



Delano
ESTD MINNESOTA 1876
THE SPIRIT OF COMMUNITY

July 10, 2026

MBAU Administrator
Office of Municipal Boundary Adjustments
PO Box 64620
St. Paul, MN 55164-0620

RE: Franklin Township/Delano Orderly Annexation Agreement

Dear MBAU Administrator:

On behalf of the City of Delano and Franklin Township, it is my pleasure to provide the attached Joint Resolution for Orderly Annexation between the two jurisdictions.

The Resolution follows several years of discussion and public process to reach terms of agreement between the Township and the City. We look forward to review and approval by the State of Minnesota.

If there is more information needed or questions regarding the attached Joint Resolution, please feel free to contact me at pkern@delanomn.gov or 763-972-0565.

Sincerely,

Phil Kern
City Administrator
City of Delano

FRANKLIN TOWNSHIP RESOLUTION NO. 2026-01

CITY OF DELANO RESOLUTION NO. R-26-16

MUNICIPAL BOUNDARY ADJUSTMENTS DOCKET NO. _____

**JOINT RESOLUTION FOR ORDERLY ANNEXATION BETWEEN
THE TOWN OF FRANKLIN
AND THE CITY OF DELANO,
WRIGHT COUNTY, MINNESOTA**

WHEREAS, the City of Delano (hereinafter referred to as the “City”) and the Township of Franklin (hereinafter referred to as the “Town” or “Township”), both located entirely within Wright County, in the State of Minnesota, desire to accommodate growth in the most orderly fashion; and

WHEREAS, the Town Board and City Council have expressed their desire to allow future development of selected properties near the City so as to avail such development of municipal services as much as is practical; and

WHEREAS, a joint orderly annexation agreement between the parties hereto is beneficial to both parties from the standpoint of orderly planning and orderly transition of government within the area proposed to be annexed, and provides the framework under which such annexation shall take place.

NOW, THEREFORE, BE IT RESOLVED, in consideration of the mutual terms and conditions that follow, the City and Town enter into this Joint Resolution for Orderly Annexation (sometimes hereinafter referred to as the “Agreement”) and the property herein described is proposed to be potentially annexed by the City and shall be annexed subject to the following terms and conditions:

1. **Designation of Orderly Annexation Area.**

The Township and the City hereby designate the areas described on **Exhibit 1** attached hereto and incorporated herein by reference (hereinafter referred to as the “Orderly Annexation Area”) for orderly annexation pursuant to Minnesota Statutes Section 414.0325.

A boundary map showing the Orderly Annexation Area legally described on **Exhibit 1** is attached hereto as **Exhibit 2** and incorporated herein by reference.

The Township and City agree that the Orderly Annexation Area described on **Exhibit 1** and designated for orderly annexation pursuant to Minnesota Statutes Section 414.0325 is approximately 2,653 acres.

2. **Office of Administrative Hearings, Municipal Boundary Adjustments.**

Upon adoption by the Town Board and the City Council, this Agreement shall confer jurisdiction upon the State of Minnesota Office of Administrative Hearings, Municipal Boundary Adjustments (hereinafter referred to as the "MBA") or its successor pursuant to Minnesota Statutes.

3. **No Alterations of Boundaries.**

The Township and City mutually agree and state that the MBA may review and comment, but no alterations by the MBA of the stated boundaries of the area designated for orderly annexation is appropriate absent the MBA taking action following a petition for annexation and a hearing pursuant to Chapter 414.

4. **Review and Comment by Municipal Boundary Adjustments.**

The Township and City mutually agree and state that this Agreement sets forth all the conditions for annexation of the areas designated on **Exhibit 1** and that no consideration by the MBA is necessary. At such time as the conditions for annexation of the areas set forth on **Exhibit 1** or a portion thereof as described in this Agreement have been met, upon receipt of a Resolution for Annexation from the City of Delano, the Office of Administrative Hearings, Municipal Boundary Adjustments, may review and comment, but shall, within 30 days, order the annexation in accordance with the terms of the Resolution.

5. **Planning and Land Use Control Authority.**

- A. The Township and City mutually agree and state that all land use authority within the Orderly Annexation Area shall remain with Wright County and the Township (if the Township chooses to exercise planning, zoning and subdivision authority pursuant to Minnesota law) while such properties remain in the Township. The City shall have exclusive planning, zoning and subdivision authority over all properties annexed to the City under the authority of this Agreement.
- B. To the extent the Township adopts its own zoning ordinance under which it issues any conditional use permits, interim use permits or variances, or other zoning requests, the Township agrees to notify the City of any requests for conditional use permits, interim use permits, variances or rezoning

applications that it receives for properties within the Orderly Annexation Area and allow the City to review and comment on same provided the City's comments are transmitted to the Township in a manner that will not prejudice the Township pursuant to Minn. Stat. § 15.99.

- C. Any applications for rezoning or for subdivision of land that are located within the Orderly Annexation Area and which are forwarded from Wright County to the Township for a recommendation shall be forwarded to the City for review and comment. The City shall provide any comment to the Township no later than three business days before the Township Board considers such application recommendation. On all such applications, the Township shall reply to the County with both its recommendation and the comments forwarded to the Township by the City.
- D. For all lands annexed to the City under this Agreement, the City shall provide notice to the Township at least 30 days prior to the City's public hearing on a preliminary plat application, including all application materials for preliminary plat approval submitted to the City by the applicant and which the City deems complete.

6. **Taxation Reimbursement.**

- A. **Tax Reimbursement.** Unless otherwise agreed, to allow the Township to be reimbursed for the permanent loss of taxable property from Township tax rolls for property in the Orderly Annexation Area, the City agrees that it will not initiate annexation or forward a resolution for annexation of any portion of the property described on **Exhibit 1** to the Office of Administrative Hearings, or its successor agency, until such time as the Township has received reimbursement for the loss of such taxable property in the applicable amounts as set forth below for all lands described in the City resolution to be annexed to the City. Tax exempt property at time of annexation is not subject to tax reimbursement.

- 1. "Unimproved Land" for purposes of this Agreement shall mean any parcel of property except parcels containing an area of five acres or less which contain a residential structure, and except parcels of property ten acres or less in size which contain a principal commercial or industrial structure. To compensate the Township for the permanent loss of taxable property from Township tax rolls, the Township shall be paid a per-acre Taxation Reimbursement amount for all Unimproved Land annexed to the City under this Agreement in the amount of \$500 per acre of property to be annexed. The acreage to which such \$500 per acre fee shall apply shall be the acreage of the property annexed as measured on a survey if one is

available or as shown on the Wright County GIS system if a survey is not available, less any land that is at the time of annexation identified as a wetland on the National Wetland Inventory, is below the ordinary high water mark of a lake as determined by the Minnesota DNR, is within the 100-year floodplain as shown on the applicable FEMA Floodplain Map, or which is public road right-of-way.

2. “Improved Land” for purposes of this Agreement shall mean any parcel of property of five acres or less which contains a residence, or a parcel of land of ten acres or less which contains a principal commercial or industrial structure. To compensate the Township for the permanent loss of taxable property from Township tax rolls, the City shall pay the Township Taxation Reimbursement for all Improved Land annexed to the City under this Agreement. Following annexation of Improved Land, payments shall be made by the City twice a year, within 30 days of the County’s property tax reconciliation distribution to the City, and shall be based on the valuation and tax capacity of the land as it exists in the Township at the time of annexation, in the amounts set forth as follows (for purposes of this subsection, the “first year following annexation” refers to the first year after annexation of the property that the Township no longer collects property taxes on the annexed property):

- (1) In the first year following annexation and for each subsequent year through the tenth year following the annexation, one hundred percent of the property taxes paid to the Township in the year of annexation.

B. Delinquent Taxes. The City agrees that it shall remit all delinquent taxes, charges and assessments collected from any portion of the Orderly Annexation Area after annexation of such property if such taxes or charges were originally payable while the delinquent property remained in the Township. Additionally, when a property no longer qualifies for special tax treatment through Green Acres or other applicable programs such as Ag Preserves, CRP, This Old House, and taxes that were deferred under one of these programs is paid to the City, the City shall remit to Township the amount which was deferred during the time the property was in the Township.

C. Special Assessments. The City agrees that it shall remit all special assessments collected from any portion of the Orderly Annexation Area after annexation of such property if such special assessments were originally levied by the Township while the property remained in the Township.

Other than the reimbursement outlined above in paragraphs A, B and C, no other reimbursement or taxes shall be owed to the Township from the City.

7. **Conditions for Orderly Annexation.**

The City and the Town mutually state and agree that properties in the Orderly Annexation Area described on **Exhibit 1** and as shown on **Exhibit 2**, or any portion thereof, shall be annexed to the City by the MBA upon receipt of a resolution from the City requesting such annexation. The City may submit such resolution to the MBA not sooner than 31 days after submitting notice to the Township (the Township may waive the 31 day period via written waiver) and only when all of the following conditions are met:

- A. The property to be annexed must be within the area described on **Exhibit 1** and shown on **Exhibit 2**.
- B. Some portion of each parcel to be annexed, other than Platted Residential Subdivisions or Non-platted Residential Subdivisions, must be located no more than 1,320 feet from the border of the City.
- C. If the property to be annexed is part of a rural residential area with lots which are part of a recorded plat where a majority of the lots in the plat are 5 acres or less in area ("Platted Residential Subdivision"), the petition must be signed by all owners of record of at least 60% of the platted lots within the subdivision and the City must annex all of the properties that make up the Platted Residential Subdivision or none of the properties in the Platted Residential Subdivision. If the City fails to approve a resolution annexing all such properties within the Platted Residential Subdivision for which the petition pertains within 90 days of the date the City receives the signed petition, the petition shall be deemed denied by the City and no further action on that petition may be taken by the City, provided that petitions that meet the requirements of this subdivision that are both signed by the requisite number of owners and are received by the City after the date of denial of a prior petition may be acted upon by the City. The City may not take action upon any petition under this subsection until the City first mails notice to the owners of all properties proposed to be annexed by such petition at least 7 days prior to the City Council meeting at which such petition will be considered. Such notice shall inform the owners of the boundaries of the area proposed for annexation as well as the date, time, and location that the City Council will consider comments from such owners at such City Council meeting.
- D. A non-platted residential subdivision area is defined as lots, parcels or properties of record used for residential purposes containing five acres or less that are contiguous to each other ("Non-platted Residential Subdivision"). If the property to be annexed is part of a Non-platted Residential Subdivision, the petition must be signed by all owners of record of at least 60% of the lots,

parcels or properties contained within the residential area and the City must annex all of the properties that make up the Non-platted Residential Subdivision or none of the properties in the Non-platted Residential Subdivision. All areas that potentially could be defined as a Non-platted Residential Subdivision are shown on the attached **Exhibit 3**. If the City fails to approve a resolution annexing all such properties within the Non-platted Residential Subdivision for which the petition pertains within 90 days of the date the City receives the signed petition, the petition shall be deemed denied by the City and no further action on that petition may be taken by the City, provided that petitions that meet the requirements of this subdivision that are both signed by the requisite number of owners and are received by the City after the date of denial of a prior petition may be acted upon by the City. The City may not take action upon any petition under this subsection until the City first mails notice to the owners of all properties proposed to be annexed by such petition at least 7 days prior to the City Council meeting at which such petition will be considered. Such notice shall inform the owners of the boundaries of the area proposed for annexation as well as the date, time, and location that the City Council will consider comments from such owners at such City Council meeting.

- E. In a petition for property to be annexed that is not part of a Platted Residential Subdivision or Non-platted Residential Subdivision identified in paragraph 7.B. or 7.C. above, the petition must be signed by all of the owners of the property proposed to be annexed.
- F. The Township has received tax reimbursement as provided by paragraph 6A above for the acres described in the notice. Upon receipt of such tax reimbursement amount, the Township shall issue a letter to the City of Delano confirming that the Township has received the amounts required by this Agreement for the property to be annexed to the City. Delano shall submit such letter from the Township to the MBA with its resolution requesting annexation.

8. **Township Roads.**

- A. Roads Serving New Plats. The City shall require that all roadways within the Orderly Annexation Area abutting new developments which are located on land that has been annexed to the City during the term of this Agreement shall be improved by the developer and/or property owner with bituminous

surfacing when the roads in the development are paved. All said road improvements shall be constructed to City standard street requirements, or in the alternative, the City may cause the road to be constructed to Township road specifications attached as **Exhibit 4**.

