

# CITY OF PEORIA – TRAFFIC COMMISSION

## REGULAR BUSINESS MEETING

### AGENDA

TUESDAY, OCTOBER 19, 2010

3:00 PM – 4:30 PM

**DATE SET:**

TUESDAY, OCTOBER 19, 2010 @ 3:00 PM

TUESDAY, NOVEMBER 16, 2010 @ 3:00 PM

TUESDAY, DECEMBER 21, 2010 @ 3:00 PM

REGULAR COMMISSION MEETING – TO BE HELD AT PEORIA CITY HALL, 419 FULTON STREET, ROOM #404, PEORIA, ILLINOIS 61602. (309) 494-8549.

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# CITY OF PEORIA – TRAFFIC COMMISSION

## AGENDAS AND MINUTES

ISSUED BY:

JOE HUDSON, VICE PRESIDENT

VIA TRAFFIC ENGINEERING DIVISION, PUBLIC WORKS DEPARTMENT

419 FULTON STREET

(309) 494-8802

INTERNET ADDRESS: [www.ci.peoria.il.us](http://www.ci.peoria.il.us)

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\*CITIZENS WISHING TO ADDRESS AN ITEM NOT ON THE AGENDA SHOULD CONTACT A COMMISSION MEMBER PRIOR TO THE MEETING. ALL OTHER PUBLIC INPUT WILL BE HEARD UNDER PUBLIC COMMENT NEAR THE END OF THE COMMITTEE MEETING.

NOTE: THE ORDER IN WHICH AGENDA ITEMS ARE CONSIDERED MAY BE MOVED FORWARD OR DELAYED BY AT LEAST 2/3 VOTE OF THE COMMISSION MEMBERS PRESENT.

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THE CITY OF PEORIA – TRAFFIC COMMISSION MEETS IN REGULAR BUSINESS SESSIONS THE **THIRD TUESDAY** OF THE MONTH AT 3:30 PM AT CITY HALL, CONFERENCE ROOM #404, 419 FULTON STREET, PEORIA, ILLINOIS. (309) 494-8549.

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NOTICES OF ANY SPECIAL MEETING ARE POSTED AT LEAST 48 HOURS PRIOR.

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CITY OF PEORIA – TRAFFIC COMMISSION  
CITY HALL, CONFERENCE ROOM #404  
3:00 PM – 4:30 PM

ROLL CALL

ANNOUNCEMENTS, ETC.

MINUTES

REQUEST FOR APPROVAL OF TRAFFIC COMMISSION MEETING MINUTES

DATED: JULY 20, 2010

AGENDA ITEMS

**ITEM No. 1**    **ELECTION OF TRAFFIC COMMISSION OFFICERS**

**ITEM No. 2**    **DISCUSSION REGARDING THE MANUAL OF PRACTICE**

UNFINISHED BUSINESS

NEW BUSINESS

PUBLIC COMMENT

NEXT MEETING

ADJOURNMENT

## REQUEST FOR DISCUSSION



To: Traffic Commission

From: Nick Stoffer, Traffic Design Engineer

**AGENDA DATE REQUESTED:** September 21, 2010

**ACTION REQUESTED:** DISCUSSION REGARDING MANUAL OF PRACTICE

The Public Works Engineering Division is currently developing a Manual of Practice to help implement the policies of the City of Peoria. The focus of the Manual of Practice is on engineering process and standards. The draft has used the Champaign Manual of Practice as a model, with other examples existing in both Bloomington and Normal. At the Traffic Commission meeting in June, copies of the outline of the entire Manual were presented. The Traffic Commission would most appropriately be asked for input on Chapters 8-14. Draft copies of Chapter 10, (Pavement Standards) and Chapter 11 (Sidewalk Standards) are enclosed for review. Chapter 10 will be discussed at the October meeting, so that staff can get input from the Commissioners on this subject. Additional chapters to be forwarded for future meetings. Comments from the Traffic Commission will be used to help develop this document.

**MINUTES OF A REGULAR MEETING  
OF THE CITY OF PEORIA**

**:TRAFFIC COMMISSION:**

**SEPTEMBER 21, 2010**

A Regular Meeting of the City of Peoria's Traffic Commission convened at 3:00 p.m. on Tuesday, September 21, 2010, at City Hall, Room 404, 419 Fulton Street, Peoria, Illinois, and was called to order by Commissioner Mary Jane Crowell.

**CALL TO ORDER**

Call to Order showed the following Traffic Commission Members in attendance: Commissioner Steve Van Winkle, Commissioner Mary Jane Crowell, Commissioner John Haverhals and Commissioner Thomas Harrington and Commissioner McNamera – 6. Absent: Vice-Chairman Joe Hudson and Commissioner Brandon Lott – 2.

Commissioner Haverhals moved to appoint Commissioner Crowell to preside over the meeting in the absence of Vice Chairman Joe Hudson; seconded by Commissioner Van Winkle.

Approved by viva voce vote

Others in attendance included Jeffrey Smith, City Engineer; Nick Stoffer, Traffic Design Engineer; Mr. Roger Sparks and Stephanie Stapleton, Traffic Engineering Administrative Specialist.

**MINUTES**

Commissioner Haverhals moved to approve the minutes of July 20, 2010, seconded by Commissioner Van Winkle.

Commissioner McNamara requested that the location be clarified under Item 3 paragraph 3. Minutes were approved by viva voce vote.

**ITEM NO. 1**      **INTRODUCTION OF TRAFFIC COMMISSION APPOINTEE**

Traffic Design Engineer Nick Stoffer and the Commission welcomed Commissioner Patrick McNamara to the Traffic Commission. Commissioner McNamara was employed by Caterpillar, Inc. prior to retiring.

**ITEM NO. 2**      **DISCUSSION REGARDING THE MANUAL OF PRACTICE**

Traffic Design Engineer Nick Stoffer gave a brief overview regarding the Manual of Practice (M.O.P.). He explained that the Public Works Engineering Division was currently developing a Manual of Practice to help implement the policies of the City of Peoria. He said the focus of the Manual of Practice was on engineering process and standards. He used the Champaign Manual of Practice as a model, with other

examples existing in both Bloomington and Normal. He stated that the draft would be customized to suit the needs of the City of Peoria. He stated the purpose for the M.O.P. is to implement processes and design standards.

He stated that the Commissions input would be used to develop a policy for the City of Peoria.

In discussion with Commissioner McNamara regarding the process of changing the language and the content of the reviewed chapters, Mr. Stoffer explained that there were very few comments regarding Chapter 8 and that the Commission was in the process of reviewing Chapter 9. He further explained that the chapters are updated to reflect the Commissions suggestions and would be presented to the Commission once the final Manual of Practice was completed.

In discussion with Commissioner McNamara, he questioned whether the Engineering staff would be able to produce the supporting documentation outlined on **Page 9.2 Section 9.00 (B) Introduction & Goals;** Mr. Stoffer stated that those were industrial standard documents that were referenced in this particular section. He further explained that these terms specified within this document would allow the engineer some latitude when making decisions.

In discussion with Commissioner Haverhals, he questioned what the next step was in the process, after the M.O.P. was completed. City Engineer Jeff Smith explained that the overall process would be that the City Council would set a vision with the Comprehensive Plan. He further explained that after the M.O.P. was completed then it would be presented to the City Council for approval. Once this document was adopted by the City Council then it would eventually be referenced in the City Code.

After a brief discussion, the Commission recommended the following changes to the Manual of Practice Chapter 9:

- Glossary be added to assist individuals that not familiar with Engineering terms
- References are provided to determine the requirements for a traffic study
- Terminology be consistent throughout the chapter
- Sections be defined to suit the needs of the City of Peoria
- Language be developed to address properties with alley access
- Clarify approval process
- Comments should be added to address Acceleration/Deceleration Lanes
- Internal circulation
- Affect on older established neighborhoods
- Acceleration/Deceleration Lanes

In discussion with Commissioner Crowell, City Engineer Smith stated that the M.O.P. would be updated and that he would like to have this completed early 2011. Once M.O.P. is completed it would be submitted to the Commission for review and final approval then it would be submitted to the City Counsel for direction and approval.

**ITEM NO. 3**      **DISCUSSION REGARDING ADA TRANSITION PLAN UPDATE**

Traffic Design Engineer Stoffer distributed a handout entitled **“Introduction to Transition Plan Update.”** He gave a brief overview regarding the ADA Transition Plan. He stated that the ADA Transition Plan was

originally adopted in 1995 to help set priorities for installation of curb ramps and accessible walkways within the City of Peoria. He further explained that engineering staff had begun the process of updating the ADA Transition to meet present needs, standards and priorities. He stated that the ADA standards are still in draft form. **(Copy attached)**

Mr. Stoffer stated the following items would be addressed in the updated plan:

- Report on progress in complying with ADA requirements
- Self-assessment & inventory needs
- Public Input
- Incorporate new & anticipated design changes
- Develop priorities, plans and a budget for next (5) five years
- Establish policies for future implementation

City Engineer Smith stated that an Adhoc Committee would be meeting to discuss how to make bus stops more accessible. He pointed that bus stops/shelters should have an accessible route to and from the facility. Benches need to be placed without obstructing the existing pedestrian way or allow a minimum 3' clear route for passage. In cases where there are construction zones and the sidewalk has been closed or route has been detoured; the pedestrian accessible route needs to be maintained, as well as including temporary ramps to and from the existing walks. He pointed out that the City still had many areas that were not accessible.

Mr. Stoffer stated that the City would be working with City Link to make the bus stops more accessible.

In discussion with Commissioner Van Winkle, Mr. Sparks pointed out that he was concerned about existing ramps that were not in compliance, ramps that have deteriorated and have had abrupt changes in the surface elevations. He also questioned, in regards to right-of-way, what type of an agreement a municipality would have with the Transit Center concerning the bus stops.

Commissioner Van Winkle felt that the City would serve as the agent to make sure that the Transit Center followed proper guidelines for bus stops/shelters.

Mr. Roger Sparks explained that many disabled citizens have to utilize a lane of traffic in some areas because there are no existing ramps or sidewalks. He questioned who would be liable if disabled citizens are forced to use the street and are injured due to no sidewalks or existing ramps in the area.

#### UNFINISHED BUSINESS

In a previous meeting, Commissioner Lott had requested that the bike plan be placed on the Agenda for further discussion. Commissioner Crowell asked that this be kept in mind for future discussion.

In discussion with Commissioner Haverhals regarding bike trail signage, he felt that there were a lot of signs that cluttered the poles, Mr. Stoffer explained that the map was outdated and the signs have not been maintained. He said that this would be quite an effort for staff to remove these signs. Unfortunately, it is a matter of priority and where does this fit in with everything else that needs to be completed, stated Mr. Stoffer.

**NEW BUSINESS**

- **METHODIST MEDICAL CENTER**

Commissioner Haverhals stated since the construction has been completed at Methodist Medical center, he questioned if there was a need to have the “stop” sign at Glen Oak at the entrance.

