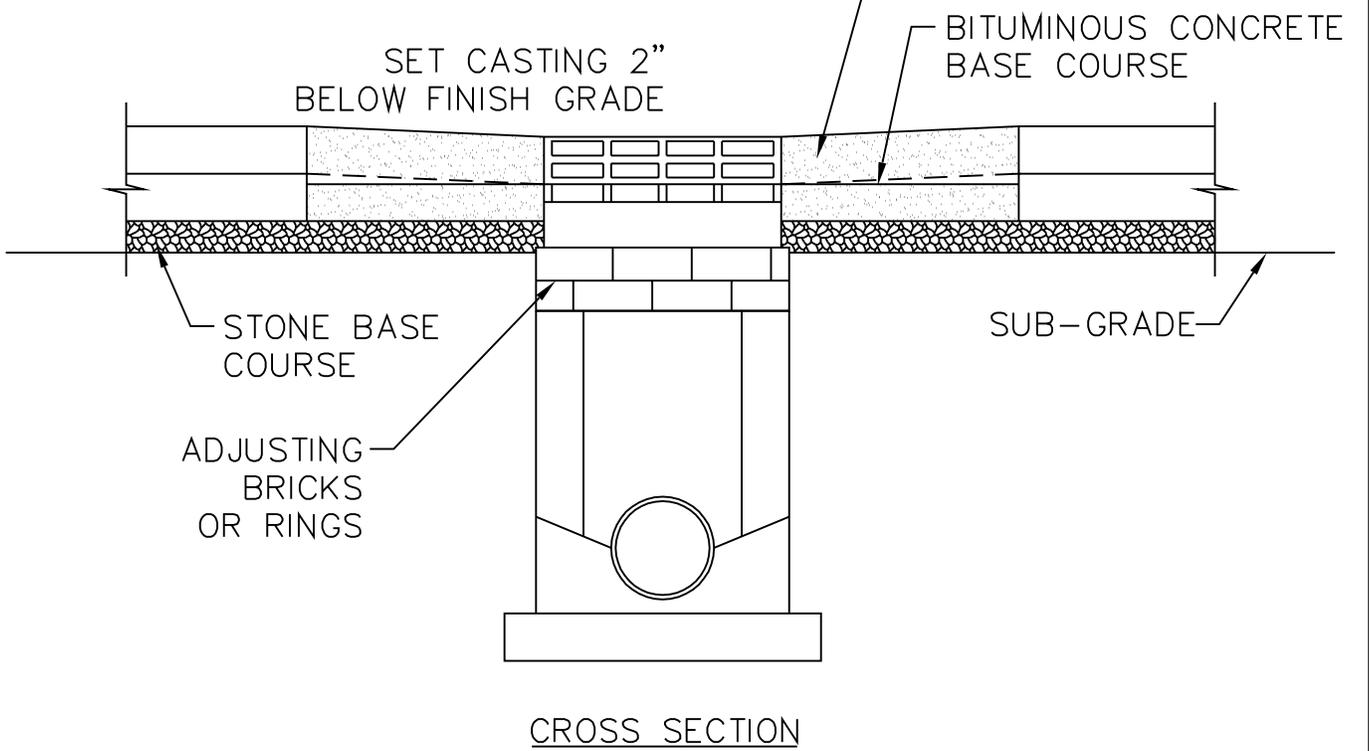
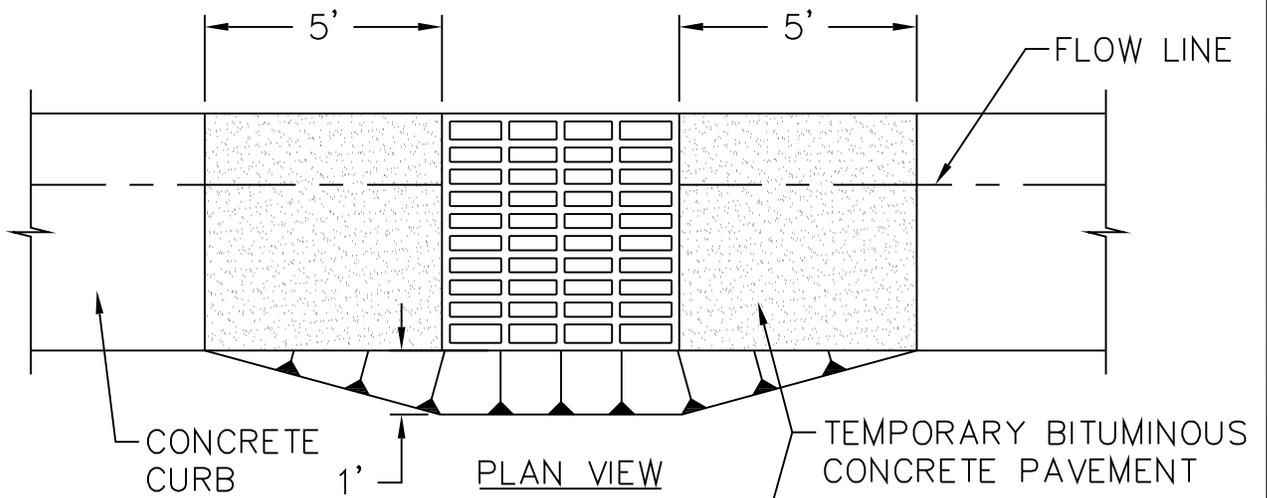
NOTE ALL PIPES MUST HAVE PITCH TO THE INLET OR MANHOLE. INSULATION AS PER COMM 82 IS REQUIRED WHEN THE 48 IN. BURY DEPTH CAN'T BE ACHIEVED. ANY INSTALLATION LESS THEN 48 IN. MUST BE APPROVED BY THE CITY BEFORE CONSTRUCTION.