- B. Maintenance of Roads. Except as specifically set out herein or unless otherwise agreed by the parties, the Township shall maintain all roads in the Orderly Annexation Area not annexed to the City and which have a gravel surface. The City shall maintain all roads in the Orderly Annexation Area not annexed to the City which are bituminous surfaced. Notwithstanding the other provisions of this paragraph 8.B, if the City annexes only one side of the property adjacent to a Township road, the City shall maintain and have jurisdiction over the entire width (both sides) of that portion of road that abuts the annexed property regardless of whether it is gravel or bituminous, and regardless of which entity paved such portion of the road. Nothing in this Agreement shall act to modify the 90th Street and County Line Road Pavement and Road Maintenance Agreement between the City and Township pertaining to the paving and maintenance of 90th Street and County Line Road dated March 3, 2025.
- C. Use of Township Roads During Plat Development. For all properties annexed under this Agreement, the City shall require in its developer's agreements that during plat development (including construction of residences) all construction traffic use a Federal highway, State trunk highways, Wright County highways or Delano city streets. If construction traffic cannot get to the annexed property using a Federal highway, a State trunk highway, a Wright County Highway or a Delano City Street, the City shall, after consulting the Township, designate a Township road that connects the property to a Federal highway, a State trunk highway, a Wright County Highway or a Delano City Street, and the City shall cause such Township road to be paved, at no expense to the Township, to at least the Township's standard for paved roads as shown on the attached **Exhibit 4** and the City shall require the Developer to route all construction traffic on such paved road and not on any other Township road. The City's developer's agreements shall also require that the developer pay the Township for the cost to repair any road damage that may occur as a result of such construction traffic using Township roads, said damage to be reasonably determined by the Town Board.
- D. Maintenance of Gravel Roads Impacted by Developed Plats. The parties acknowledge that the development of residential and industrial subdivisions on annexed land may, in certain circumstances, lead to increased traffic on the Township's gravel roads as a result of such subdivision development, which in turn leads to increased maintenance costs on such roads. The Township may, at its expense, measure the average trips per day on Township roads that the Township's engineer believes will be impacted by annexation and

development of nearby lands within the City. Such measurements shall be taken no more than 18 months before development of the subdivision which is believed to contribute traffic on particular Township roads and such measurements shall employ the same or similar standard for counting vehicles as used by the Wright County Highway Department to count vehicle traffic on Wright County highways. The Township may again measure such traffic after substantial development of the plat but not later than two years after all lots in the plat have buildings constructed on them. If after the development of such subdivision the average daily traffic counts on Township roads leading to such subdivision and which are in close proximity to such subdivision increase by 20% or more from traffic levels prior to the development of such subdivision, the City shall annually compensate the Township based upon a comparison of pre-development use to post-development use, with the City paying a proportionate share of the non-snowplowing maintenance expenses of such roads equal to the increase in average daily vehicle trips on such roads as may be most recently measured compared to the average daily vehicle trips on the said roads as last measured before the commencement of construction on the annexed property that was platted. As an alternative to the City paying a proportionate share of the non-snowplowing maintenance expenses as required above, the City may, at its expense, pave such road or roads consistent with the Township's road standards attached as **Exhibit 4**. As an example of this cost sharing arrangement, if the Township road leading to such subdivision has an average daily traffic count of 140 vehicle trips per day prior to the development of the annexed property, and the graveling, grading and dust coating expenses (including the Township's cost of labor for performing such road work) for the 12 month period immediately preceding such measurement are \$10,000, and assuming that the Township's expenses for the same stretch of road for the 12-month period after development of the subdivision in question has commenced are \$16,000 and the average daily traffic count is 190 vehicles at such time, the City will pay \$5,714 of such maintenance cost according to the following formula: $(190-140)/140 \times \$16,000 = \$5,714$.

- E. No Assessment of Township Properties for Road Improvements. The City shall not specially assess any properties in the Township for improvements to roads that are made while such properties are located in the Township. Nothing in this Agreement shall bar the City from charging such properties for road improvements as a condition of annexing such properties under the terms of this Agreement.

9. **Provision of Municipal Services.**

- A. Extension of Services. Extension of municipal water and sanitary sewer service to annexed properties requesting such services will be a high priority by the City.
- B. Use of Trunk Charges. The City shall not specially assess any properties in the Township for the extension of sanitary sewer, municipal water, or storm sewer utilities that are made while such properties are located in the Township. Nothing in this Agreement shall bar the City from charging such properties a trunk charge for such utility extensions as a condition of annexing such properties under the terms of this Agreement.
- C. Upon annexation of any property from the Township to the City, the City shall be responsible for providing all customary and normal municipal services to such property as may be determined by the City Council from time to time.

10. **No Assessment Policy.**

With respect to road, sewer and water improvements to be constructed within the Orderly Annexation Area, the City shall not specially assess any property for such road, sewer or water improvements if such property was in the Township during the time such improvement was constructed, unless the owners of such property agree to such assessment via written agreement with the City.

The City reserves the right to enter into development agreements with the owner and/or developer of any specific parcels of property within the Orderly Annexation Area, or other Township properties, that vary from the terms of this paragraph 10 with respect to such parcel.

11. **Installation of Utilities.**

In the event the City installs sanitary sewer or municipal water utilities through property that remains in the Township, the City shall mail a notice to all property owners who abut the easement or right of way where such utilities are installed offering the property owners the option, at the property owners' expense, to install service leads on such sewer and water lines during the installation of such utilities. For all such services installed, the City shall retain authority over when and under what conditions such properties may connect to the City's utilities.

12. **Existing Draintiles.**

The City shall require that any functioning draintile lines located during development of any parcel annexed from the Orderly Annexation Area be connected to the City's storm sewer

system, or shall make such other arrangements that will not impede the flow of such drain tile lines.

13. **Authorization.**

The appropriate officers of the City and Town are hereby authorized to carry the terms of this Agreement into effect.

14. **Severability and Repealer.**

A determination that a provision of this Agreement is unlawful or unenforceable shall not affect the validity or enforceability of the other provisions herein. However, should any element of paragraph 6 relating to "Taxation Reimbursement" or paragraph 23 relating to limitations on other annexations be deemed unlawful or unenforceable, the Township at its discretion may terminate this Agreement, but only after the parties have engaged in in Direct Negotiation and Mediation as set forth in paragraph 15 of this Agreement, or the Township has made good faith attempts to engage the City in Direct Negotiation and Mediation as set forth in paragraph 15 of this Agreement but the City has refused to participate in good faith in such negotiations and mediation. Any prior agreement or joint resolution existing between the parties and affecting the property described in the attached Exhibits shall be considered repealed upon the effective date of this Agreement.

15. **Effective Date and Termination.**

- A. This Agreement shall be effective upon adoption by the governing bodies of the City and Town and approval by the MBA. Unless the parties have agreed to an extension, this Agreement shall terminate five years from the date upon which both parties have executed this Agreement. Notwithstanding the termination of this Agreement, the provisions of paragraphs 6.A.2, 6.B, and 6.C, of this Agreement shall remain binding upon the parties after the termination of this Agreement until such provisions have been fully performed, while paragraphs 8.A, 8.B, 8.C and 8.D of this Agreement shall remain binding upon the parties for eight years after the termination of this Agreement.
- B. In the event that 30% of the acreage contained within the Orderly Annexation Area shown on the attached **Exhibit 5** at the commencement of this Agreement that falls within the Industrial or Commercial designations under the City's Comprehensive Plan is annexed to the City under the terms of this Agreement, the parties shall meet to discuss the possibility of increasing the

Orderly Annexation Area to encompass more land that the City finds acceptable for commercial or industrial development. In the event that 50% of the acreage contained within the Orderly Annexation Area shown on the attached **Exhibit 5** at the commencement of this Agreement that falls within the Industrial or Commercial designations under the City's Comprehensive Plan is annexed to the City under the terms of this Agreement, the parties shall meet to discuss amending this Agreement to enlarge the Orderly Annexation Area to encompass more land that the City, in its sole discretion, finds acceptable for commercial or industrial development. In the event that the Township refuses to sign such an amendment, the City may terminate this Agreement upon 30 days written notice to the Township.

- C. In the event a majority of the Franklin Town Board, during the term of this Agreement, votes to request that Wright County Planning and Zoning rezone or otherwise change the zoning applicable to property in the Orderly Annexation Area such that it would increase the density of residential housing (allowing residential units on smaller lots) within the Orderly Annexation Area, the City shall have the right to terminate this agreement within 90 days after the Township informs the City of such vote.

16. **Disputes and Remedies.**

The City and Township agree as follows:

- A. **Direct Negotiation.** When a disagreement over interpretation of any provision of this Agreement shall arise, the City and the Township shall direct staff members, as they deem appropriate, to meet at least one time at a mutually convenient time and place to attempt to resolve the dispute through direct negotiation.
- B. **Mediation.** When the parties to this Agreement are unable to resolve the disputes through direct negotiation, the parties shall submit their respective grievances to mediation.
- C. **Adjudication.** When the parties to this Agreement are unable to resolve their respective grievances either through direct negotiation or through mediation, either party may seek relief through initiation of an action in a court of competent jurisdiction. In addition to the remedies provided for in this Agreement and any other available remedies at law or equity, in the case of a violation, default, or breach of any provision of this Agreement, the non-violating, non-defaulting, or non-breaching party may bring an action for specific performance to compel the performance of this Agreement in accordance with its terms.

17. **Amendment.**

Both parties reserve the right to initiate an amendment or revision to this Agreement at any time. Upon initiation, the parties agree to meet and discuss the proposed amendment or revision, but neither party shall be required to approve such amendment or revision.

18. **Annual Meeting regarding Orderly Annexation Agreement.**

At least one City Council Member, at least one Town Board Supervisor, and staff as appointed by each party shall meet annually at a mutually agreeable time and place to discuss any concerns that either the City or the Town may have regarding annexation issues. In the event one or more such meetings do not occur, the failure to hold such meeting shall not invalidate or terminate this Agreement.

19. **Costs Associated with Orderly Annexation Agreement.**

Each party shall pay its own costs incurred in the negotiation, development and implementation of this Agreement, but the City shall pay any filing fees required by the State of Minnesota.

20. **Venue.**

The venue for all actions concerning this Agreement shall be Wright County, Minnesota.

21. **Entire Agreement.**

With respect to the Orderly Annexation Area legally described on **Exhibit 1** and shown on **Exhibit 2**, respectively, which are attached hereto and incorporated herein by reference, the terms, covenants, conditions, and provisions of this Agreement shall constitute the entire agreement between the parties hereto superseding all prior agreements and negotiations between the parties. In addition, that certain agreement between the City and Township entitled "Delano and Franklin Township Joint Road Maintenance Agreement" dated September 6, 2005 is hereby terminated and both parties are released from all obligations imposed by such agreement.

22. **Notice.**

Any notices required under the provisions of this Agreement shall be in writing and sufficiently given if delivered in person or sent by U.S. Mail, postage prepaid, to the Franklin Township Clerk and the Delano City Administrator at their official addresses.

23. **Legal Description and Mapping.**

The Township and City agree that in the event there are errors, omissions or any other problems with the legal description provided on **Exhibit 1**, or mapping provided on **Exhibit 2**, in the judgment of the MBA, the City and Township agree to make such corrections and file any additional documentation including a new **Exhibit 1 or Exhibit 2** making the corrections requested or required by the MBA as necessary to make effective the annexation of said Orderly Annexation Area in accordance with the terms of this Agreement.

24. **Other Annexations Limited.**

During the term of this Agreement, unless both the Township and the City agree in writing to such annexation, the City shall not annex any property from the Township except as set out in this Agreement. It is the intent of the parties that this Agreement set the exclusive geographical boundaries of land which may be annexed and set the exclusive procedures under which annexation from the Township to the City may occur during the term of this Agreement. During the term of this Agreement, the Township shall not pursue incorporation or any other boundary adjustments.

The parties recognize that Property owners continue to maintain those options available by law at the time of their action to pursue municipal boundary adjustments. However, during the term of this Agreement, the City will not support any property owner initiated annexation petition for areas proposed for development that are located outside of the Orderly Annexation Area or which do not meet the conditions for orderly annexation as set forth in paragraph 7 of this Agreement.

PASSED, ADOPTED AND APPROVED by the Franklin Town Board of Supervisors, Wright County, Minnesota, this 6th day of July, 2026.

FRANKLIN TOWNSHIP


Chair


Clerk

PASSED, ADOPTED AND APPROVED by the Delano City Council, Wright County, Minnesota, this 7th day of July, 2026.