- **WAYNE STREET HILL**

Commissioner Haverhals stated that Wayne Street hill needed curbing and that a huge hole was developing in this area, which was very deep. He requested that someone take a look at this section.

- **ELECTION OF OFFICERS**

Commissioner Haverhals requested that the Election of Officers be added to the October Agenda.

- **MAIN STREET LANE REDUCTION**

Commissioner Smith commended staff on the Main Street project. He felt that traffic had slowed down. He questioned if staff was monitoring the traffic or if any additional studies had been conducted since the lane reduction.

Mr. Stoffer stated that staff had received both positive and negative comments regarding the lane reduction. He said the project would continue down the hill to Glendale Avenue. He stated that in the beginning there was some confusion; however, signs have been added and he felt that motorists have adjusted to the traffic pattern change.

In discussion with Commissioner Haverhals, regarding the lane reduction, he expressed concern about additional traffic on Moss Avenue. Mr. Stoffer explained that he was not aware of the impact on Moss Avenue and that he does not have before/after traffic counts on Moss Avenue, at this time.

- **TRAFFIC COMMISSION UPDATES**

Commissioner McNamara questioned what mechanism was used to track pending items for the Commission.

Mr. Stoffer stated that Administrative Specialist Stephanie Stapleton tracks pending items for the Commission.

City Engineer Smith suggested that a calendar be created to track these items.

**PUBLIC COMMENT**

NONE.

**NEXT MEETING**

The next Regular Scheduled Meeting will be held on **Tuesday, October 19, 2010** at 3:00 p.m. at City Hall, Suite 404.

**ADJOURNMENT**

There being no further discussion, the Regular Meeting of the Traffic Commission adjourned at 4:30 pm.

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Commissioner Mary Jane Crowell

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Nicholas A. Stoffer, Traffic Design Engineer

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## **CHAPTER 10: PAVEMENT STANDARDS**

### **10.00 Introduction and Goals**

### **10.01 Administration**

### **10.02 Standards**

### **10.03 Standard Attachments**

## 10.00 INTRODUCTION AND GOALS

The purpose of this chapter is to provide guidance for the design and construction of pavements in accordance with criteria and standards established by IDOT and the City of Peoria. The goal is to design and construct pavements that are free from defects and will provide superior long-term performance.

## 10.01 ADMINISTRATION

This chapter applies to all new and existing public street pavements within the City limits and the 1-1/2 mile extra territorial jurisdiction. The following general guidelines shall apply when designing and constructing pavements:

- A. Pavement thickness for new or reconstructed streets shall meet or exceed minimum thickness requirements established by this Manual.
- B. All pavement designs shall be in general conformance with the City of Peoria Subdivision Regulations and Manual of Practice.

## 10.02 STANDARDS

- A. **Referenced Standards:** Design and construction standards for pavements shall comply with the requirements of the following standards:
  - 1. IDOT, Bureau of Design and Environment Manual, latest edition.
  - 2. IDOT, Highway Standards Manual, latest edition.
  - 3. IDOT, Standard Specifications for Road and Bridge Construction, latest edition.
  - 4. IDOT, Construction Manual, latest edition.
  - 5. City of Peoria Manual of Practice, latest edition. In case of conflict between standards, the City Manual of Practice takes priority over other standards.
- B. **Subgrade:** The subgrade shall be prepared in accordance with IDOT Standard Specifications for Road and Bridge Construction, except as amended or expanded as follows:
  - 1. *Soils Report:* On all new or reconstructed **arterial** class City streets, it may be required that a Soils Report be prepared by an experienced, independent materials testing firm. The Soils Report should at a minimum include the following: Location & Design section which identifies the projects location, length, existing conditions, existing and proposed pavement typical sections, stations of borings; a Soil Geology section which describes existing soil types and profiles and provides a sieve analysis of each soil boring with grain size distribution plots, Liquid Limits, Plastic Limit, % Sand, % Clay, % Silt, and subgrade support rating; copies of actual boring logs; a soil profile plot based on interpretation of boring logs; and a Conclusion and Recommendation section which includes recommendations for lime stabilization with recommended application rates of lime and water and any other subgrade stabilization alternatives.
  - 2. *Testing:* The following minimum subgrade tests shall be performed according to applicable testing standards:

- a. **Compaction:** The IDOT Standard Specifications for Road and Bridge Construction shall govern subgrade compaction. Moisture density requirements should apply to all embankment construction and to the upper 12 in. of cut sections. Testing should be performed every 100 ft. of roadway with tests alternating between lanes (i.e. 200 ft. intervals in each lane of traffic).
- b. **Subgrade Stability:** The design CBR (California Bearing Ratio) for the City of Peoria is 3%. A CBR of 3% indicates a poor or weak subgrade strength condition, which is typical of soils in Peoria. Subgrade strengths at the time of construction should be at least 6% (CBR = 6%) in the top 12 in. of the subgrade. For pavement designs that do not require a design CBR value, such as in the IDOT BDE pavement design sections, a soil support rating of "poor" should be used. Where appropriate an Illinois Bearing Ratio (IBR) of 2% shall be used for design.
- c. **DCP:** The DCP (Dynamic Cone Penetrometer) is used to estimate the in situ CBR of granular materials and fine-grained soils. The DCP can be used to determine that the recommended subgrade CBR of 6% in the top 12 in. of subgrade is obtained during construction. The DCP used for testing shall comply with the most current ASTM standard. Testing should be performed every 50 ft. of roadway with tests alternating between lanes (i.e. 100 ft. intervals in each lane of traffic).

Prepared subgrades shall be retested after the winter, when significant ponding water has been present, or when the subgrade is significantly saturated with moisture and approved by the City Engineer prior to placement of any paving materials. The City Engineer may require additional testing prior to paving if there are any apparent changes in the subgrade. Refer to Standard Attachment 10.02 for the relationship between DCP and CBR.

- d. **Proof Rolling:** In addition to stability and density testing, the City Engineer may require that the subgrade be "proof rolled" prior to approval of the subgrade and before the placement of base materials. Trucks shall be loaded as follows: 27,000 lbs. on two axles and 45,000 lbs. on three axles with the tolerance not to exceed 10%. A loaded truck shall make a single pass along each lane of street or parking subgrade at distances as directed by the City Engineer and not to exceed 10 ft. apart. Any areas of the prepared and compacted subgrade which show rutting, cracking, or rolling upon test rolling will be marked as unsuitable and will not be accepted. The unsuitable areas shall be removed and reconstructed as directed in this Chapter. Additional DCP's may be required to better define the area of deficiency.
3. **Remediation:** If subgrade compaction and stability requirements cannot be met, then, with the approval of the City Engineer, the following remediation methods shall be executed.
- a. **Unsuitable Material:** Unsuitable material in **untreated or unstabilized** subgrade shall be removed to a minimum depth of 12 in., with additional material removal as required by the City Engineer. The resultant void shall be backfilled with embankment material and compacted. The use of

additional stability methods, such as coarse aggregate and geofabrics, may be required by the City Engineer.

Unsuitable materials in **treated or stabilized** subgrades shall be removed and replaced with coarse aggregate. After the subgrade has been treated or stabilized, the Engineer will use a DCP to test the compacted subgrade and will determine the locations of unsuitable material that will need to be removed. The contractor shall remove the unsuitable material to a minimum depth of 18 in. with additional material removal as required by the City Engineer. The removed material shall be disposed of in accordance with Article 202.03 of the Standard Specifications. The resultant void will be backfilled with a minimum of 12 in. of coarse aggregate with a gradation of CA-1 and capped off with a minimum of 6 in. of coarse aggregate with a gradation of CA-6. The CA-6 depth should always be placed at a depth of 6 in.; however, the CA-1 depth may increase depending on the depth of unsuitable material removal. The coarse aggregate shall meet the requirements of Section 1004 of the Standard Specifications. Compaction of the coarse aggregate shall be performed to the satisfaction of the Engineer.

The use of additional stability methods, such as geofabrics, may be required by the City Engineer. If fully saturated conditions exist, underdrains may be required to dewater the subgrade.

- b. Lime Stabilization: Lime stabilization is recommended for remediation by the City when the Soils Report indicates that existing roadbed soils are lime reactive. The lime shall be mixed to a minimum depth of 12 in. and shall follow IDOT's Standard Specification for Lime Stabilized Soil Mixture. Laboratory evaluation and design procedures for lime reactive soils shall follow all procedures and guidelines outlined in the latest edition of the IDOT Geotechnical Manual. Specifically, evaluation and design procedures should follow Attachment II-B, Method A of the Geotechnical Manual. The design lime content is the amount used for construction and shall be 1% above the minimum lime content. The minimum lime content is the value which provides a compressive strength gain of 50 psi over that of the untreated soil, and provides a minimum average compressive strength of 100 psi for the treated soil. Soils that do not meet these minimum requirements will not be considered for lime stabilization.
4. Trucks or heavy equipment shall not travel on any pavement subgrade after final testing prior to pavement construction with the exception of proof roll testing.
5. Pavement subgrade material shall not be removed, placed or disturbed after pavement subgrade compaction and stability testing has been completed prior to pavement construction. Additional testing is required if the pavement subgrade is disturbed and/or material is removed from or placed on the pavement subgrade after approved compaction and stability testing.

**C. Pavements (see code/subdivision manual)**

1. *Residential Street Thickness Standard:*

| <b>Street Type</b> | <b>Full-Depth Asphalt<br/>Minimum Thickness</b> | <b>PCC<br/>Minimum Thickness</b> |
|--------------------|---|----------------------------------|
| Local              | 9 in.   | 7 in.                            |
| Collector          | 9 in.   | 7 in.                            |
| Arterial           | *   | *                                |

\* Refer to Section 2., "Arterial Class and Industrial / Commercial Streets", below.

*Note: As per Standard Attachment 25.01, four legged intersections shall be thickened by 1 in.*

2. *Arterial Class and Industrial / Commercial Streets:* These pavements shall be design pavements. Structural design for new pavements shall be in accordance with the IDOT's Bureau of Design and Environment Manual (BDE), Chapter 54, "Pavement Design." All pavement design calculations shall be submitted to the City Engineer for review and approval.
  - a. *Rigid Pavements:* Structural design of rigid pavements, including joints and joint placement, shall be in accordance with Section 54-4.01, "Mechanistic," of the BDE Manual except modified as follows:
    - i. Use subgrade support rating of "poor".
    - ii. Minimum design period is 30 years.
  - b. *Flexible Pavements:* Structural design of flexible pavements shall be in accordance with Section 54-5.01, "Mechanistic," of the IDOT BDE Manual except modified as follows:
    - i. Use subgrade support rating of "poor".
    - ii. Full-depth asphalt pavements shall be used exclusively.
    - iii. Minimum design period is 30 years.
3. *Curb & Gutter:* Refer to Chapter 8, Table A. ? The standard curb and gutter for all new local and collector class street construction is the IDOT B6.18 curb and gutter, except for boulevard median curbs that shall be IDOT B6.12. Curb and gutter for arterial class streets shall be a design option specific to the needs of the project.
4. *Minimum Transverse Slope:* As per Chapter 8, the minimum transverse slope shall be 3/16 in. per ft. As per the IDOT Highway Standard Drawing 606001-01?, the minimum transverse cross slope on the pan of the gutter shall be 6% or 3/4 in. per ft. The minimum thickness of the curb shall be the same as the minimum thickness for the pavement throughout the curb.