## SUMP LINE SECTION

REVISED: SEPTEMBER, 2003

#6C



**INTERIM PAVEMENT INLET**



REVISED: JULY, 2001

TEMPORARY BITUMINOUS  
BASE COURSE WEDGE  
(INTEGRAL TO TOP  
BINDER COURSE ASPHALT)

MANHOLE  
COVER

20'  
MIN

1/4" TO 1/2"

BITUMINOUS  
BASE COURSE GRADE

1" TO  
1 1/4"

4" BITUMINOUS  
BASE COURSE

MANHOLE  
COVER

20'  
MIN  
RADIUS

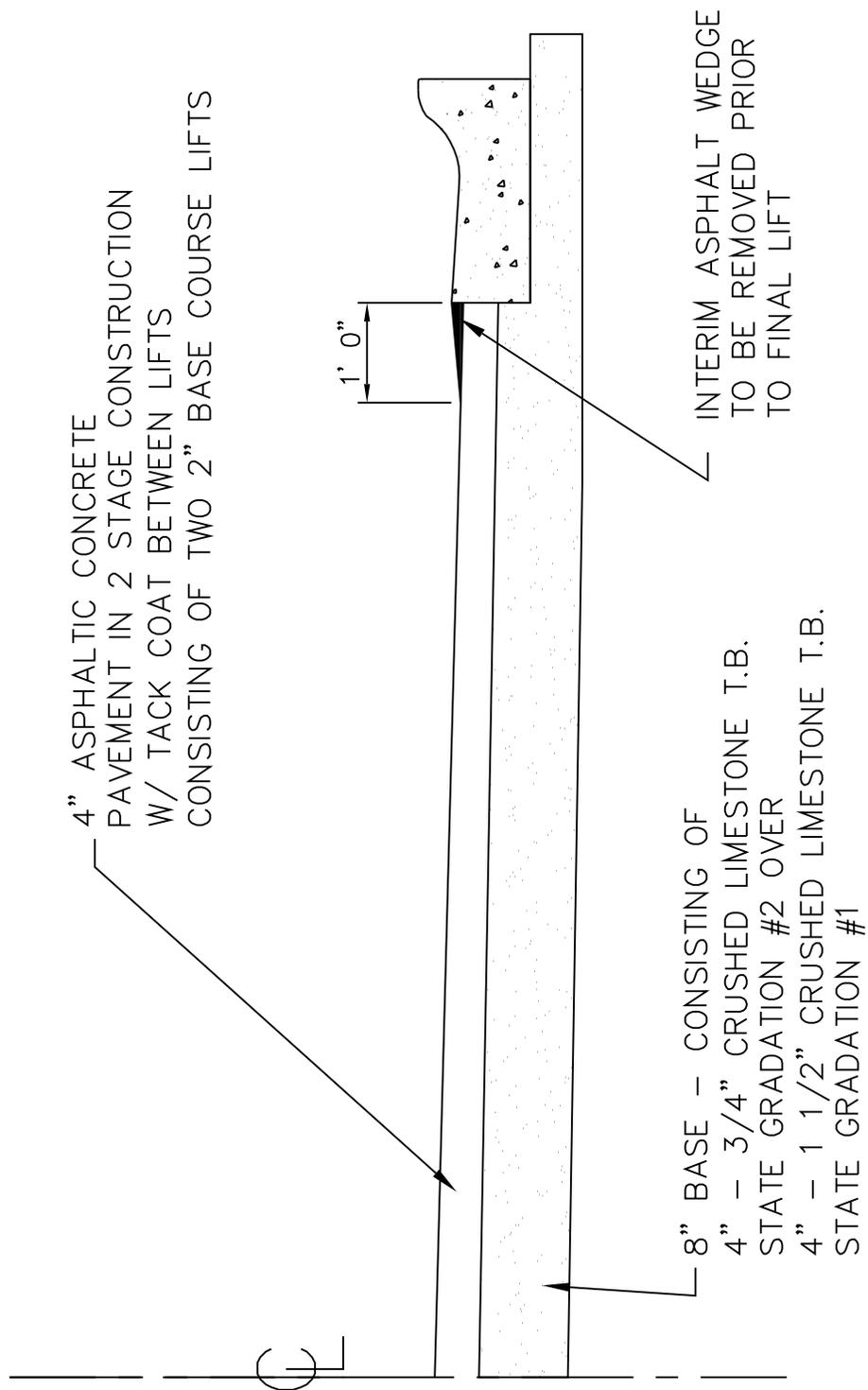
TEMPORARY  
BITUMINOUS  
RAMP



### TEMPORARY MANHOLE RAMP DETAIL

REVISED: JANUARY, 2002

#7B



4" ASPHALTIC CONCRETE  
PAVEMENT IN 2 STAGE CONSTRUCTION  
W/ TACK COAT BETWEEN LIFTS  
CONSISTING OF TWO 2" BASE COURSE LIFTS

8" BASE - CONSISTING OF  
4" - 3/4" CRUSHED LIMESTONE T.B.  
STATE GRADATION #2 OVER  
4" - 1 1/2" CRUSHED LIMESTONE T.B.  
STATE GRADATION #1

INTERIM ASPHALT WEDGE  
TO BE REMOVED PRIOR  
TO FINAL LIFT

1' 0"



**INTERIM PAVEMENT CROSS SECTION**

REVISED: FEBRUARY, 2005