CITY OF DELANO

Holly Schrupp
Mayor

Michelle Ely
City Clerk

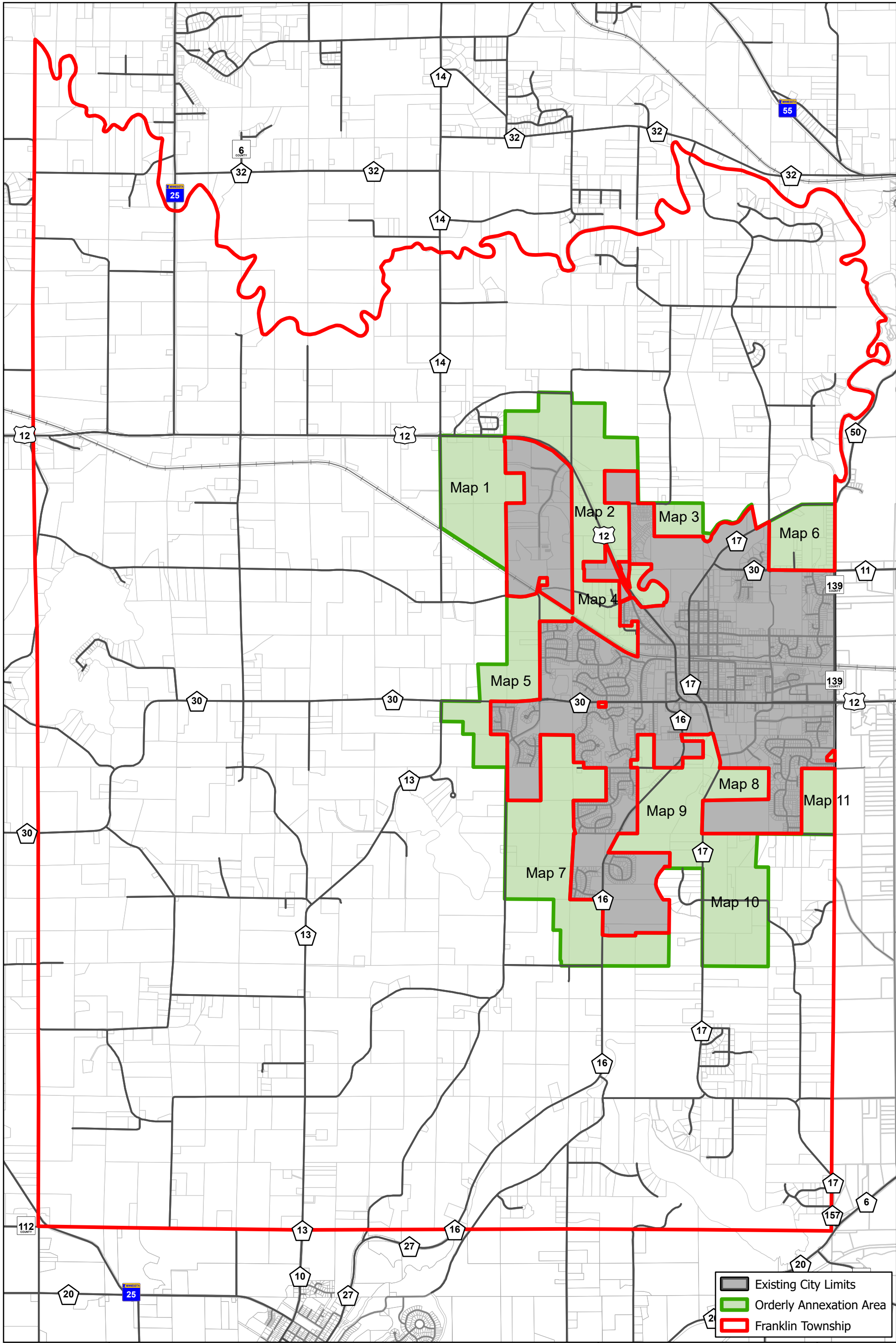
EXHIBIT 1
City of Delano and Franklin Township Orderly Annexation Agreement
Property Description

The Orderly Annexation Agreement contains all properties as identified by the following Wright County Property Identification (PID) Numbers:

208200014101	208200033200	208200142302	208200242200
208200014103	208200033201	208200142400	208200243100
208200014105	208200033400	208200143200	208200243200
208200014200	208200101101	208200143201	208200243300
208200014202	208200101300	208200143301	208200243400
208200014300	208200101400	208200144101	208219001010
208200014301	208200103400	208200144102	208219001020
208200014302	208200104200	208200144103	208219001030
208200014303	208200104201	208200144200	208219001040
208200014304	208200104300	208200144201	208219001050
208200014305	208200111201	208200144202	208219001060
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208200014309	208200112104	208200144206	208219002010
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208200024300	208200141400	208200232101	
208200031100	208200141401	208200232300	
208200031101	208200141402	208200233400	
208200031200	208200141403	208200234300	
208200032100	208200141404	208200242101	
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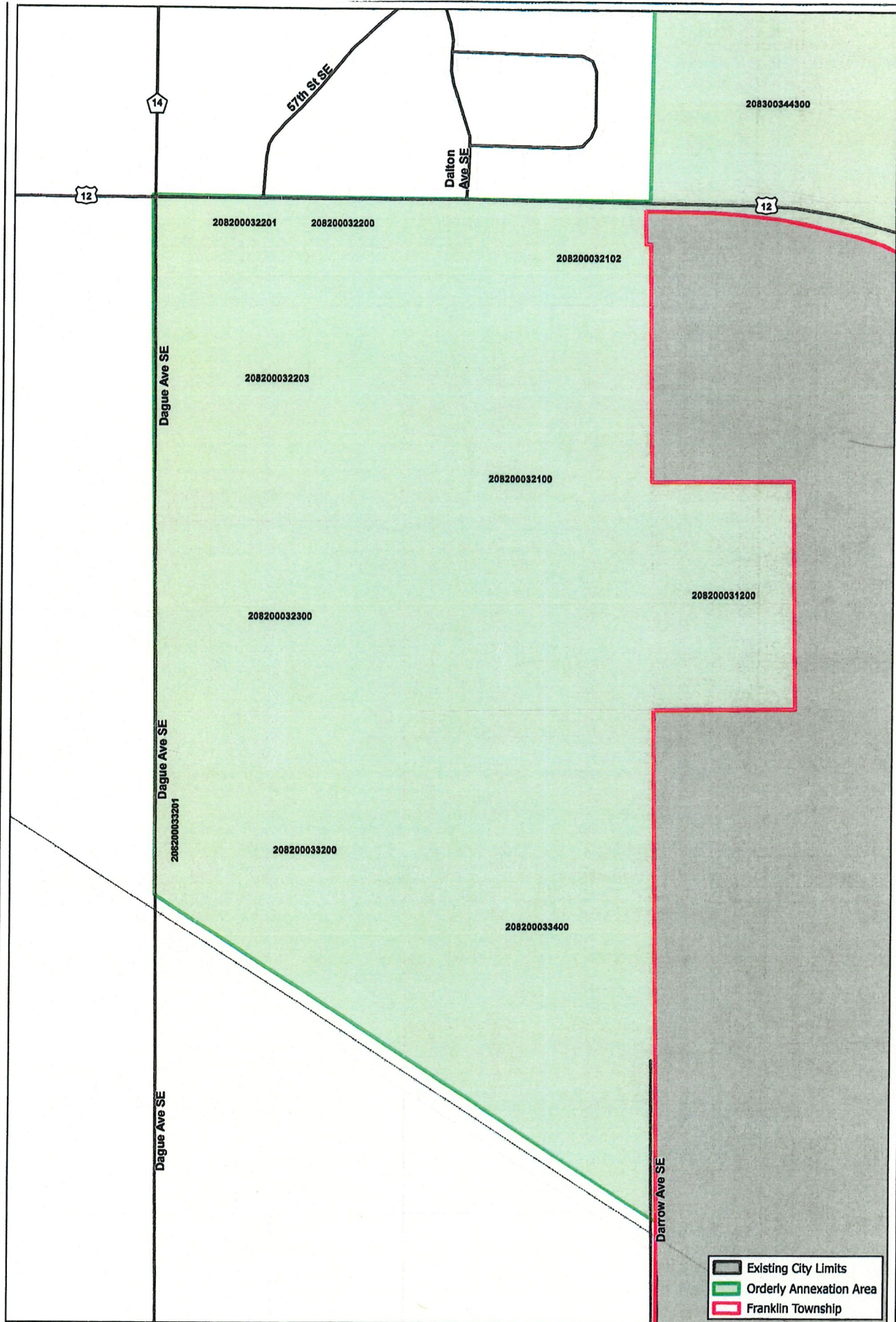
EXHIBIT 2

Boundary Map



- Existing City Limits
- Orderly Annexation Area
- Franklin Township

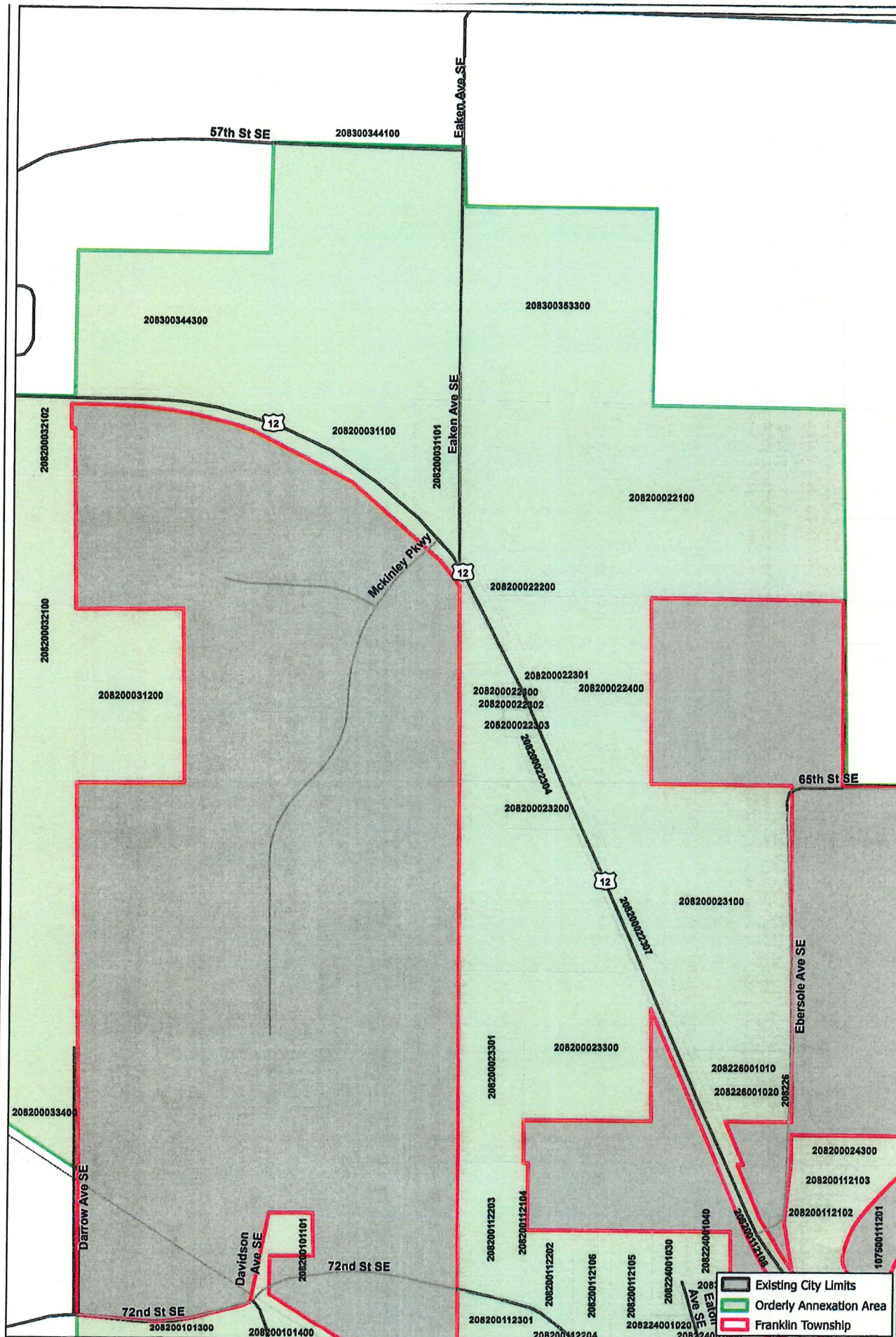
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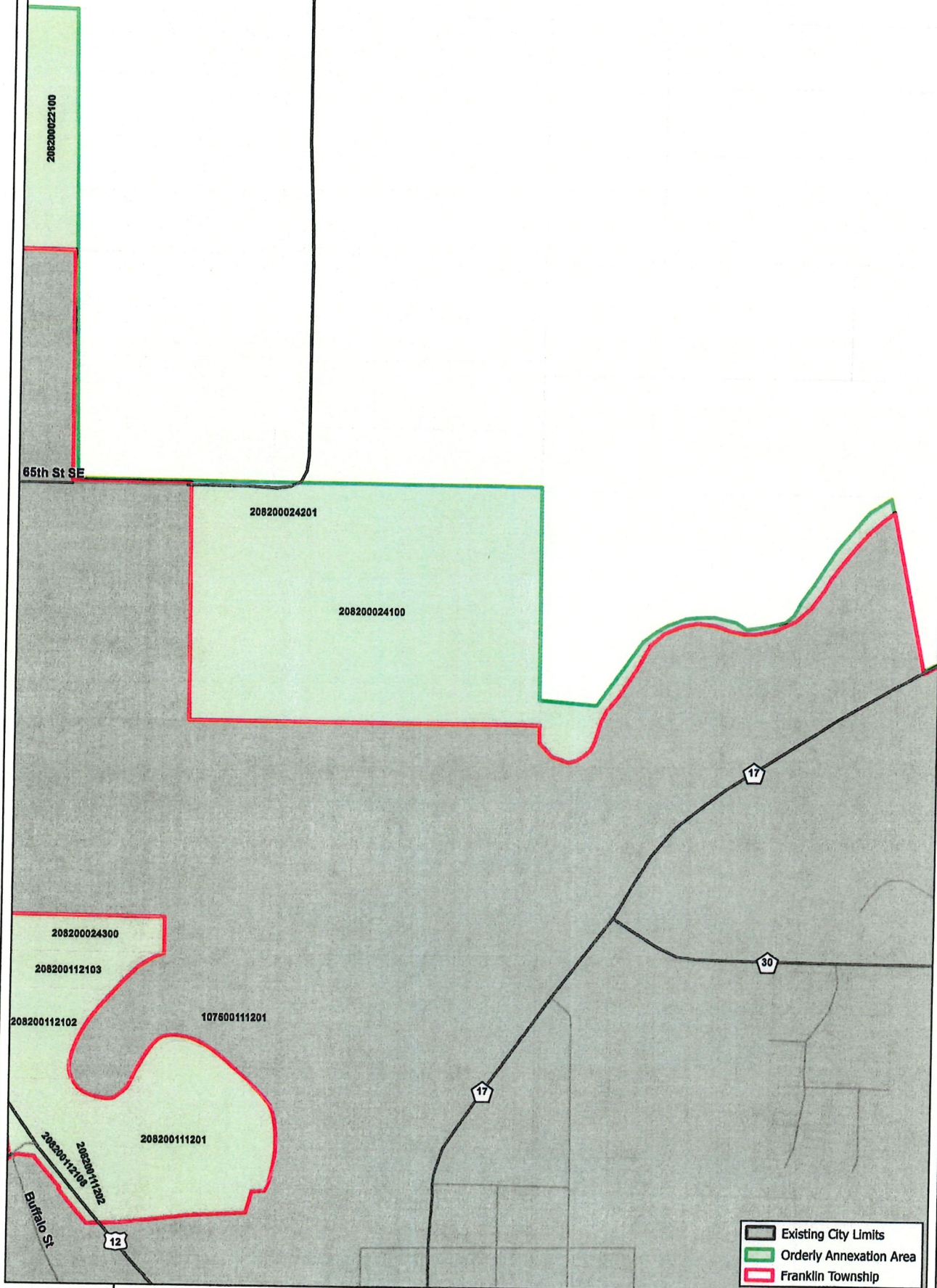