#### **D. Materials**

1. *Portland Cement Concrete (PCC) Pavement:* Materials for Portland cement concrete shall conform to the IDOT Standard Specifications, except as amended or expanded as follows:
  - a. The maximum slump of PCC shall be 4 in. The slump may exceed four inches with an approved concrete mix design and with prior approval from

the City Engineer. The maximum slump for slip forming methods shall not exceed 2 in.

- b. Portland cement concrete must be produced at an IDOT-approved plant using IDOT currently approved materials for the IDOT-approved mix design.
  - c. An IDOT approved mix design specification sheet must be provided to, or on file with and approved by the City Engineer prior to use of the PCC mixture for pavement construction.
2. *Full-Depth Bituminous Concrete Pavement:* Materials for full-depth bituminous concrete pavement shall conform to the Standard Specifications for Bituminous Concrete Pavement (Full-Depth) except as amended or expanded as follows:
- a. All proposed bituminous binder and surface courses shall be designed in accordance with Superpave mix design procedures and be approved by IDOT. Evidence of IDOT approval must be submitted to the City Engineer.
  - b. The bituminous surface course shall be modified with polymers unless directed otherwise by the City Engineer.
  - c. An IDOT approved Quality Control / Quality Assurance (QC / QA) Plan must be submitted to the City Engineer prior to the use of a Superpave mix for pavement construction.
  - d. QC / QA testing is required for all bituminous mixes on arterial class streets.
  - e. Bituminous materials must be produced at an IDOT approved plant using IDOT approved materials for the IDOT approved mix design.

**E. Construction**

1. *Portland Cement Concrete (PCC) Pavement:* Construction of PCC pavement shall conform to the Standard Specifications, except as amended or expanded as follows:
- a. The contractor shall protect the pavement against all traffic, including that of their own employees or other workers on the site, until test specimens have attained the flexural or compressive strength as specified.
  - b. The contractor is responsible to guard fresh concrete until it sets and hardens sufficiently to prevent people from writing, walking, riding bicycles or otherwise marking, defacing, or causing depressions of any type in the concrete in a permanent fashion. Any concrete so marked will be removed and replaced by the contractor at the contractor's expense.
  - c. Joints in all residential local and collector streets shall be constructed in accordance with the PCC Pavement Details and Joint Layout Details of this Chapter (See Standard Attachment 10.01), together with the following requirements:
    - i. Joint inserts or dummy joints are expressly prohibited.
    - ii. Sawing of joints shall commence as soon as the concrete has cured and hardened sufficiently to permit sawing without excessive raveling,

but no later than eight hours after the concrete has been placed. All joints shall be sawed to the full depth as shown in the standard details at the end of this chapter, and before uncontrolled shrinkage cracking takes place. If necessary, the sawing operations shall occur during the day or at night, regardless of weekends, holidays, or weather conditions. Contractors should make themselves aware of City noise ordinances and holiday restrictions.

- iii. Joints in all arterials shall be filled with approved Joint Sealer, approved Preformed Joint Filler, or approved 5 cell Preformed Elastomeric Compression Seals, depending on the type of joint.
  - iv. Portland cement concrete curb and gutter shall be constructed in accordance with IDOT Standard Specifications.
  - v. Tie bars may be omitted along longitudinal joints on local streets ( $\leq 28$  ft. wide) except that bars must be used on all "stand alone" tied curb and along all longitudinal "cold" construction joints.
  - vi. Jointing adjacent to manhole casting lid assemblies and curb frame and grate assemblies shall follow Standard Attachment 25.01.
  - vii. Tie Bars: Epoxy-coated tie bars shall be installed in drilled holes along the vertical edge of the first lane placed as specified on the plans.
- d. When street pavement is constructed by full width or half width slip form paving methods, the contractor shall "box out" around proposed storm inlets that lie within the combination curb and gutter section with concrete forms.
2. *Full-Depth Bituminous Concrete Pavement:* Construction of full-depth bituminous concrete pavement shall conform to the Standard Specifications, except as amended or expanded as follows:
- a. Portland cement concrete curb and gutter shall be constructed in accordance with IDOT Standard Specifications.
  - b. The bituminous concrete surface course shall have a minimum thickness of 1-1/2 in.
  - c. Refer to Standard Attachment 10.03 for termination detail for bituminous concrete pavement.

#### **F. Testing**

1. *Portland Cement Concrete (PCC) Pavement:* Testing of PCC pavement shall conform to the Standard Specifications, except as amended or expanded as follows:
- a. Compression tests of the concrete are required as described in the IDOT Construction Manual and as specified as follows:
    - i. The testing method shall be AASHTO T23 and AASHTO T22, except that 6 in. by 12 in. cylindrical specimens may be used. Note: 2 cylinders are required for an approval test.
    - ii. The testing frequency is two tests with two cylinders per 250 ft. per lane, or four cylinders per day, whichever is greater.

- iii. Test specimens shall attain a minimum compressive strength of 3,500 lbs. per square inch (psi) in 14 days or sooner.
- iv. When evaluating deficient concrete strength, the current ACI Building Code Requirements for Structural Concrete (see Evaluation and Acceptance of Concrete—Laboratory-Cured Specimens) shall be followed.
- b. Flexural strength tests of the concrete shall comply with IDOT, “Manual of Instructions for Concrete Proportioning and Testing”, three point testing method and as follows:
  - i. The testing frequency shall be 2 tests with 2 beams per 250 ft. per lane, or 4 beams per day, whichever is greater.
  - ii. Test specimens shall attain a minimum flexural strength of 650 lbs. per square inch in 14 days or sooner.
- . Test specimens must be clearly marked to indicate the following:  
Name of the Subdivision (if applicable), Engineer, Street Name, Pavement Location, Date and Time, Material Supplier, Air Content, Slump, Air Temperature, Concrete Temperature, Mix Design Number.
- d. Upon request of the City Engineer, surface smoothness tests may be required. Tests shall be conducted per the most recent IDOT standard spec that includes straight edge (surface smoothness) test procedures.
- 2. *Full-Depth Asphalt Concrete*: The following tests shall be made when constructing full-depth asphalt concrete pavement:
  - a. Density: Compaction tests must be made in accordance with Section 406.16 of the Standard Specifications. If the in-place lift density is found to be deficient, subject to the approval of the City Engineer, the owner shall either:
    - i. Remove and replace the deficient sections to the required pavement strength; or,
    - ii. Post a three year cash bond in the amount of 100% of the estimated cost to remove and replace the deficient pavement. The cost shall be estimated for the end of the review period, i.e. inflate the cost. The bond form shall be approved by the City Attorney.
    - iii. Refer to Section G below for pavements constructed out of specification.
  - b. Thickness: Pavement cores for verification of pavement thickness shall be taken at the rate of 1 per 250 ft. per lane at locations designated by the City Engineer. If pavement thickness is deficient, subject to approval of the City Engineer, the subdivider shall either:
    - i. Remove and replace the deficient pavement section(s) to the planned thickness; or,
    - ii. Pay to the City an amount based upon the amount which would have been deducted from a contractor's payment for the work, pursuant to



Section 407.10 of the Standard Specifications as now or hereafter amended.

- iii. Refer to Section G below for pavements constructed out of specification.
- iv. Pavement deficiencies of thickness in excess of 10% shall be removed and replaced to plan thickness.
- c. Upon request of the City Engineer, surface smoothness tests may be required. Tests shall be conducted per the most recent IDOT standard spec that includes straight edge (surface smoothness) test procedures.

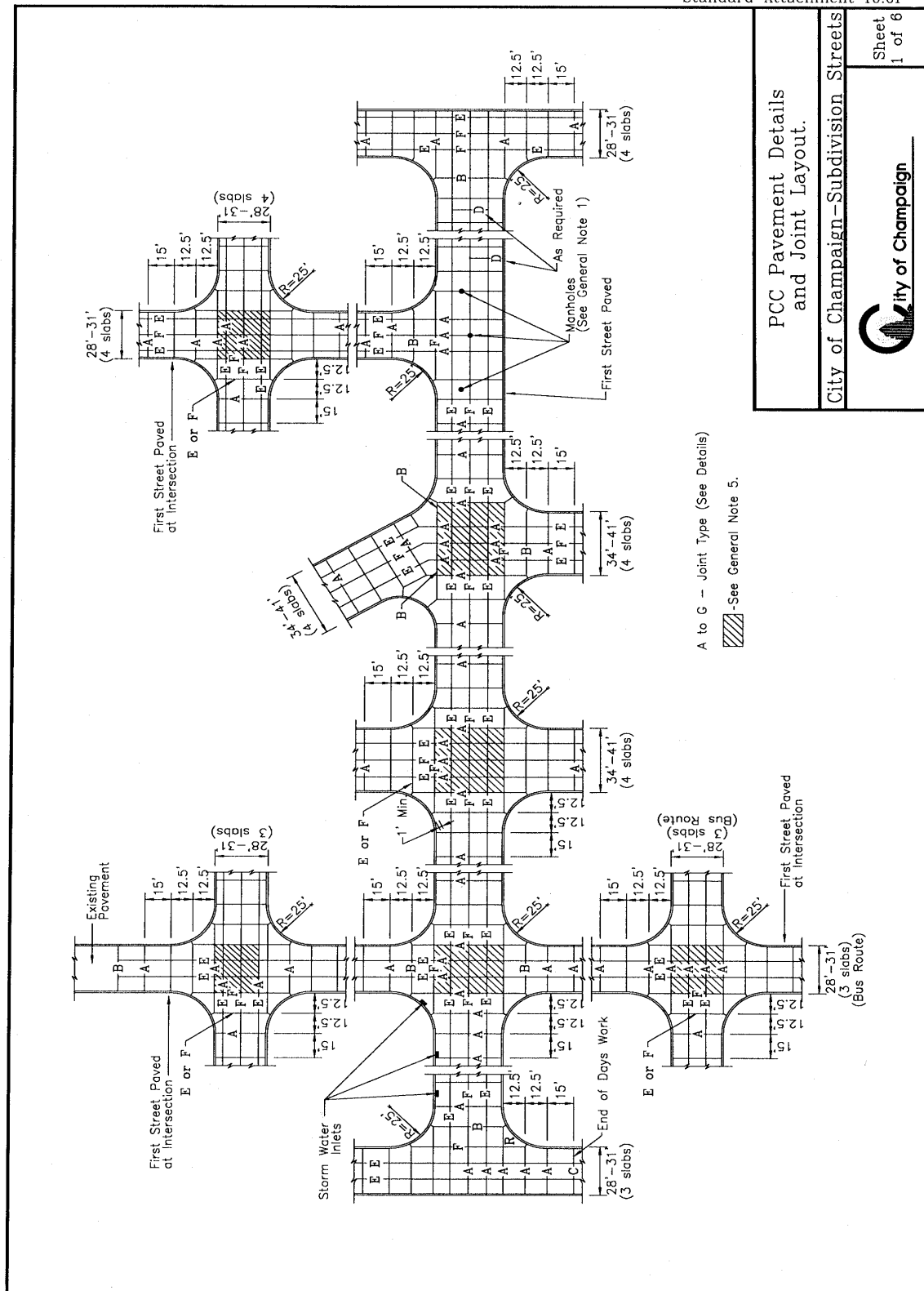
**G. Pavement Constructed Out of Specification**

- 1. The City Engineer shall determine if pavement is out of specification by reviewing the materials, testing, strength, appearance, etc. While it is understood that random cracks may appear in concrete pavement, this should be a rare occurrence. Cases of numerous cracks, shrinkage or otherwise, shall be subject to removal and replacement per the direction of the City Engineer. At the discretion of the City Engineer, pavements with moderate defects may be secured by a long-term bond in lieu of removal.
- 2. Bonds for securing repair and replacement of pavement initially failing to meet standards shall meet the following criteria:
  - a. If the subdivider is allowed to post a bond in lieu of repair and replacement of pavement which does not meet the design and testing criteria set forth in these regulations, the bond shall secure the removal and replacement of the deficient pavement within 60 calendar days of the City's demand to replace the same within a period of three years.
  - b. If at any time within the three year bond period, two or more random cracks, shrinkage cracking, spalling, or durability cracking appear within a panel of Portland cement concrete pavement, that panel shall be removed and replaced.
  - c. If at any time within the three year bond period, two or more cracks, raveling, or stripping appear within a section of full-depth asphalt concrete pavement that entire section shall be removed and replaced to the full thickness of pavement.
- 3. The bond shall be secured by cash in an amount equal to 100% of the City Engineer's estimate of removal and replacement costs. The bond and security shall be in a form approved by the City Attorney.
- 4. The bond shall be executed by the subdivider or the subdivider's contractor.

**10.03 STANDARD ATTACHMENTS**

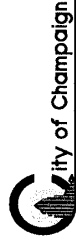
Standard Attachment 10.01 – PCC Pavement Details and Joint Layout (6 pp.)  
Standard Attachment 10.02 – CBR & Dynamic Cone Penetrometer Relationship  
Standard Attachment 10.03 – Asphalt Pavement Termination Detail

## Standard Attachment 10.01

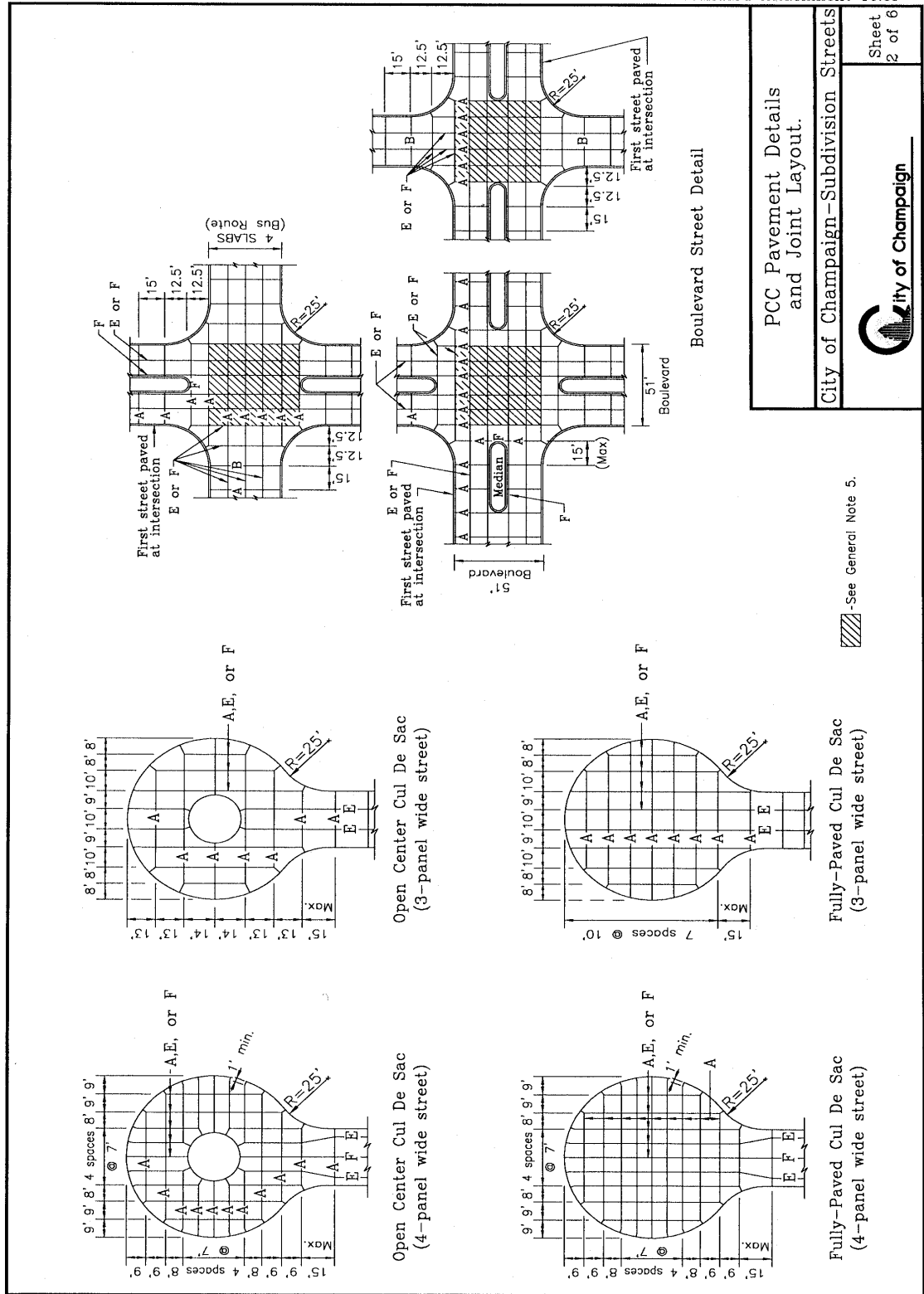


### PCC Pavement Details and Joint Layout.

City of Champaign-Subdivision Streets

Sh  
10

Standard Attachment 10.01a



PCC Pavement Details  
and Joint Layout.

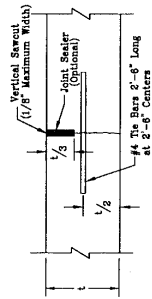
City of Champaign-Subdivision Streets

City of Champaign

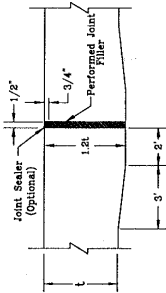
Sheet  
2 of 6

## General Notes

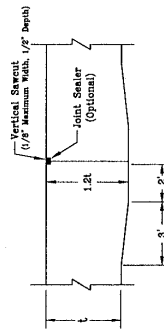
1. Pavement slabs with manhole castings within the pavement limits shall be jointed as shown in the details.
2. All transverse joints must be continuous across the pavement and extend through curbs, except tied transverse construction joints.
3. Transverse joint spacing shall not exceed 15 feet.
4. Sawed joints may be sealed with joint sealer meeting the requirements of Section 750 of the Illinois Department of Transportation "Standard Specifications" for Road and Bridge Construction.
5. The pavement thickness at the intersection of four-legged intersections shall be increased by 1 inch over that of the thickest adjacent pavement structure.
6. Tie bars for type "E" & "F" longitudinal joints may be omitted on local streets  $\leq 28'$  wide, except that tie bars must be used for all stand alone (tied curb) and all longitudinal construction "cold" joints.



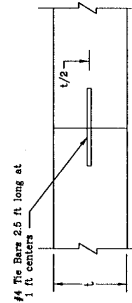
Type A  
Sawed Transverse Joint



Type B  
Thickened-Edge Transverse Isolation Joint



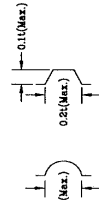
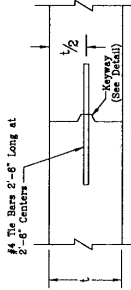
Type C  
Thickened-Edge Transverse Construction Joint  
(At Planned Joint Location)



Type D  
Transverse Construction Joint  
(At Other Than Planned Joint Location)

Type E  
Sawed Longitudinal Joint

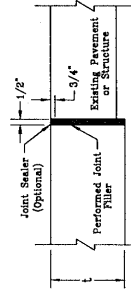
(The bars must be used for stand alone curb & gutter-tyed curb but may be omitted on monolithic curb on local streets  $\leq 28'$  wide)



Keyway Detail

Type F  
Longitudinal Construction Joint

(The bars may be omitted for local streets  $\leq 28'$  wide that are paved full width)