Orderly Annexation Area - Map 1

Boundaries of Growth within Franklin Township
Delano, MN







Orderly Annexation Area - Map 3

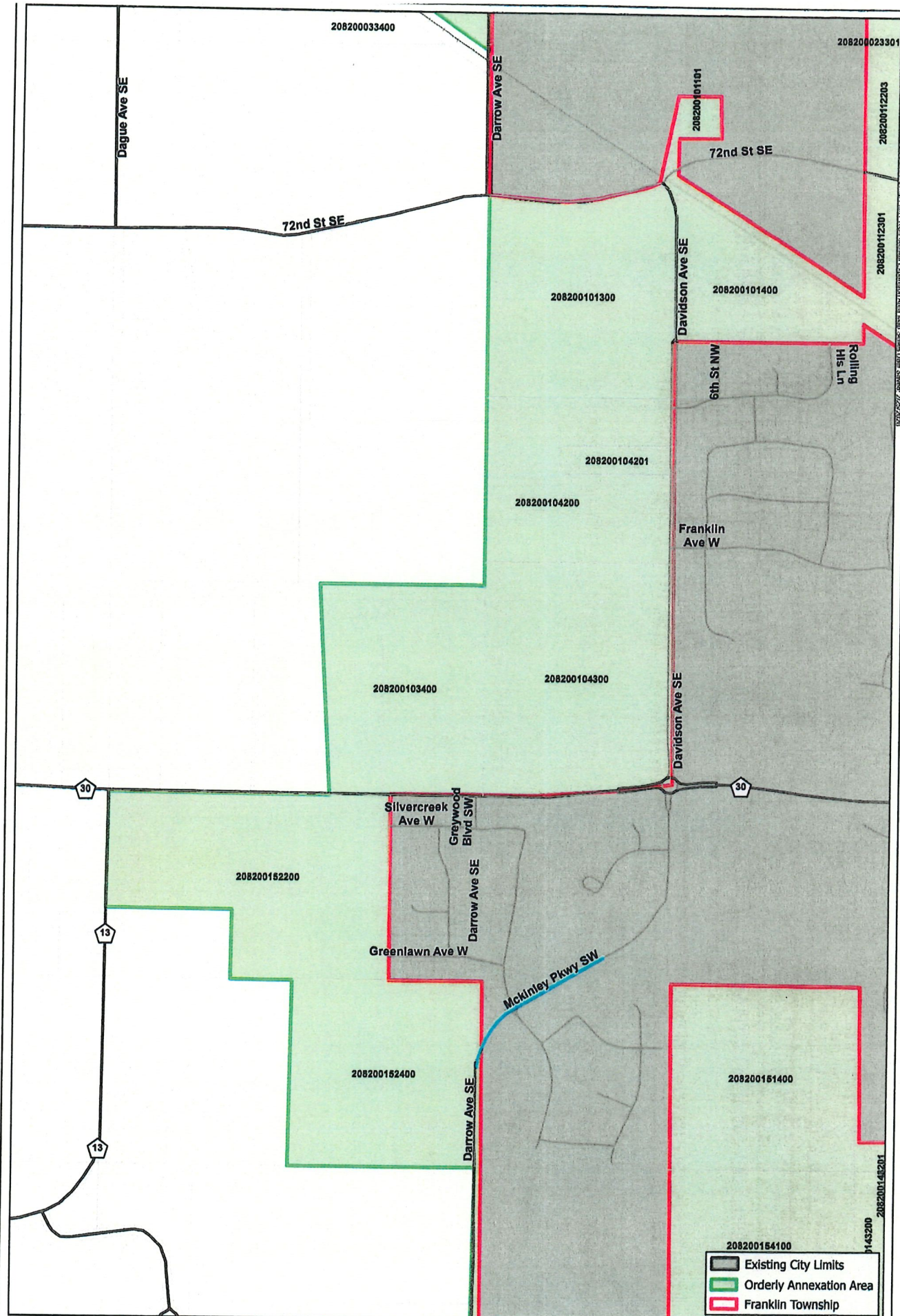
Boundaries of Growth within Franklin Township
Delano, MN



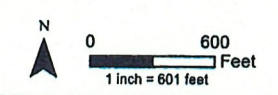
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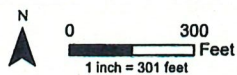
Orderly Annexation Area - Map 5
 Boundaries of Growth within Franklin Township
 Delano, MN