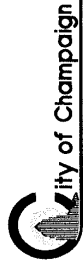


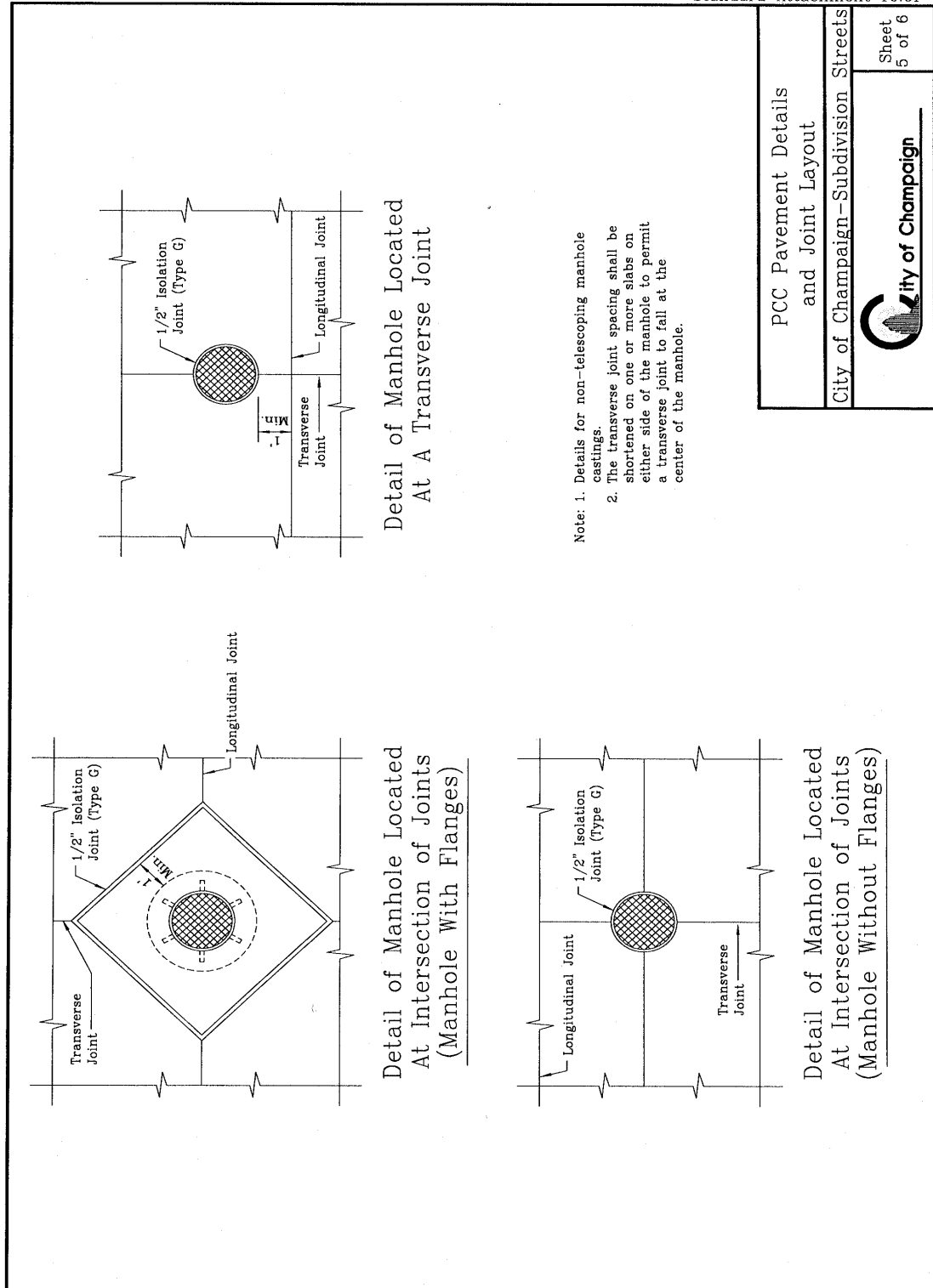
Type G  
Isolation Joint

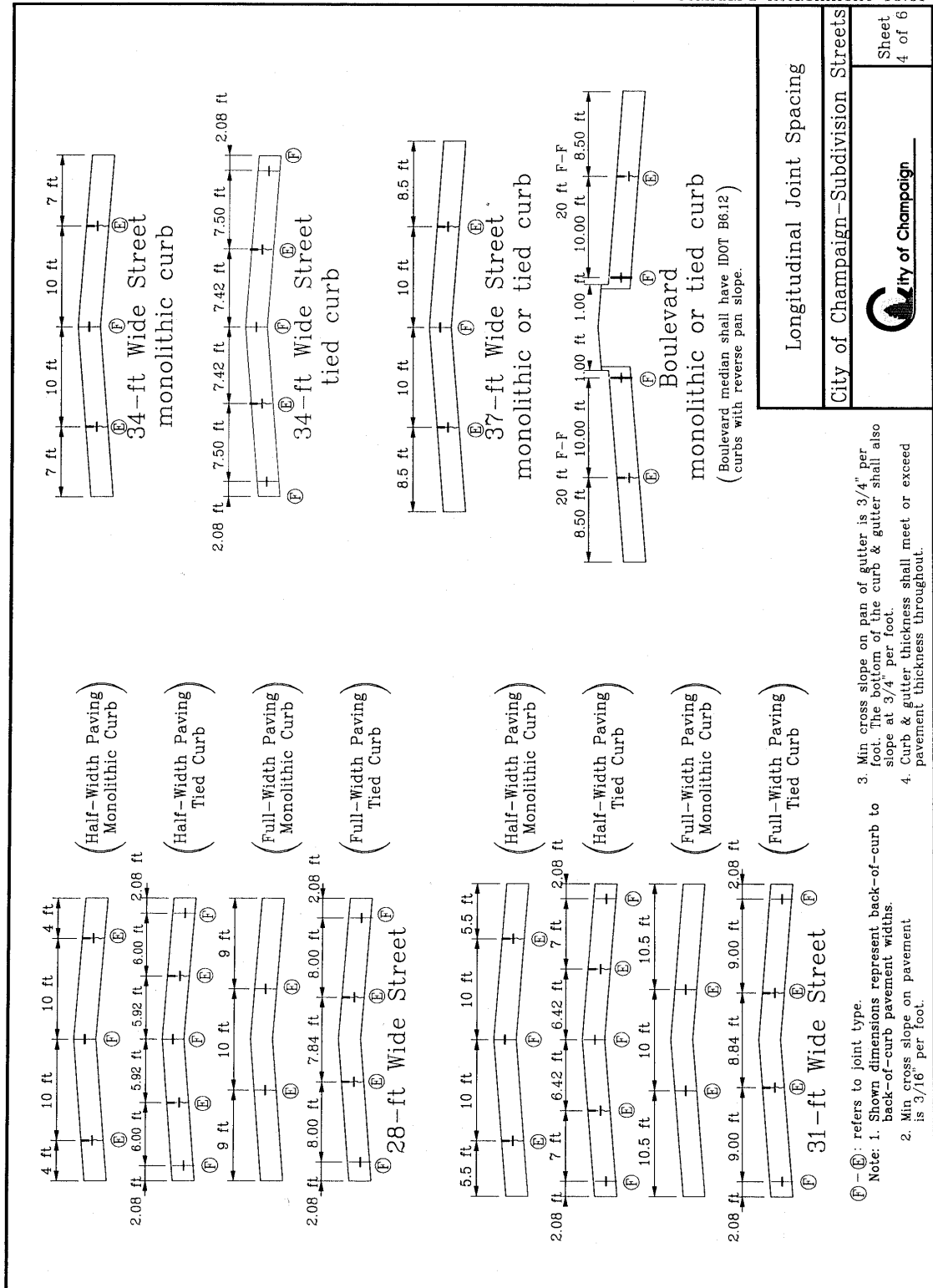
PCC Pavement Details  
and Joint Layout.

City of Champaign-Subdivision Streets

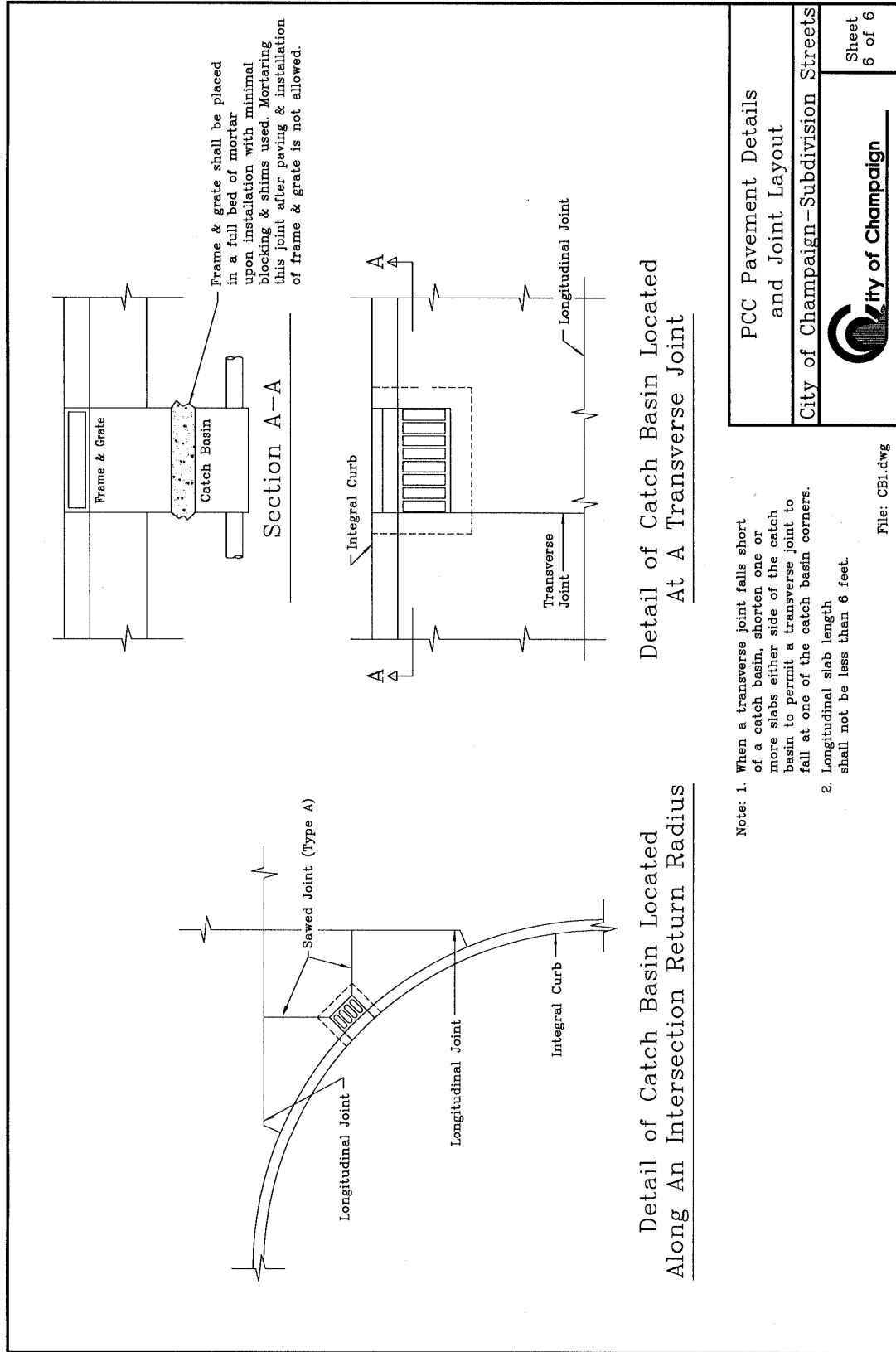
Sheet  
3 of 6







③ - ④: refers to joint type.  
 Note: 1. Shown dimensions represent back-of-curb to back-of-curb pavement widths.  
 2. Min cross slope on pavement is 3/16" per foot.  
 3. Min cross slope on pan of gutter is 3/4" per foot. The bottom of the curb & gutter shall also slope at 3/4" per foot.  
 4. Curb & gutter thickness shall meet or exceed pavement thickness throughout.