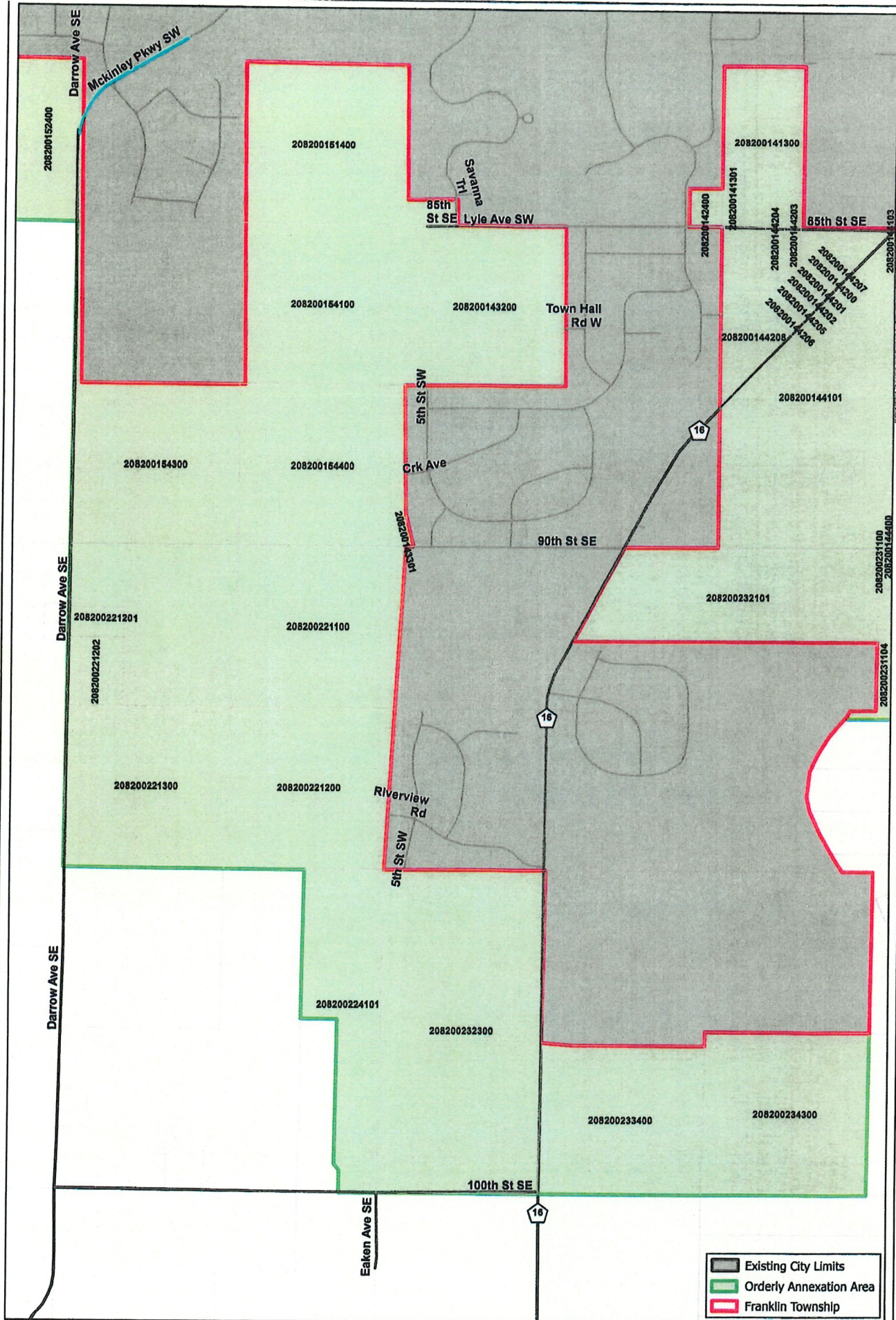


Orderly Annexation Area - Map 6

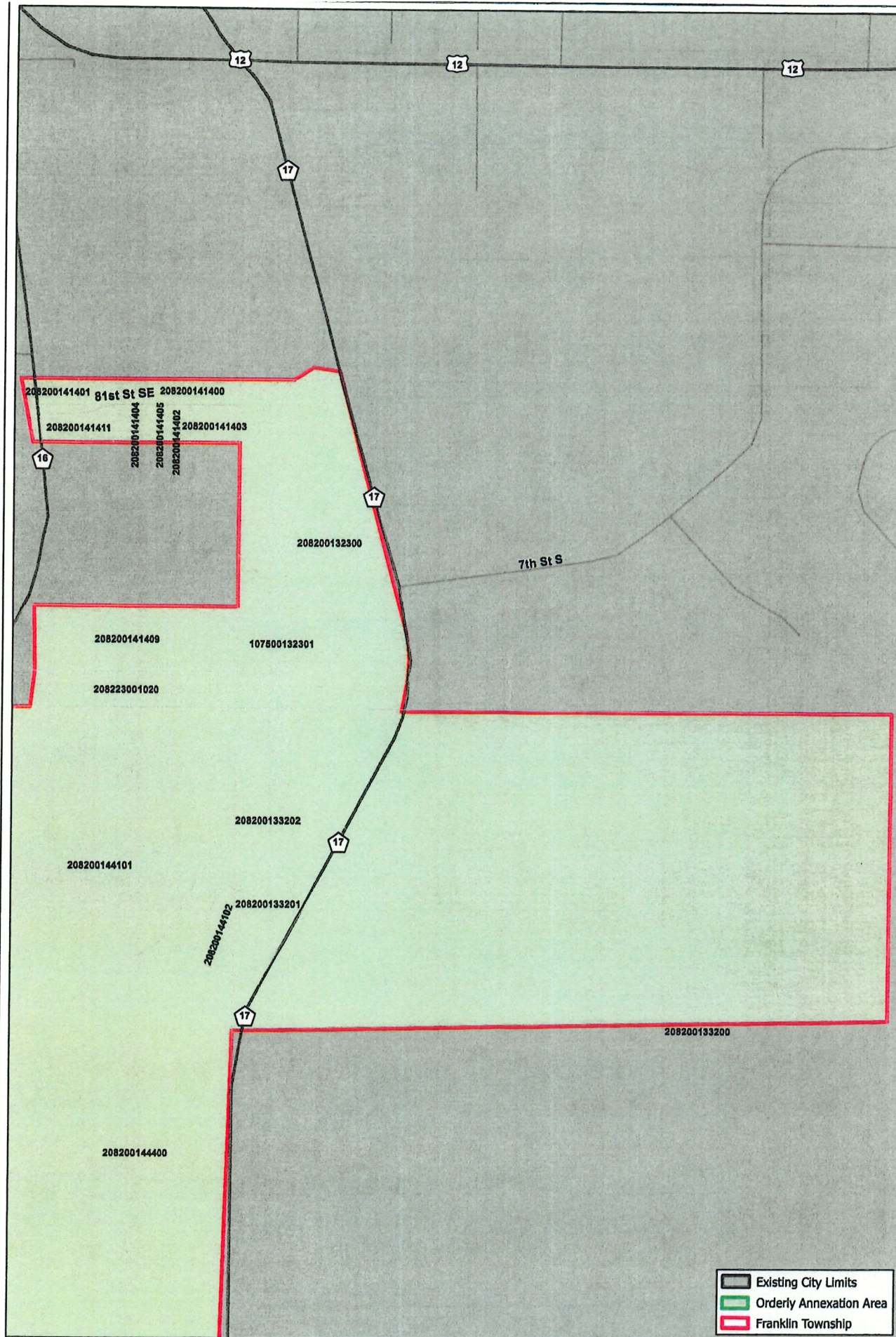
Boundaries of Growth within Franklin Township
Delano, MN



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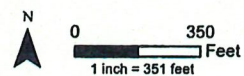


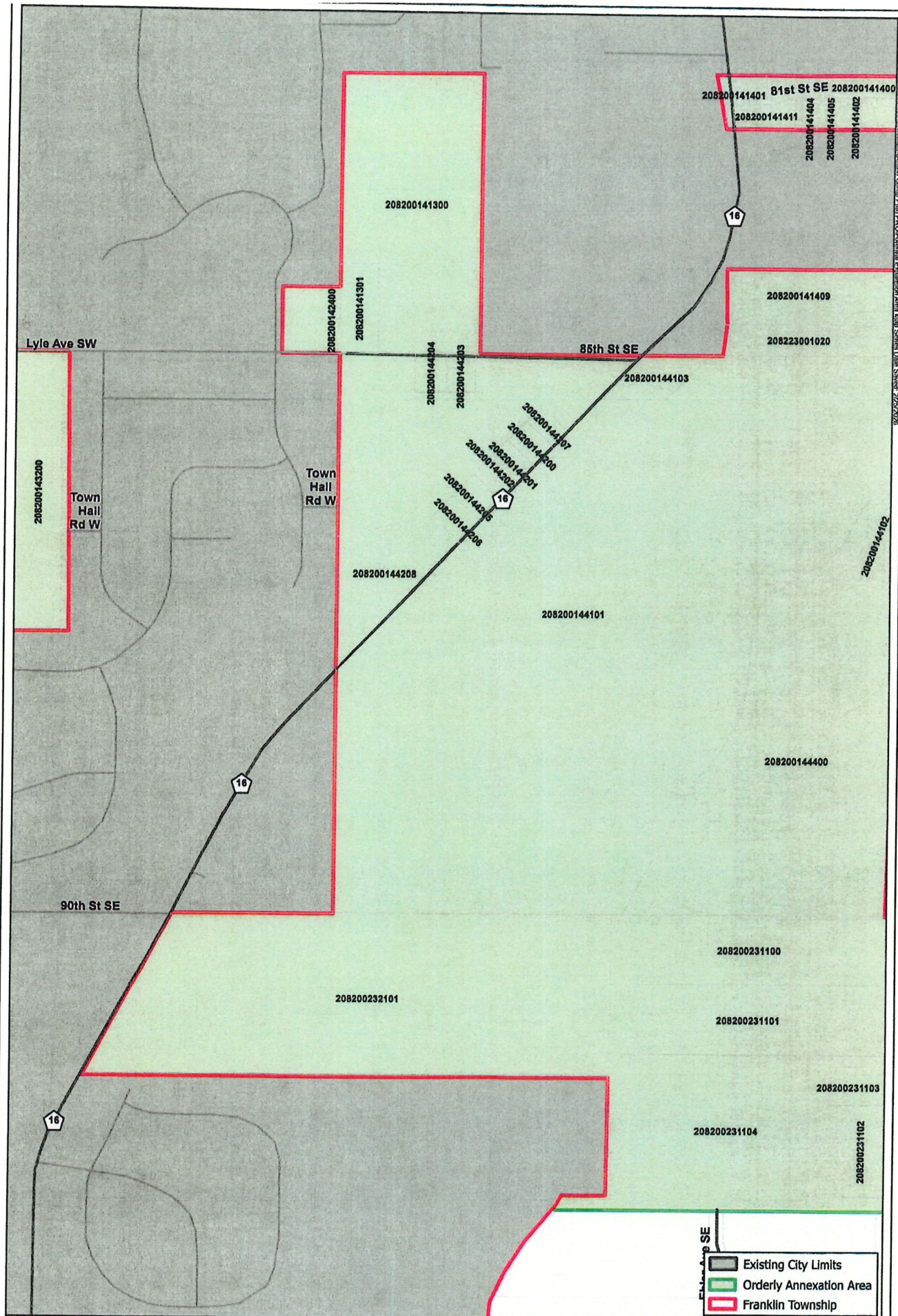
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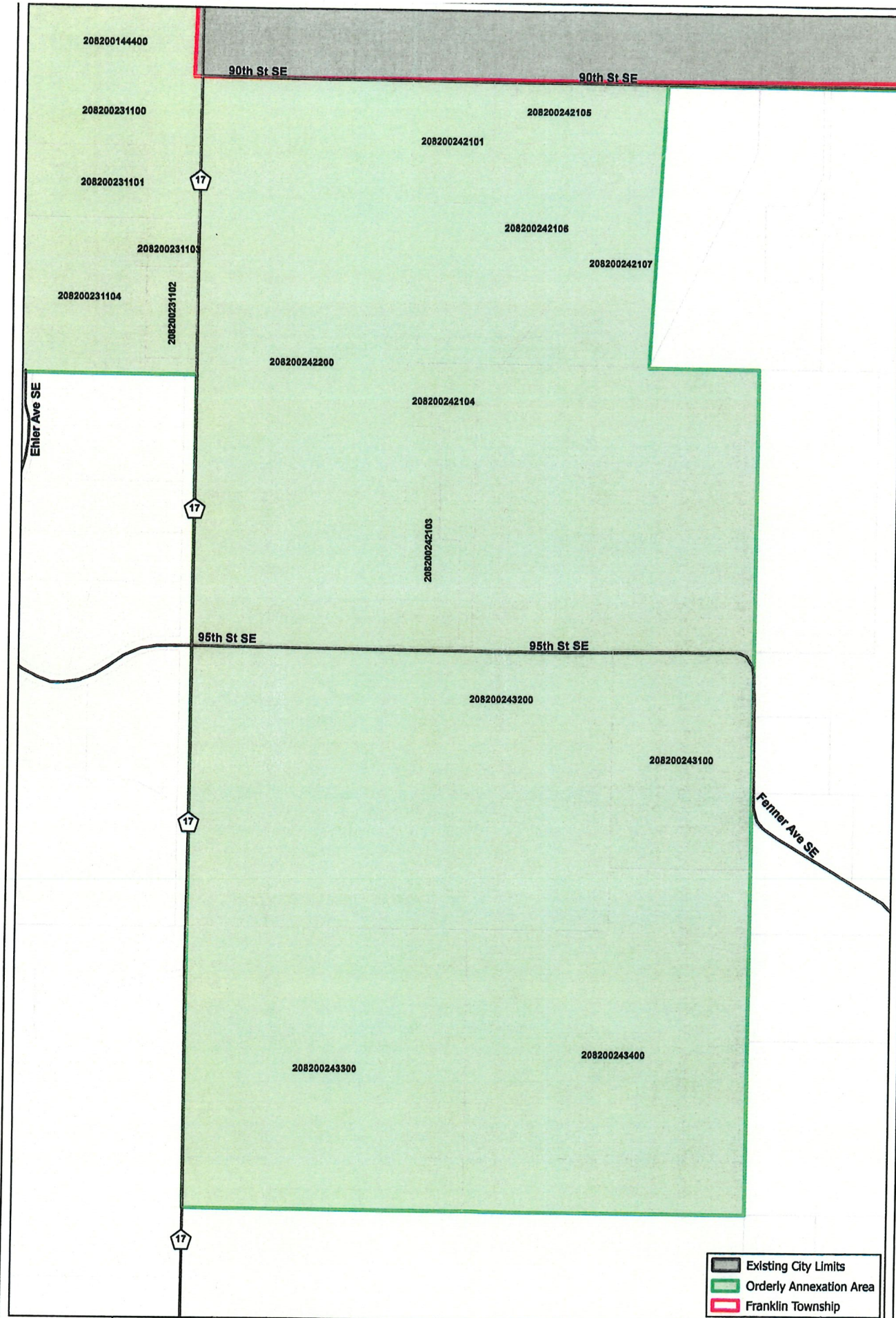
Orderly Annexation Area - Map 8

Boundaries of Growth within Franklin Township
Delano, MN

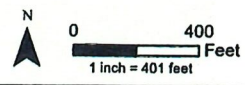




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Orderly Annexation Area - Map 10
Boundaries of Growth within Franklin Township
Delano, MN