PCC Pavement Details  
and Joint Layout

City of Champaign—Subdivision Streets

Sheet  
6 of 6

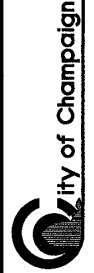
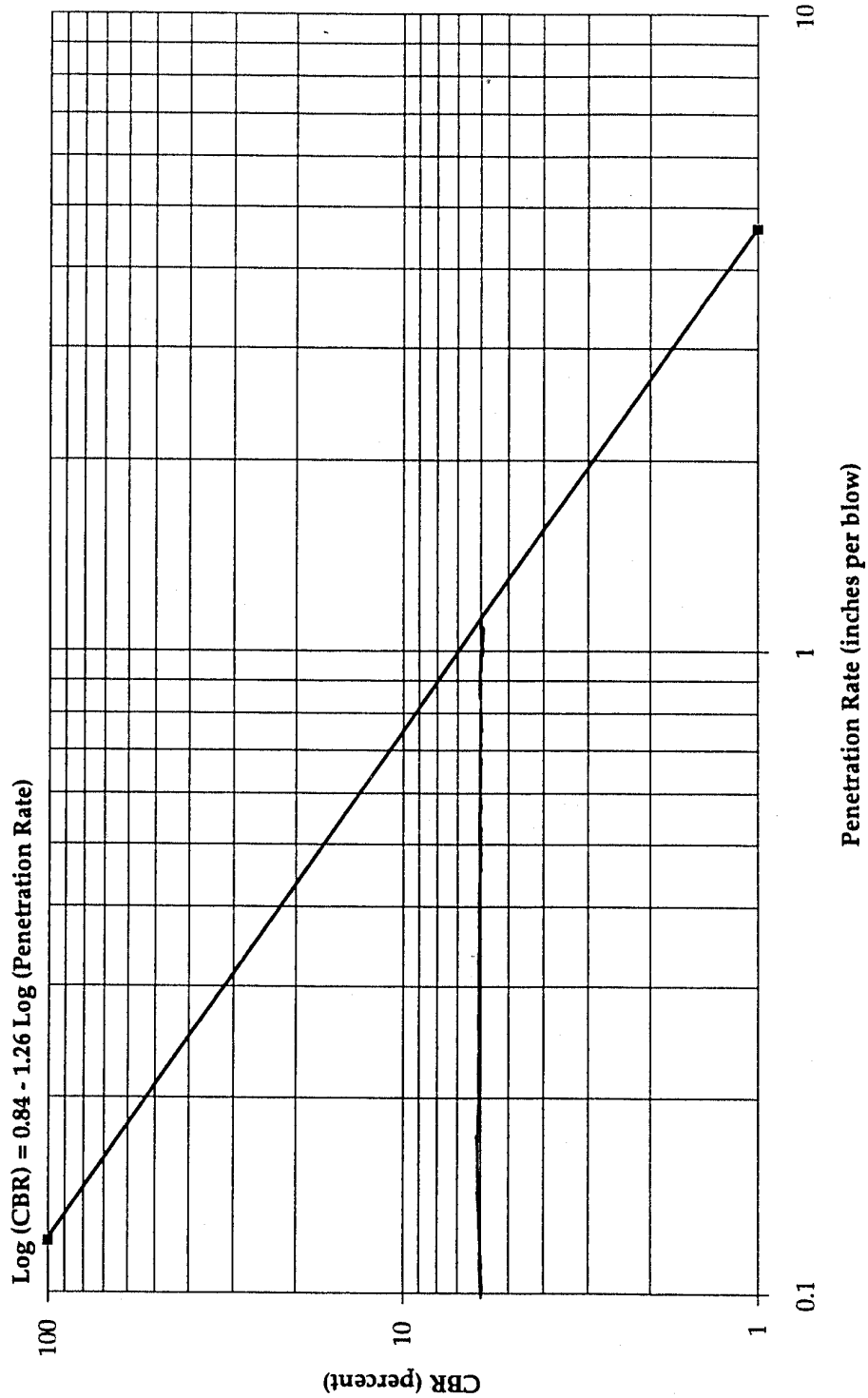


Figure 3.4. CBR - Dynamic Cone Penetrometer Relationship.

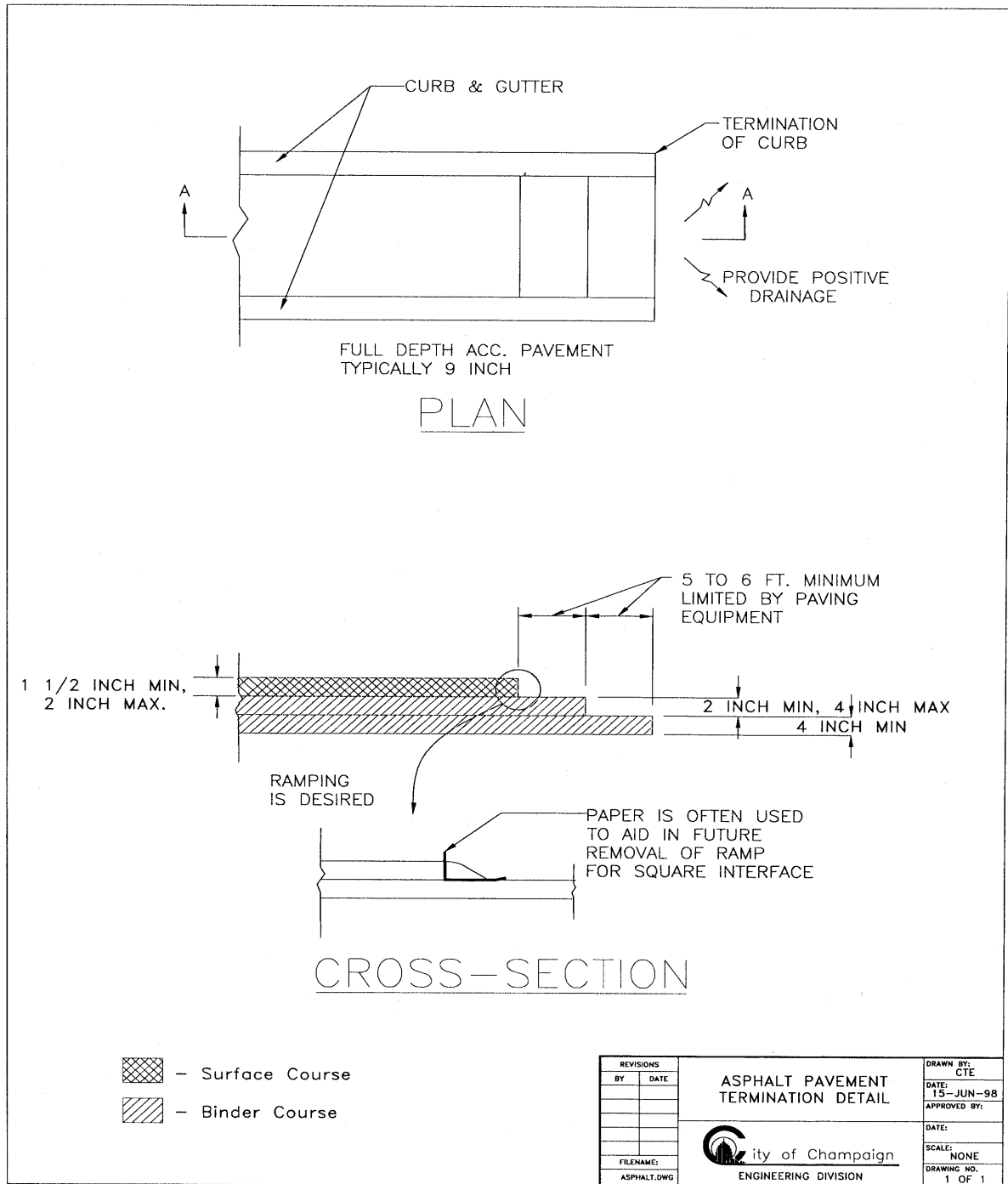


$$\begin{aligned} \text{Log}(6) &= 0.84 - 1.26 \text{ Log}(P_n) \\ .077815 &= 0.84 - 1.26 P_n \\ \text{Log } P_n &= 0.04909 \\ P_n &= 10^{0.04909} = 1.12 \text{ in. per blow} = 0.893 \text{ blow per in.} = 10.72 \text{ blow per ft.} \end{aligned}$$



## CHAPTER 10: PAVEMENT STANDARDS

Standard Attachment 10.03



Standard Attachment 10.03

## **CHAPTER 11: SIDEWALK**

### **11.00 Introduction and Goals**

### **11.01 Administration**

### **11.02 Standards**

### **11.03 Standard Attachments**

## 11.00 INTRODUCTION AND GOALS

It is the goal of this chapter to provide safe and convenient pedestrian access ways to all residential, commercial, office, and industrial developments. Sidewalks shall be installed in all subdivisions unless a waiver has been granted by the City of Peoria. Sidewalk shall be installed, repaired or upgraded as needed on any individual site development / redevelopment as determined by the Right-Of-Way (ROW) Inspector.

## 11.01 ADMINISTRATION

**A. Repair or reconstruction of existing sidewalks:** Per the direction of the City ROW Inspector, any sidewalk work shall be done per and standards outlined in the sidewalk section of Chapter 25? of this Manual and the following criteria of this chapter:

1. *Traffic Control* shall be provided for all sidewalk construction including the necessary means of keeping both contractor and pedestrian safe during construction of sidewalks. This may include the use of construction signs, barricades, lighting, and / or directing traffic (with traffic control flaggers if necessary.)
2. *ROW Permits:* The necessary ROW permits shall be obtained from the ROW inspector as per Chapter 25? of this Manual.

**B. Construction of sidewalks in new subdivisions:** Construction of sidewalks in new subdivisions shall be per the IDOT Standard Specifications and the requirements of this Manual.

**C. Referenced Standards:**

1. The City of Peoria Municipal Code
2. IDOT, Standard Specifications for Road and Bridge Construction
3. IDOT Highway Standards
4. IDOT Construction Manual
5. AASHTO Standards
6. ADA / ADAG requirements

## 11.02 STANDARDS

**A. Thickness:** All sidewalks shall be a minimum of 4 in. thick. Sidewalks at driveway locations shall be thickened to match the thickness of the driveway pavement.

**B. Width:** Sidewalks shall not be less than 5 ft. in width; sidewalks in high traffic areas, including the commercial, downtown and campus districts, may require a 6 ft. width or greater, as determined by the City ROW Inspector.

**C. Subgrade:** Sidewalk subgrade material shall be free of debris, organic material, plastic clays, and other material prone to freeze-thaw damage. Subgrade material shall be

compacted per IDOT standards to prevent settling under the traffic of building materials delivery vehicles.