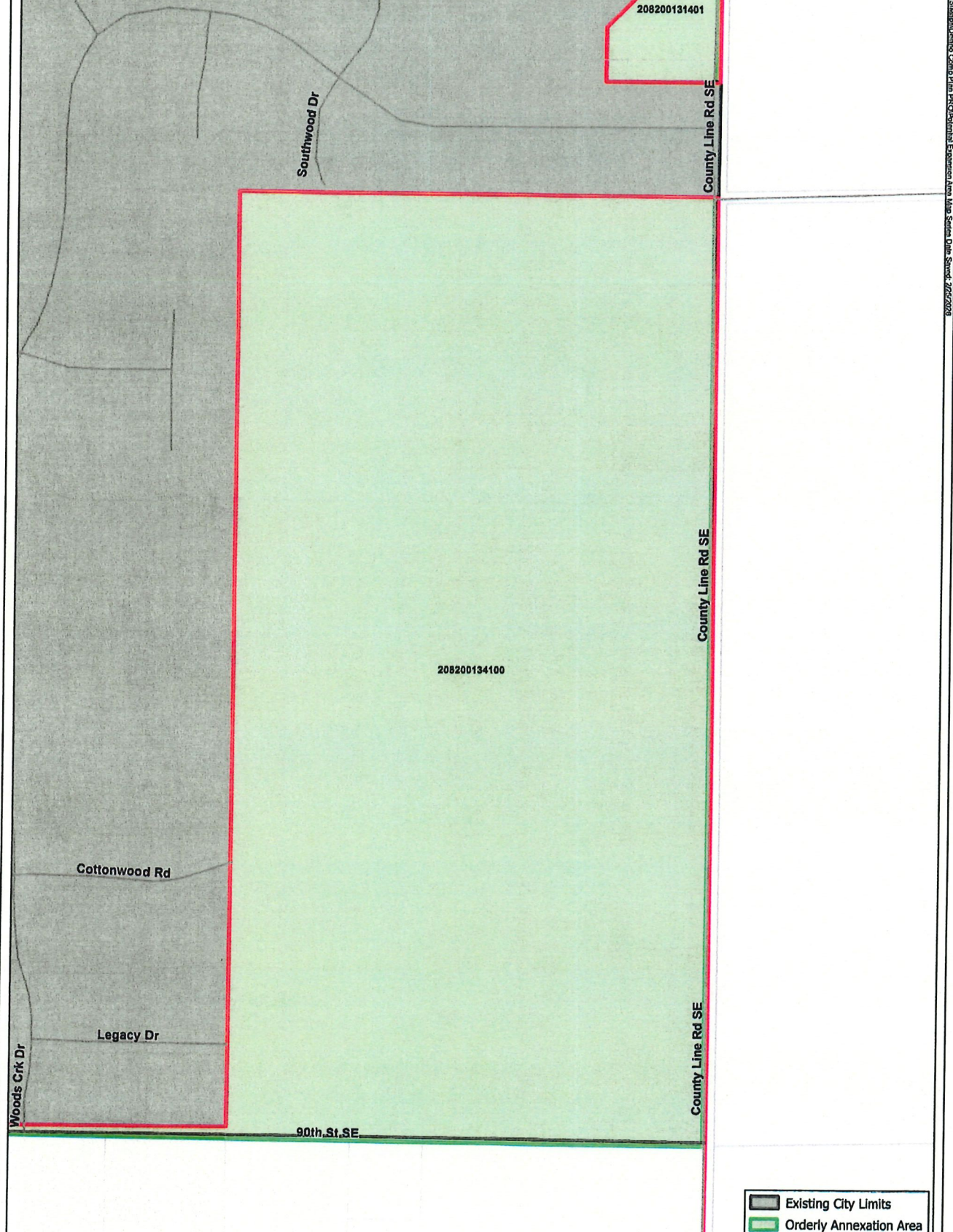
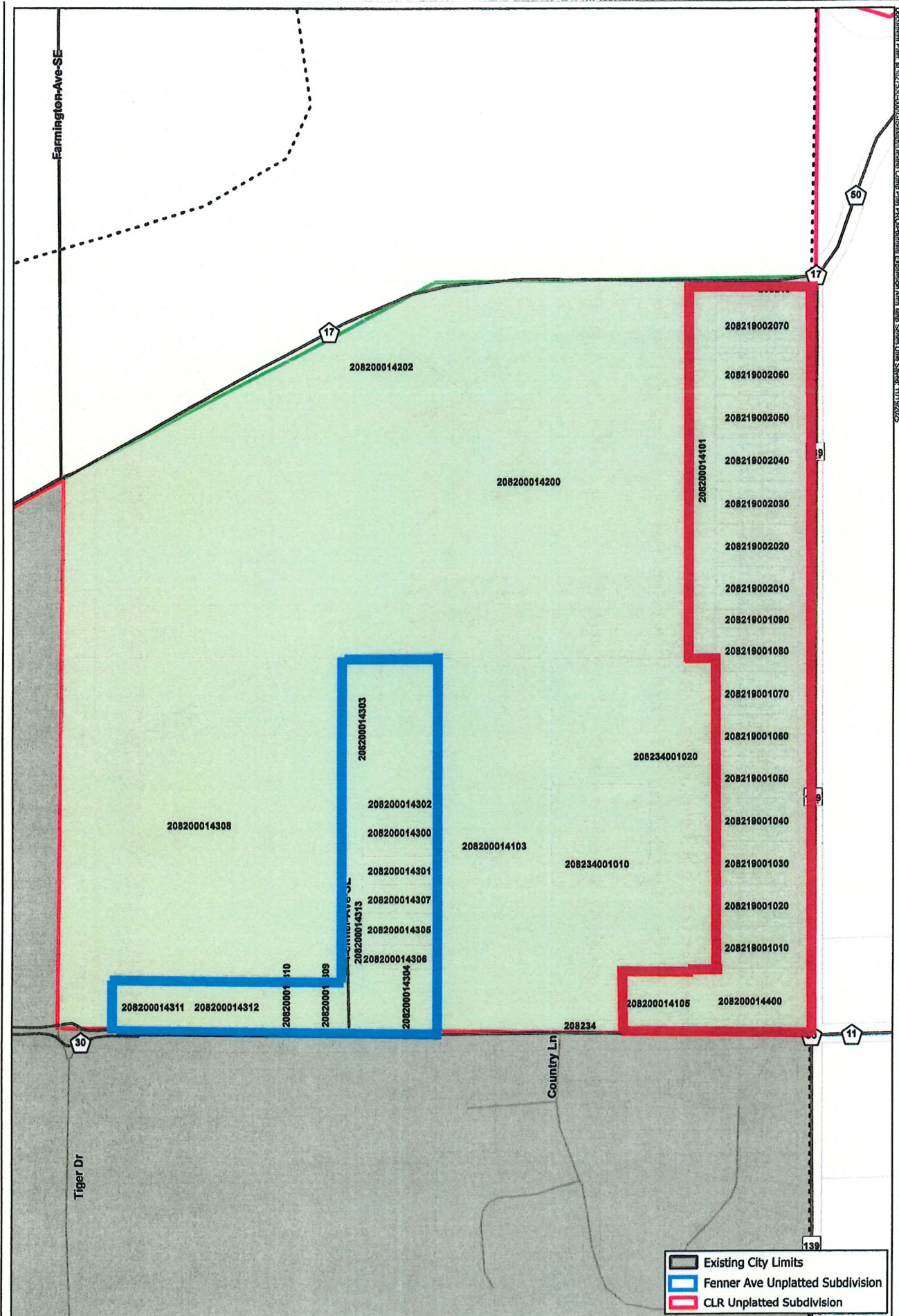


EXHIBIT 3

Non-platted Residential Subdivisions



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Potential Expansion Areas - Map 6
 Boundaries of Growth within Franklin Township
 Delano, MN

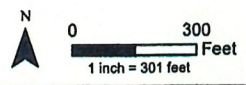


EXHIBIT 4

Township Paved Road Specifications

EXHIBIT 4

**ENGINEERING MANUAL
FOR
FRANKLIN TOWNSHIP**

Prepared by:

HAKANSON ANDERSON ASSOCIATES, INC.
3601 Thurston Avenue
Anoka, Minnesota 55303
Telephone: 763-427-5860

December 2025

Approval Date: January 5, 2026
Revision Date:

Forward

In order to protect public health, safety and welfare, it is necessary to establish standards for engineering in the Township of Franklin, Wright County, Minnesota.

This manual outlines specific requirements, materials and standards that will be incorporated into the preparation of plans and specifications for utility, street and other construction improvements within the Township.

Utility facilities and associated work shall be designed to conform to the "10 State Standards" and shall be constructed in accordance with City Engineers Association of Minnesota Standards Specifications except as modified by specific Township of Franklin requirements. Street surface improvements shall be designed to the standards of the Minnesota Department of Transportation design manuals and shall be constructed in accordance with the Minnesota Department of Transportation Standard Specifications except as modified by specific Township requirements.

Development plans and public facilities construction plans shall conform to Township of Franklin associated ordinances and comprehensive plans. Related to engineering, comprehensive plans include the surface water runoff control plan and the Township transportation plan with designated collector streets. The Township of Franklin has the authority to construct improvements as necessary with the costs of improvements allocated or assessed to properties for benefit. In cases where the Township Standards conflict with those of another Governmental Unit with jurisdiction over such development, the higher standard shall apply.

These standards are established as policy and as such may be subject to change by action of the Town Board.

The Township of Franklin Engineering Manual was approved by the Town Board on January 5, 2026.

Andrew Vistad, PE
Township Engineer



HAKANSON ANDERSON ASSOCIATES, INC.
3601 Thurston Avenue
Anoka, MN 55303
Telephone: 763-427-5860

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APPENDIX

- A. Township of Franklin Standard Detail Plates
 - 100 Series Street
 - 400 Series Storm Sewer and Appurtenances
 - 500 Series Erosion Control and Land Restoration
 - 800 Series Barricades, Signals, Markers, etc.
 - 900 Series Public Utilities
- B. Township of Franklin Policy on Stormwater Drainage Requirements
- C. Standards for Street Construction
- D. Standards for Signage & Striping

GLOSSARY OF TERMS

AASHTO	American Association of State Highway and Transportation Office
ANSI	American National Standards Institute
ASTM	American Society of Testing and Materials
AWWA	American Water Works Association
CEAM	City Engineer's Association of Minnesota
CMP	Corrugated Metal Pipe
HDPE	High Density Polyethylene
Mn/DOT	Minnesota Department of Transportation
MPCA	Minnesota Pollution Control Agency
PID	Property Identification Number
PVC	Polyvinyl Chloride
RCP	Reinforced Concrete Pipe
SDR	Strength to Diameter Ratio

ENGINEERING MANUAL

I. Engineering Requirements

As set forth in various sections of the Township policies, the City is required to submit certain plans and specifications for review and approval by the Township for roads the City is improving within the Township for roads the City is improving within the Township. These include such items as grading plans, drainage plans, topographic surveys, plats, street and utility plans and specifications. These plans and specifications shall be prepared by competent professionals.

The professional services required of the City may include one or more of the following professionals: land surveyor, planner, soils (geotechnical) and civil engineer and testing service. The engineering services include not only preparation of plans and specifications, but field staking in order to assure the Township that the completed project is in conformance with the approved plans and specifications. The Township will provide inspection of the installation of the facilities at the City's expense.

If the City chooses to improve a road within the Township, the following procedures shall be followed:

1. The City shall submit plans, specifications, and copies of all design calculations to the Township for review and approval. These plans are to be prepared by a licensed professional civil engineer and shall be in accordance with Township standards as outlined herein. The Township guidelines shall be adhered to in design considerations.
2. The City shall submit erosion and sediment control plans along with a Storm Water Pollution Prevention Plan to the Township for review and approval. No work is to begin until all erosion and sediment control methods are in place and approved by the Township.
3. The City will be responsible for not only plans and specifications preparation, but also for providing staking. Resident inspection of said improvements to assure compliance with the approved plans shall be completed by the Township at the City's expense.
4. Copies of all bids, change orders, and other associated project costs documents relating to the improvements shall be forwarded to the Township Engineer.
5. Any changes to the approved plans and specifications shall be approved by the Township Engineer in writing before work is started.

6. The City will hold a preconstruction meeting prior to the start of any work on the development. The Township staff and Township Engineer along with the contractor and subcontractors, City's engineer, utility companies and other interested parties must be invited to the meeting. The City will be responsible for drafting pre-construction meeting minutes. The minutes shall be submitted to the Township Engineer for review, then distributed by the City to all parties who were in attendance at the meeting.
7. The City shall retain an independent testing service approved by the Town Board to perform the required material tests of the project. Copies of tests will be forwarded to the Township Engineer for review. The cost of this service will be the responsibility of the City.

The Township shall be notified 24 hours in advance of all scheduled tests so its representatives can be present at the time tests are made. The required tests include utility installation, subgrade, base course, concrete placement, and bituminous pavement.

8. Upon completion of all the work required, the Township Engineer or his designated representative, a representative of the contractor and a representative of the City will make the required final inspections of all work. This includes a final inspection of all site grading, Class 5, concrete, gravel shoulders, bituminous base placement, and approval by the Township Engineer before any building permits will be issued. Before the final payment is made to the contractor by the City, the Township Engineer shall be satisfied that all work is satisfactorily completed in accordance with the approved plans and specifications, and the City's engineer shall submit a written statement attesting to same. Acceptance of the completed work shall be made by motion of the Town Board upon the recommendation of the Township Engineer. The Engineer's written statement shall contain the following:
 - a. The City or the City's engineer must submit written certification to the Township Engineer stating that all public improvements have been completed in accordance with the approved plans and specifications.
 - b. The City's engineer shall provide the Township with a complete set of electronic files on computer disks and 2 sets of full size "as-built" plans for the Township records as outlined in this manual. These as-builts shall be submitted within 90 days after the completion of the improvements, and before any security is released.
 - c. The City's surveyor shall provide the Township with written certification that all corners of lots (iron monuments) have been placed.

9. Warranty Period – If within the time prescribed by law, or by the contract documents any of the work is found to be unacceptable, the City shall correct it promptly unless the Township has previously accepted the work. The City shall give prompt notice after discovery of any unacceptable conditions to the contractor responsible for the project work.

Unless otherwise noted in the contract documents, the following requirements shall apply:

- a. The City shall guarantee all work relating to utilities, appurtenances, material, and equipment furnished by it for a period of three (3) years from the date of written acceptance of the work or project.
- b. The City shall guarantee all work relating to street construction including concrete curb and gutter, sidewalks, materials, and equipment furnished by him for a period of three (3) years from the date of written acceptance of the work or project. The streets will not be accepted prior to the bituminous wearing course being constructed.
- c. During the warranty period for newly constructed bituminous roadways the City is required to complete a bituminous seal coat or cover the cost to complete a seal coat. The Seal coat shall be completed within the 3-year warranty period following the construction of the final lift of bituminous pavement. The seal coat shall meet the current township specifications and shall be completed at the optimal time, June through September. Should the City choose to cover the cost, the township will utilize average bid prices for similar projects completed. The costs can be contributed to the development escrow or added to the performance/warranty bond amount.
- d. After all public improvements have been completed, properly inspected as specified above, the project will be accepted by the Township.

II. Erosion Control Policy

1. Required Erosion Control Plan

Prior to commencing any earth disturbing activity in a development, the City shall prepare and submit an erosion control plan for approval by the Township Engineer. The plan shall be approved if it complies with Wright County ordinance, the Township's Land Development Regulations, Road Ordinance, and the requirements contained herein. The City must also

prepare and submit to the Township Engineer a Stormwater Pollution Prevention Plan (SWPPP) which meets the MPCA requirements.

2. Required Control Measures

The control measures shall conform to the MPCA's "Application for General Stormwater Permit for Construction Activity" (MN R100001) requirements and as specified herein;

- a. The plan shall be suited to the topography and soils so as to create the least erosion potential.
- b. The land shall be developed in increments of workable size on which adequate erosion and sediment controls can be provided and maintained during the construction period. Grading operations and other land disturbing operations shall be staged so that the area being developed is not exposed for long periods of time without stabilization.
- c. Temporary vegetation and/or mulching shall be used to protect the areas exposed during the development per the time frames as required by the permit.
- d. Permanent vegetation and structures shall be installed per the time frames as required by the permit. If grading is not completed until after the planting season has expired, temporary erosion control measures, including dormant seeding and mulching, shall be implemented.
- e. Sediment basins (debris basins, sediment basins, silt basins, or silt traps) shall be installed and maintained to remove sediment from runoff waters from the land undergoing development. Storm sewer inlets shall be provided with debris guards and silt basins to trap sediment and avoid possible damage from blockage. The sediment shall be removed when necessary to maintain effectiveness of control measure. If sediment/siltation measures taken are not adequate and result in downstream sediment pollution, the City shall be responsible for cleaning out or dredging downstream water conveyance systems, storm sewers and ponds as necessary.
- f. Before grading is commenced, all control measures shall be installed as shown on the approved plan.
- g. Immediately after curb and gutter has been placed, cured, and backfilled, or construction of the gravel shoulder, approved erosion control measures shall be installed directly behind the curb and shoulders.

- h. Erosion control practices shall comply with the Minnesota Pollution Control Agency Best Management Practices.
- i. The City shall be responsible for cleaning and maintenance of the storm sewer system (including ponds, infiltration basins, pipes, catch basins, culverts, and swales) within the adjacent off-site storm sewer system that receives storm water from the improved road. The City shall follow all instructions it receives from the Township concerning the cleaning and maintenance of the storm sewer system.
- j. A temporary concrete washout area is required. These temporary washout areas must not allow any liquid concrete, including rinse water from concrete-chutes and washing of concrete tools, to contact the bare ground. The waste material must be disposed of off-site in an MPCA-approved manner. A concrete washout sign must be installed at each temporary washout facility.

III. Township Standard Plans

In order for the Township to have standardized construction and as-built plans, the guidelines listed below shall be followed:

1. General Requirements

- a. The City must consider the requirements for plans found in the Land Development Regulation, Township and County Subdivision Ordinance, Road Ordinance and street construction standards attached herein.
- b. Incorporated in the set of plans shall be a sheet indicating the entire project, with corresponding sheet numbers on each separate sheet and index.
- c. All sheets shall be 22" x 34" standard. Half size 11" x 17" may be approved by the Township Engineer.
- d. Plan and Profile sheets
Horizontal Scale 1" = 50'
Vertical Scale 1" = 5'
(Unless otherwise specified and approved by the Township Engineer)
- e. General Details
 - i. North arrow
 - ii. Scale

- iii. Date of preparation
 - iv. Name of all streets
 - v. Name of the plan preparer, Engineer, Surveyor and City
 - vi. Seal or signature of the preparer, Licensed Engineer and Licensed Land Surveyor.
 - vii. Roadway and storm sewer plan and profile shall be drawn at a scale of 1" = 50' horizontal and 1" = 5' vertical.
 - viii. Roadway cross-sections shall be drawn at a scale of 1" = 10' horizontal and 1" = 5' vertical.
- f. All detail drawings shall be on a separate sheet and referenced to the proper sheet.
 - g. The profile shall be directly below the plan with the stationing aligned as closely as practical. Stationing shall be shown on the plan view as well as the profile.
 - h. All parcels shall be properly labeled with lot and block numbers and plat name, or P.I.D. in unplatted areas. Developed parcels shall have their address shown on the plan. Bearings and distances for all existing roadway centerlines and right-of-way described above shall be shown.
 - i. All matchline breaks shall be clean with reference points clearly marked. All plans which are broken by a matchline shall be on the same or consecutive sheets.
 - j. Existing utilities shall be shown in both plan and profile, stationed, and labeled as existing.
 - k. Approximate locations of small utilities: gas, electric, telephone and cable lines shall be shown. Minnesota Statute requires locates.
 - l. Right of way and pavement or curb and gutter alignment data shall be shown.
 - m. Benchmarks shall be placed on all sheets. (N.G.V.D. 1929 Adj. datum)

2. **As-Built Requirements**

- a. All as-built plans shall be in an electronic acceptable format on computer disk with unnecessary construction information removed (trees, shrubs, fences, etc.). Two sets of full size as-built plans shall be provided in addition to the disks.

- b. As-built plans on all ponding areas and drainage swales and ditches are required. Plans shall indicate as-built ground elevations (spot shots) superimposed upon the proposed contours, normal water elevation, high water elevation.
- c. A licensed professional civil engineer shall sign and certify all as-built plans.
- d. Show the contractor's name on the as-builts.
- e. Show where fabric or insulation has been placed or correction to pavement section has been made in the streets on the plan portion of the as-builts.
- f. Benchmarks shall be referenced on each sheet.
- g. As-built elevations shall be established using conventional methods (non G.P.S.) with an accuracy of $\pm 0.05'$. All elevations shall be based on N.G.V.D. 1929 Adj. datum.

IV. Township Standard Materials

In order to standardize certain construction materials and assure quality construction, we have adopted the following:

1. Storm Sewer and Drainage Pipe

- a. All storm sewer pipe within any street right-of-way (not including driveway culverts) shall be reinforced concrete pipe of the class as shown on the plans. Pipe shall meet Mn/DOT 3236 Specification. Joints shall be flexible watertight meeting ASTM C-361.
- b. Storm sewer pipe on private property or on easements not used for vehicle traffic may be corrugated high density polyethylene (HDPE) pipe.
 - i. Corrugated high density polyethylene (HDPE) pipe and fittings shall meet the requirements of Mn/DOT specification 2503 (Corrugated Polyethylene Pipe Sewer).
- c. Articulated Concrete Block, conforming to Mn/DOT 3604, or an engineer approved equivalent riprap is required at all storm sewer discharge pipes and pond overflows. Fabric blanket conforming to Mn/DOT 3733 (e.g. Mirafi 500 or 800) is required under the articulated block.

- d. Erosion control (Wood fiber) blanket is required at all inlets. (See Mn/DOT Standard Plate No. 9102D) All erosion control blanket shall be fastened to the ground using bio-degradable staples or wood stakes. Metal staples will not be allowed.
- e. The minimum size of cross culverts shall be 18" for storm sewer pipe.
- f. The minimum size of driveway culverts shall be 15" in diameter and 28' long with flared end section aprons centered in the ditch flow line.
- g. Draintile pipe shall be perforated Thermoplastic Pipe or Corrugated Polyethylene Drainage Tubing conforming to Mn/DOT 3245 or 3278 respectively and shall be installed per Mn/DOT 2502 unless otherwise approved by the Town Engineer.

2. Metal Sewer Castings

- a. Castings for storm manholes and catch basins shall be in accordance with the standard plates and schedule of structures. Unless otherwise specified, castings shall be equivalent to Neenah R-1733 for manholes
- b. Yard inlet castings shall be Neenah R-4342 or equivalent.

3. Manhole and Catchbasin Structures

- a. Manhole and catchbasin structures shall be in accordance with applicable Mn/DOT standard plates or standard plates as shown in the plans. All manholes and covers shall be reinforced for traffic loadings.
- b. Manholes or catch basins identified on the plans as slab top shall be constructed from pipe manufactured to ASTM C-76 Standards, minimum Class 3 strengths.
- c. Manholes identified on the plans as box structures shall be constructed from precast reinforced concrete box sections conforming to ASTM C-789 placed on end. Wall thickness and reinforcement shall be in accordance with ASTM C-789 Table 1 for box section under earth dead load and HS-25 live load conditions. Base and cover slabs shall have thickness and reinforcement to meet MnDOT HS-25 traffic loadings.
- d. All manhole and catchbasin structures with builds greater than 4.0 feet from casting to invert shall have steps. Maximum distance from

top of casting to first step is one and half (1½) feet.

- e. All manholes that are located in green areas shall be marked with a steel marker post and “MH” indicator sign. All manholes that are located within a gravel road shall be adjusted to 1’ below the surface and shall be marked with an offset steel marker post that is located within the right-of-way.

4. Street Material

All materials shall be in conformance with the current Minnesota Department of Transportation Standard Specifications for Construction, and all subsequent revisions (Mn/DOT) or as modified herein in Appendix D.

- a. All streets must be constructed and paved in accordance with Township Ordinances.
- b. All Aggregate surfacing shall be Class 2 crushed granite.

5. Seal Coat Material

All materials shall be in conformance with the current Minnesota Department of Transportation Standard Specifications for Construction, and all subsequent revisions (Mn/DOT) or as modified herein in Appendix D.

V. Testing Requirements

Materials shall be sampled and tested in accordance to the Mn/DOT Schedule of Material Control, except for as modified below. Utility systems shall be tested in accordance with the Standard Specifications for Storm Sewer as published by the City Engineer’s Association of Minnesota (CEAM). The Township Engineer shall be notified 24 hours in advance of the specific test.

1. Pipe Trench Compaction

- a. Standard Proctor Density (ASTM D-698-78): Proctor samples will be obtained within the utility trenches for each type of soil encountered in construction.
- b. Density Test Nuclear (ASTM D-2922): 1 test per lift of backfill, 1 test every 500 feet of pipe installed, minimum 1 test daily when backfilling.
- c. Sand-Cone Method (ASTM D-1556): The Township Engineer may order density tests by the sand cone method.

2. Embankment Compaction

- a. Standard Proctor Density (ASTM D-698-78): 1 test per source of material.
- b. Density Test Nuclear (ASTM D-2922): 1 test per lift of embankment, 1 test every 500 feet of roadway fill, 1 test daily when constructing embankment.
- c. Density Test Sand-Cone Method (ASTM D-1556): The Township Engineer may order density tests by the sand cone method.

3. Class 3 or 4 Aggregate

- a. Standard Proctor Density (ASTM D-698-78): 1 test per source of material.
- b. Gradation Test: 1 test per source of material.
- c. Density Test Nuclear (ASTM D-2922): 1 test per lift of embankment, 1 test every 500 feet of roadway fill, 1 test daily when constructing embankment.
- d. Density Test Sand-Cone method (ASTM D-1556): The Township Engineer may order density tests by the sand cone method.

4. Street Base Aggregate

- a. Standard Proctor Density (ASTM D-698-78): 1 test per source of aggregate base, 1 test per 1000 tons of aggregate placed, 1 test daily when constructing base.
- b. Gradation Test (ASTM D-422): 1 test per source of aggregate base, 1 test per 1000 tons of aggregate placed, 1 test daily when placing aggregate base.
- c. Density Test (Nuclear ASTM D-2922): 1 test per 500 feet of roadway.
- d. Test Rolling (MN/DOT 2111): Prior to placement of granular material, the Township requires the completion of a test roll on the street subgrade. The test roll shall conform to Mn/DOT 2111 except, the contractor shall provide a loaded tandem axle truck with a minimum nine (9) Ton axle load and gross weight of 25 tons. The contractor shall provide a weight ticket for the test roll vehicle to the Township Engineer during the test roll.

The test rolling shall be at the direction of the Township Engineer. A soils engineer and Township representative must be present during the test rolling and provide a written certification to the Township that the test passed or what corrections or recommendations are necessary if there is a failure.

The Township may also require test rolling of the aggregate base once the base section has been constructed.