- D. Location:** Sidewalks shall be located on both sides of the street within the public right-of-way. There is to be a minimum one foot space between the outside edge of the sidewalk and the right-of-way / property line. If excessive distance is between street crossings, mid-block sidewalks shall be located as per of this Manual. (Appendix A Subdivision, Article V Design Standards

**5-202.Blocks.**

Sizes of blocks shall be not less than 250 feet nor more than 1,000 feet in length measured along the greatest dimension of the enclosed block area. Any block over 700 feet must provide for an improved pedestrian through-walkway (five-foot sidewalk) as close to the center of the block as possible. This walkway must be dedicated to the public use.

- E. Access:** For developments, where normal street configuration does not provide adequate pedestrian access to schools, parks, commercial centers, or other pedestrian traffic generators, alternate pedestrian access ways shall be provided within a dedicated public right-of-way.

- F. ADA:** All sidewalks shall conform to all current Americans With Disabilities Act (ADA) standards.

- G. Minimum Geometry Requirements:** Sidewalk geometry shall comply with this manual, State of Illinois requirements, and ADA requirements. Minimum geometry requirements shall include but not be limited to the following:

1. *Grade* (longitudinal slope) shall not exceed 8% (1 in. per 1 ft.). Landings shall be provided at regular intervals as per the current ADA guidelines (see Standard Attachment 11.03).
2. *Cross Slope* (transverse slope) standard shall be 2% (1/4 in. per ft.) downward in the direction of the back of curb.
3. *Ramps:* ADA ramps shall be provide at all necessary locations per IDOT and ADA requirements. Minimum face to face of curb width on sidewalk ramps shall be 3 ft.

- G. Material Requirements:** Sidewalks shall be constructed of Portland Cement Concrete (PCC) from an IDOT approved plant using IDOT approved mix design and material.

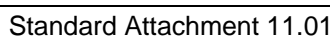
- H. Construction Requirements:** Sidewalks shall be constructed per these standards and the requirements of Chapter 25?—Right-of-Way Construction Requirements.

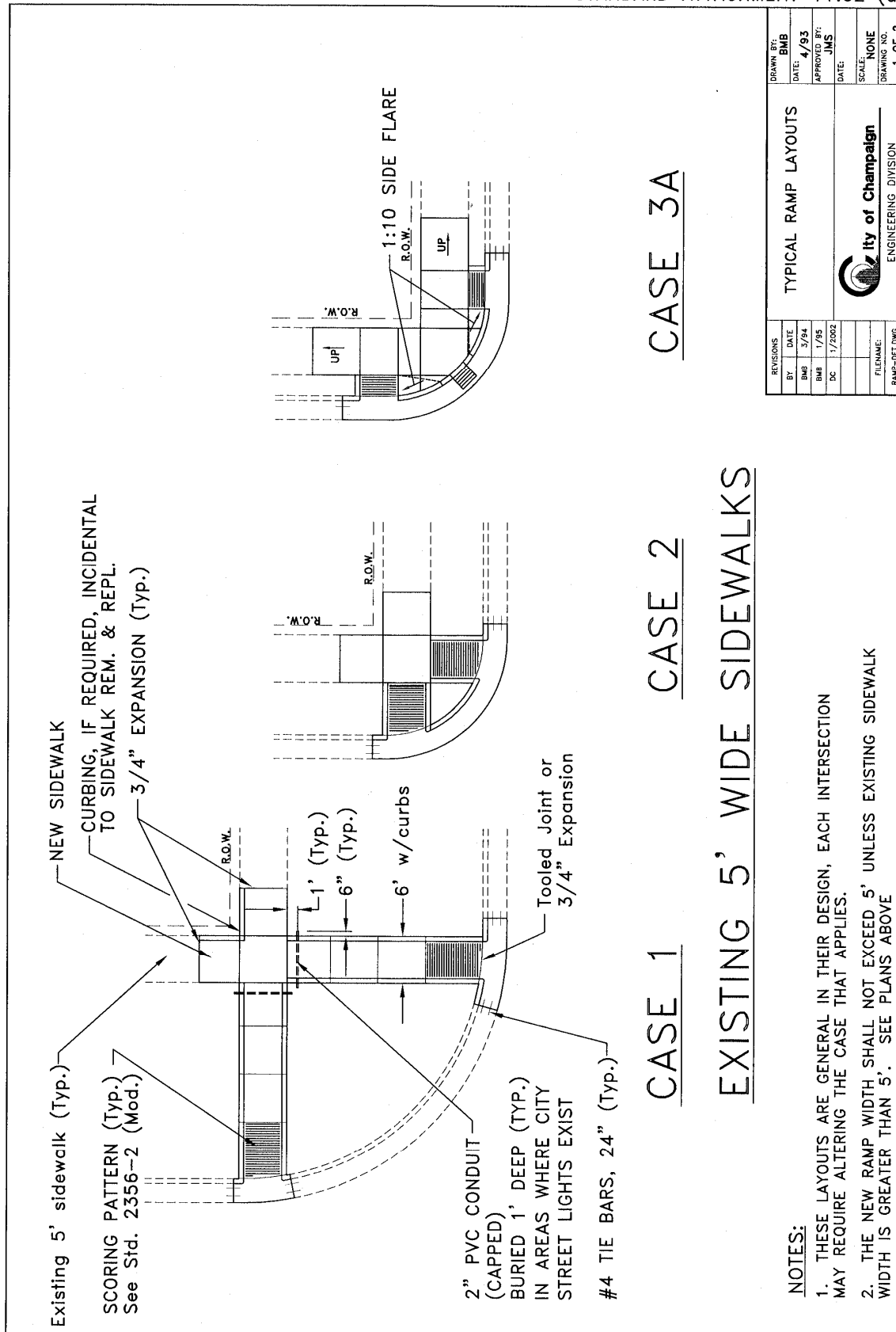
1. *Forms:* Steel forms shall be used. Lumber forms may be used when constructing sidewalk ramps, curved pavement, or small projects. However, in no case shall sidewalk be less than 4 in. thick.
2. *Expansion Joints:* Expansion joints, 3/4 in. thickness, should be placed only at junctions of pavement and sidewalk, and at the intersection of sidewalks.

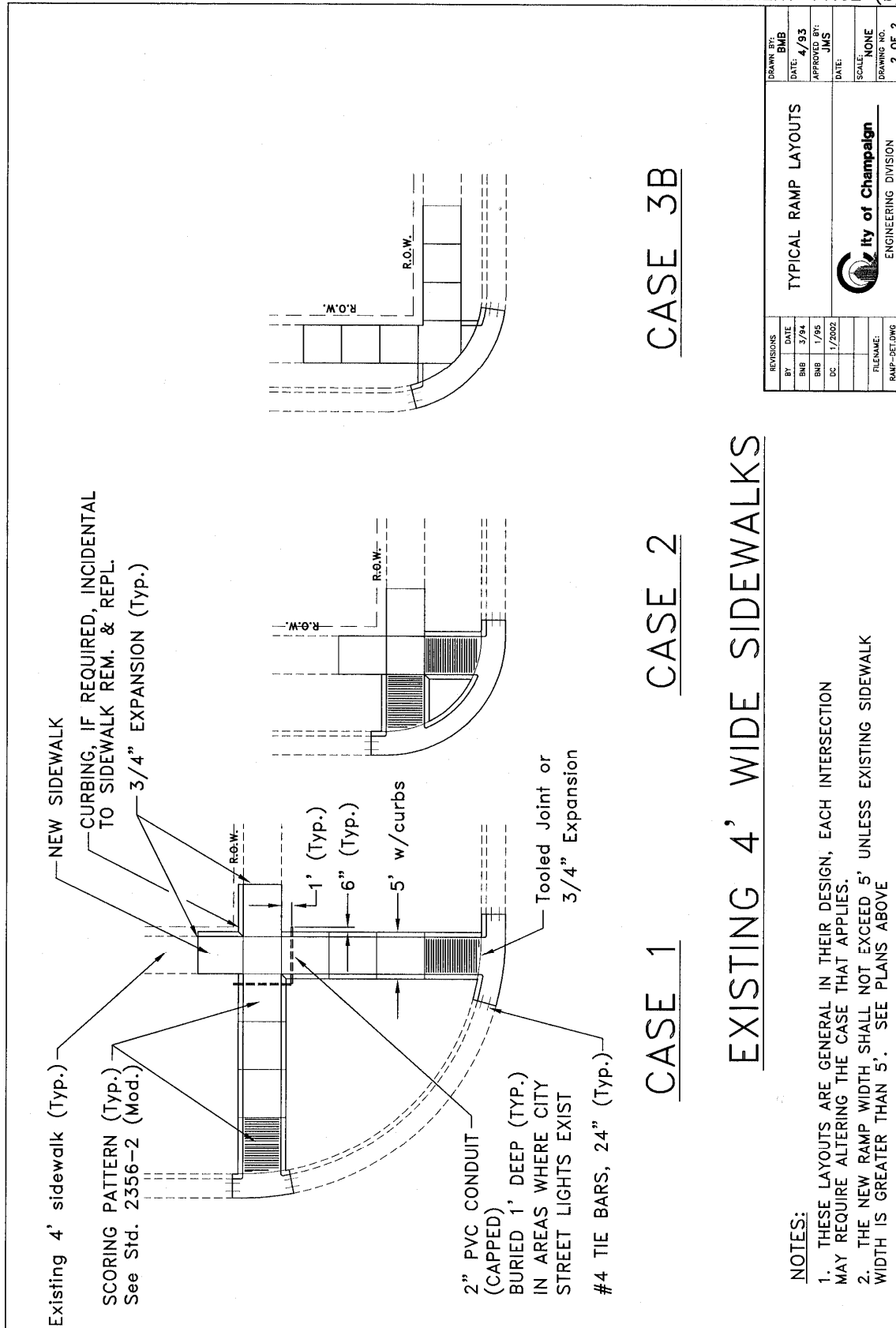
3. *Ramp Impressions:* Only transverse grooving is allowed on sidewalk ramps. Diamond impressions and other designs are not allowed (see Standard Attachment 11.01).
4. *Constructed Width:* The minimum sidewalk is 5 ft.
5. *Timing:* Sidewalks should be constructed prior to occupancy of buildings / subdivision. Forms shall be stripped in accordance with the IDOT standard specification and the sidewalk shall be backfilled immediately after the forms are stripped.
6. *Inspection and Testing:* All inspecting and testing procedures shall be followed as stated in the Illinois Department of Transportation Construction Manual.

### **11.03 STANDARD ATTACHMENTS**

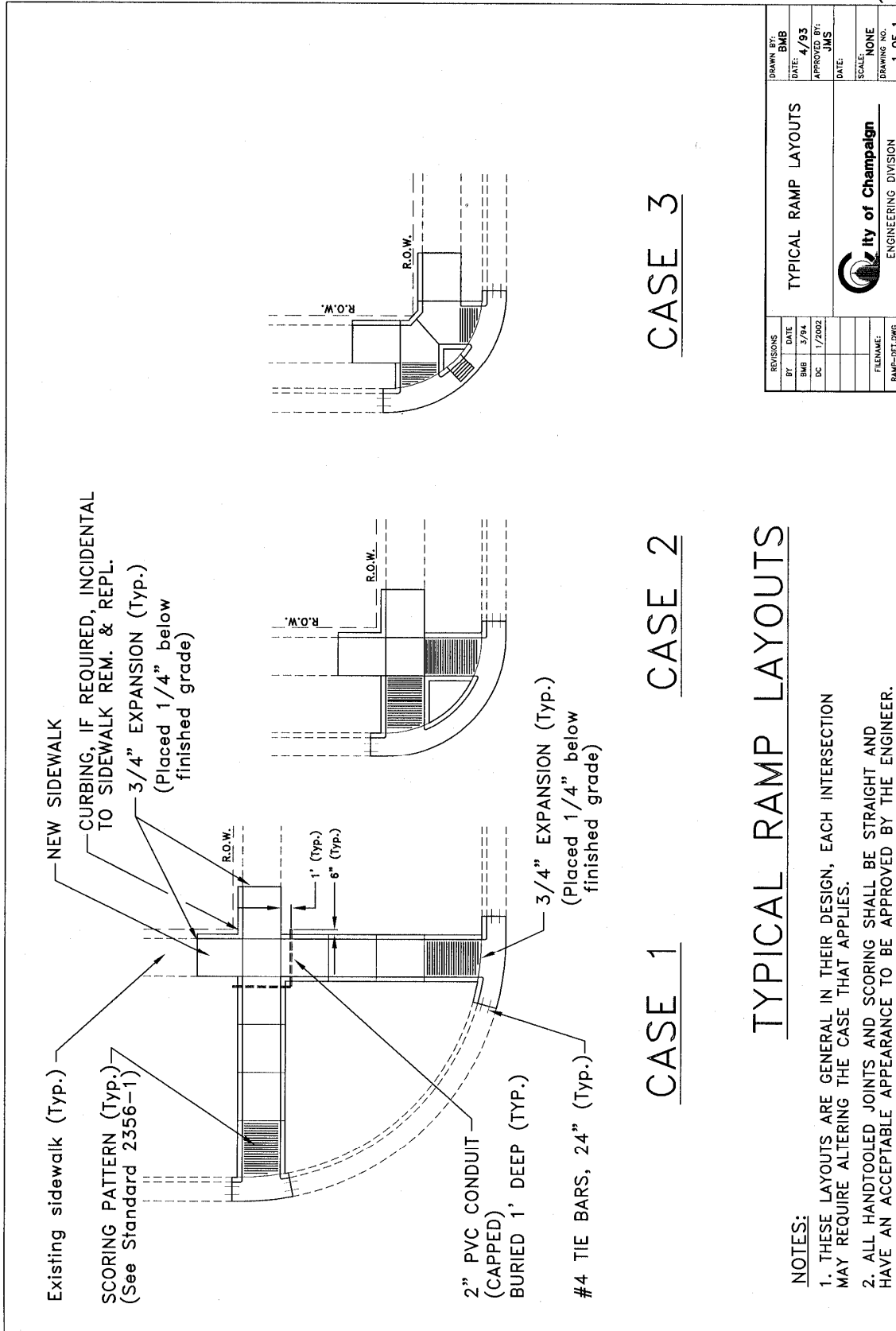
Standard Attachment 11.01—Sidewalk Ramps Accessible to the Disabled  
Standard Attachment 11.02—Annual Accessibility Program Typical Ramp Details  
Standard Attachment 11.03—Landing Requirements



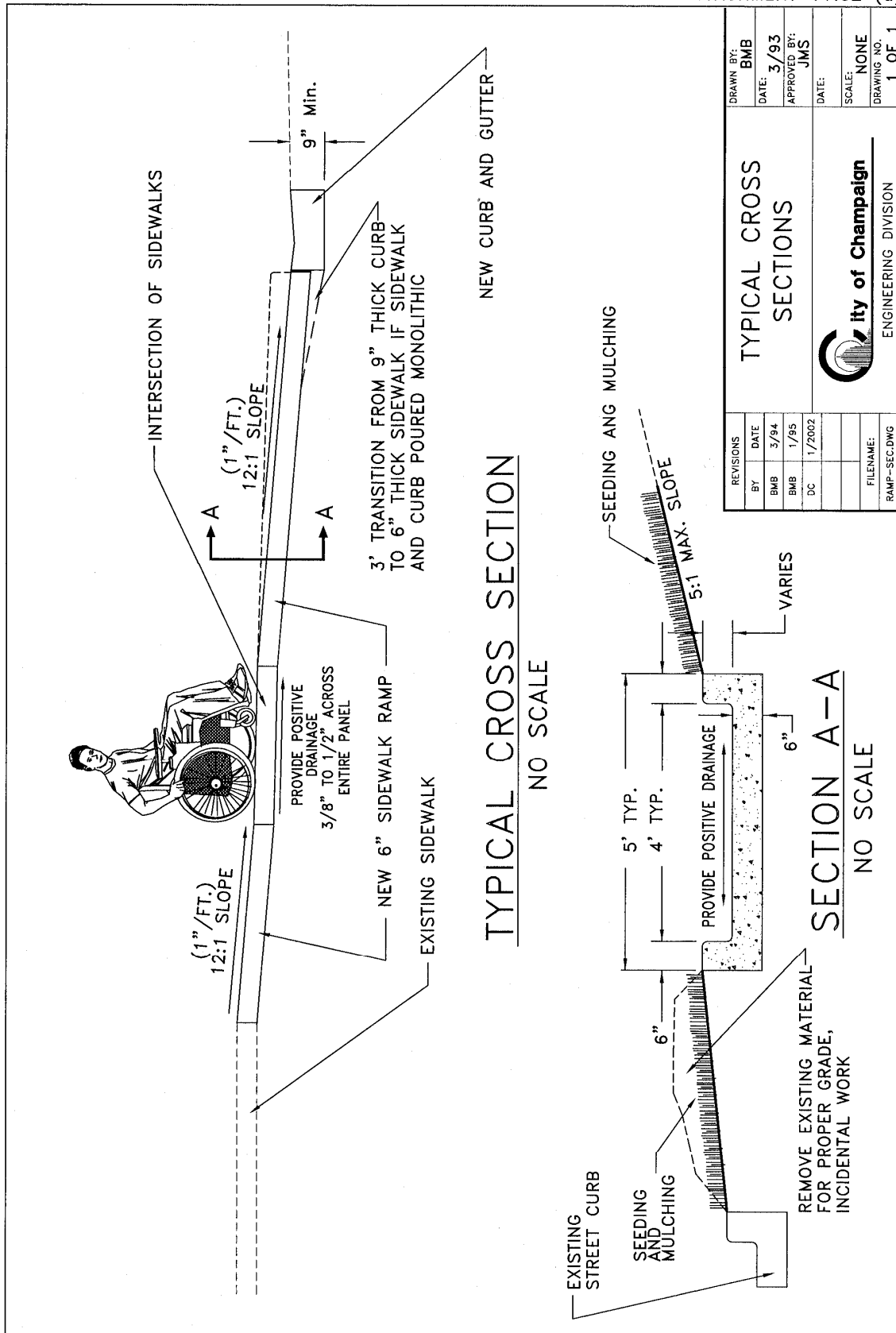




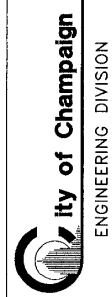




STANDARD ATTACHMENT 11.02 (d)



| REVISIONS    |        | TYPICAL CROSS SECTIONS |        |
|--------------|--------|------------------------|--------|
| BY           | DATE   | DRAWN BY:              | BMB    |
| BMB          | 3/94   | DATE:                  | 3/93   |
| BMB          | 1/95   | APPROVED BY:           | JMS    |
| DC           | 1/2002 | DATE:                  |        |
| FILENAME:    |        | SCALE:                 | NONE   |
| RAMP-SEC.DWG |        | DRAWING NO.            | 1 OF 1 |



Standard Attachment 11.02d

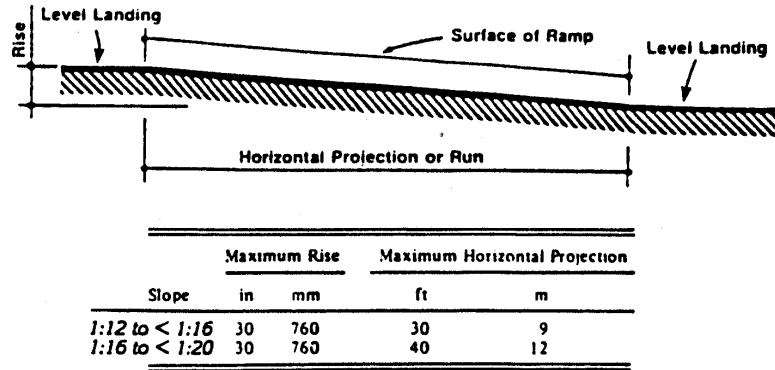


Fig. 16  
Components of a Single Ramp Run and Sample Ramp Dimensions

**4.8.3 Clear Width.** The minimum clear width of a ramp shall be 36 in (915 mm).

**4.8.4\* Landings.** Ramps shall have level landings at bottom and top of *each ramp and each ramp run*. Landings shall have the following features:

- (1) The landing shall be at least as wide as the ramp run leading to it.
- (2) The landing length shall be a minimum of 60 in (1525 mm) clear.
- (3) If ramps change direction at landings, the minimum landing size shall be 60 in by 60 in (1525 mm by 1525 mm).
- (4) If a doorway is located at a landing, then the area in front of the doorway shall comply with 4.13.6.

**4.8.5\* Handrails.** If a ramp run has a rise greater than 6 in (150 mm) or a horizontal projection greater than 72 in (1830 mm), then it shall have handrails on both sides. Handrails are not required on curb ramps or *adjacent to seating in assembly areas*. Handrails shall comply with 4.26 and shall have the following features:

(1) Handrails shall be provided along both sides of ramp segments. The inside handrail on switchback or dogleg ramps shall always be continuous.

(2) If handrails are not continuous, they shall extend at least 12 in (305 mm) beyond the top and bottom of the ramp segment and shall be parallel with the floor or ground surface (see Fig. 17).

(3) The clear space between the handrail and the wall shall be 1 - 1/2 in (38 mm).

(4) Gripping surfaces shall be continuous.

(5) Top of handrail gripping surfaces shall be mounted between 34 in and 38 in (865 mm and 965 mm) above ramp surfaces.

(6) Ends of handrails shall be either rounded or returned smoothly to floor, wall, or post.

(7) Handrails shall not rotate within their fittings.

**4.8.6 Cross Slope and Surfaces.** The cross slope of ramp surfaces shall be no greater than 1:50. Ramp surfaces shall comply with 4.5.