5. Bituminous Tests

- a. General: Bituminous tests are to be conducted by an independent Mn/DOT certified testing laboratory. One core will be taken for every 500 tons placed, or a minimum of 3 cores per job. Bituminous cores shall be tested for in-place density and thickness.
- b. Marshall Densities and Field Densities (ASTM D-1559): As required by Township Engineer.
- c. Thickness: All cores shall be measured for in-place thickness.

6. Concrete Tests

- a. General: When molding cylinders for strength tests, three cylinders are to be made according to ASTM C-31. One additional cylinder shall be molded when it is anticipated that surrounding air temperatures will fall below 40° Fahrenheit. Said cylinder shall be cured on site.
- b. Compressive Strength (ASTM C-39): 1 set of 3 for every 100 cubic yards of concrete placed or a minimum of 1 set of 3 daily when pouring concrete.
- c. Percent Air Test (ASTM C-231): 1 test for every 100 cubic yards of concrete placed or a minimum 1 test daily when pouring concrete.
- d. Slump Test (ASTM C-143): 1 test for every 100 cubic yards of concrete placed or a minimum 1 test daily when pouring concrete.

VI. Construction Requirements

1. Storm Sewer

- a. Applicable Specifications:
 - i. Work shall conform to the Standard Utility Specifications as

published by the City Engineers Association of Minnesota, 2023 revision, except as herein modified.

- ii. Pipe sewers shall be installed in accordance with CEAM 2621 and Mn/DOT 2501, except as modified herein.

2. Casting Adjustments

All utility castings shall be adjusted as follows:

- a. Sewer Manhole:

All storm sewer manhole castings shall be in place during the laying of the wear course. The castings shall be adjusted before the mat is laid and shall be not less than 1/8" nor more than 1/4" below finished grade. Cast iron adjustment rings will be allowed to make the final adjustment prior to wear course paving. Paving must be completed within 48 hours of making the adjustment.

- b. Storm Sewer:

Storm sewer inlet castings shall be adjusted so the flow line is 2" below finished gutter line.

- c. Grouting Adjusting Rings:

Whenever adjustment rings are provided, the contractor shall grout rings, place the castings, and remove all excess grout on the inside and outside of the manhole by wiping smooth with a gloved hand or similar instrument.

3. Streets

Street construction shall be in accordance with the current Minnesota Department of Transportation Standard Specifications for Construction and all subsequent revisions (Mn/DOT) including the following:

Common excavation and embankment - Mn/DOT 2106

Common excavation and embankment density or compaction requirements are as follows: Roadway embankment shall be compacted by the method described as "Specified Density" as outlined in Mn/DOT Section 2106.3 Paragraph G.1 and Table 2106.3-4.

Aggregate base - Mn/DOT 2211 with compaction by the specified density method.

Plant mixed bituminous non-wear – Mn/DOT 2360.

Tack coat - Mn/DOT 2357

Plant mixed bituminous wear - Mn/DOT 2360.

Concrete curing and protection - Mn/DOT 2531.3G

The street shall be constructed in accordance with typical sections shown on Township Standard Plates as outlined in Appendix A and detailed in Appendix C. The final wear course shall not be constructed until at least one winter freeze/thaw season after the bituminous base construction is completed.

Before excess common excavation, borrow or other materials from projects are deposited or mined on private property, a grading, fill or mining permit is required by the County/Township, plus permission in writing from the property owner.

4. Bituminous Tests

- a. General: Bituminous tests are to be conducted by an independent testing laboratory. One core will be taken for every 500 tons placed, or a minimum of 3 per job. Bituminous cores shall be tested for in-place density and thickness.
- b. Rice Densities and Field Densities (ASTM D-1559)
- c. Thickness: All cores shall be measured for in-place thickness.

VII. Storm Water Treatment Basins

1. Storm water conveyance, storage and treatment basins shall be designed in accordance with the Township of Franklin's policy on stormwater drainage as outlined in Appendix C. Typical basin construction and outlet structures are shown on the Township Standard Plates in Appendix A.

VIII. Miscellaneous

1. Proper notification of improvements shall be given by the City Engineer to the responsible governmental agencies affected by said construction. All necessary permits shall be obtained prior to commencing any work. All special requirements of the responsible agencies shall be complied with.
2. The City's contractor shall furnish, erect, and maintain signs and barricades as provided in Mn/DOT 1710 "Barricades and Signs" to protect the public.

The Township Engineer shall be notified 24 hours prior to the proposed partial blockage or closure of any street or public right-of-way. No street or public right-of-way shall be closed without the proper approval of the Township Engineer and appropriate agencies and emergency departments.

3. It is the responsibility of the City's contractor to protect and leave undisturbed those markers or monuments set for the subdivision of land.
4. The City's contractor shall immediately repair or replace at his own expense any defective workmanship or material of which he is notified during the construction period, or within the warranty period following the date of final acceptance of the work, regardless of the approval and acceptance of the work.
5. A plan for the routing (Detour) of construction traffic shall be submitted to the Township Engineer for his approval. Roads (County, Township) that are utilized for access or egress to the construction site shall be kept free of unsuitable dirt and other debris resulting from said construction. Adequate dust control shall be maintained by the City's contractor.
6. The Township will require the contractor to submit a list of materials and respective suppliers as well as all tests of materials.
7. If any material or labor supplied by the contractor or City is rejected by the Township Engineer or his designated representative as defective or unsuitable, then such rejected material shall be promptly removed, disposed of off the job site, and replaced with approved material.
8. All street rights-of-way shall be cleared and grubbed to full width except as specifically directed.
9. Any utility and drainage easements adjacent to the street right-of-way shall be cleared and grubbed for the placement of utilities except as specifically directed.
10. Work shall not commence before 7:00 a.m. nor extend beyond 7:00 p.m. Monday through Friday. On Saturdays, the hours will be from 8:00 a.m. to 6:00 p.m. No work is to be done on Sundays. Hours and days of work may be modified based on need and approved by the Township Engineer.
11. Driveway grades shall be no greater than 8%.
12. Swing away mailboxes and mailbox placement shall be agreed upon by the City and the Township, unless the Post Office rules otherwise. The City will communicate with the post office to determine their placement preference.

13. The City agrees that upon any sale of a residential lot in the plat, the City will ensure that the purchaser installs a 911 House Number Sign. The sign shall meet the requirements of Wright County.
14. All access to lots shall be shown on the plat and access will be via a bituminous surface street, which abuts the lot. Access will not be allowed off of unimproved right of way provided in the plat. All entrances shall not have slopes steeper than a 1:4 ratio and will not include retaining walls in rural ditch areas.

APPENDIX A

Standard Detail Plates

**TOWNSHIP OF FRANKLIN
STANDARD DETAIL PLATES**

APPENDIX A
Township of Franklin Standard Detail Plates

SERIES 1 STREET

- 100 Local Residential Rural Street Section – 10 Ton
- 101 Local Residential Rural Street Section – Granite Surfacing
- 102 Residential Cul-De-Sac Rural Section
- 102A Residential Temporary Cul-De-Sac Rural Section
- 103A Residential Temporary Cul-De-Sac Section
- 104 Driveway Detail: Rural
- 106 Mailbox Pullout Rural Section
- 108 Mailbox Support\
- 109 Subsurface Drain Headwall (Mn/DOT 3131C)

SERIES 4 STORM SEWER APPURTENANCES

- 400 Skimmer Structure
- 401 Skimmer Structure with Weir
- 402 Skimmer Structure Grate Cover
- 403 Typical Treatment Pond
- 403A Typical Infiltration Basin
- 405 Storm Sewer Standard Manhole
- 406 Slab-Top Manhole
- 409 Standard Storm Manhole – Yard Inlet
- 410 27" Precast Catch Basin Yard Inlet
- 412 Structure Casting (Mn/DOT 4110)
- 413 Storm Cover (Mn/DOT 4110)
- 414 Manhole Step (Mn/DOT 4180J)
- 415 Culvert End Marker (Mn/DOT 8150C)

SERIES 5 EROSION CONTROL & LAND APPURTENANCES

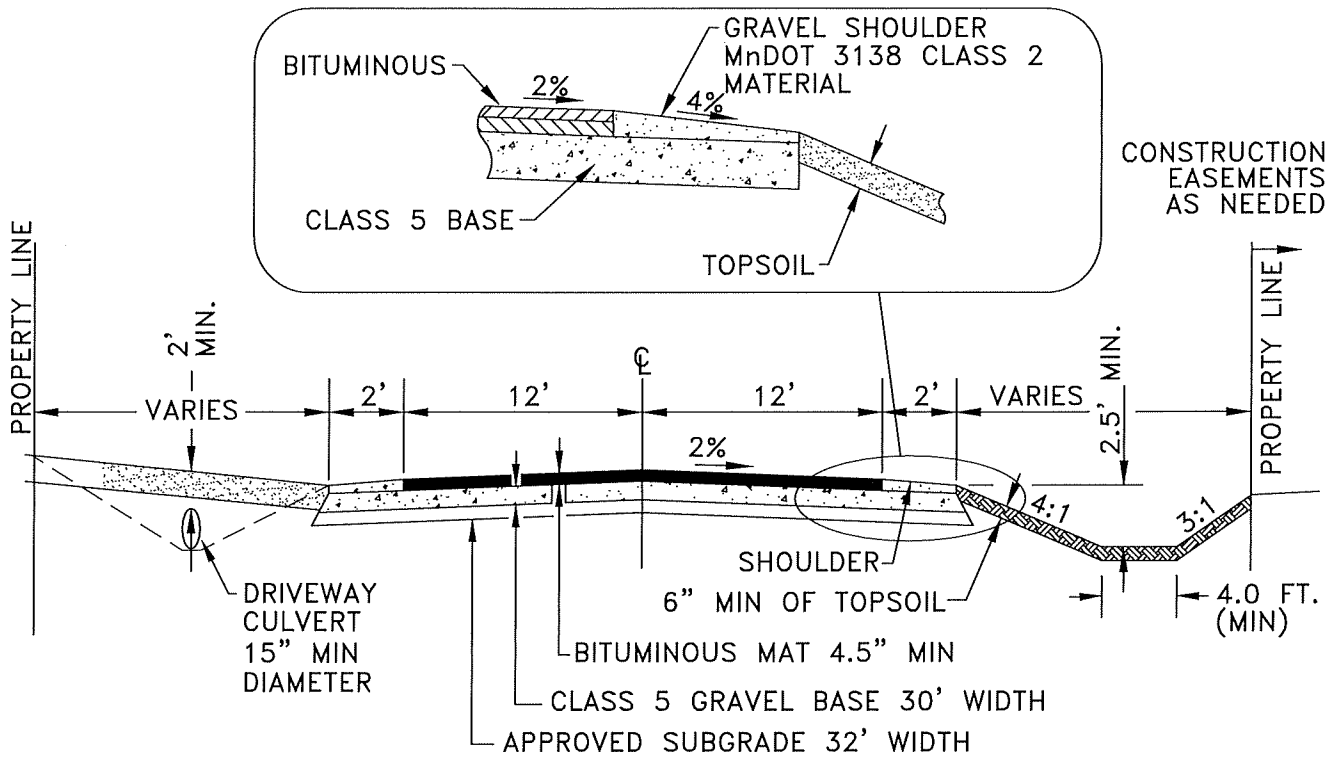
- 500 Articulate Concrete Block
- 500A Riprap Placement
- 501 Silt Fence
- 502 Wood Fiber Blanket Installation
- 503 Rock Construction Entrance
- Mn/DOT 9102D Turf Establishment Areas (Culvert Ends)

SERIES 8 BARRICADES, SIGNS, MARKERS, ETC.

- 800 Street Sign Installation
- Mn/DOT 8002G Permanent Barricade

SERIES 9 UTILITIES

- 900 Location of Public Utilities



LEGEND			
BITUMINOUS SURFACE		AGGREGATE BASE	SUBGRADE
WEAR SP 9.5 SPWEA240B	NON-WEAR SP 12.5 SPNWB230B	CLASS 5, OR 6 3138	CLASS 3, OR 4 3138
** 2"	** 2.5"	*	*

* AGGREGATE AND SUBGRADE THICKNESS TO BE RECOMMENDED BY A LICENSED GEOTECHNICAL ENGINEER
CLASS 5 AGGREGATE BASE SHALL BE A MINIMUM OF 8"

** MINIMUM ALLOWABLE DESIGN THICKNESS, 100% CRUSHED

NOTES: CUMULATIVE DESIGN LANE 18 KIP ESAL'S IS THE CUMULATIVE DAMAGE EFFECT OF VEHICLES DURING THE DESIGN LIFE OF A FLEXIBLE PAVEMENT.

LOCAL RESIDENTIAL RURAL STREET SECTION – 10 TON

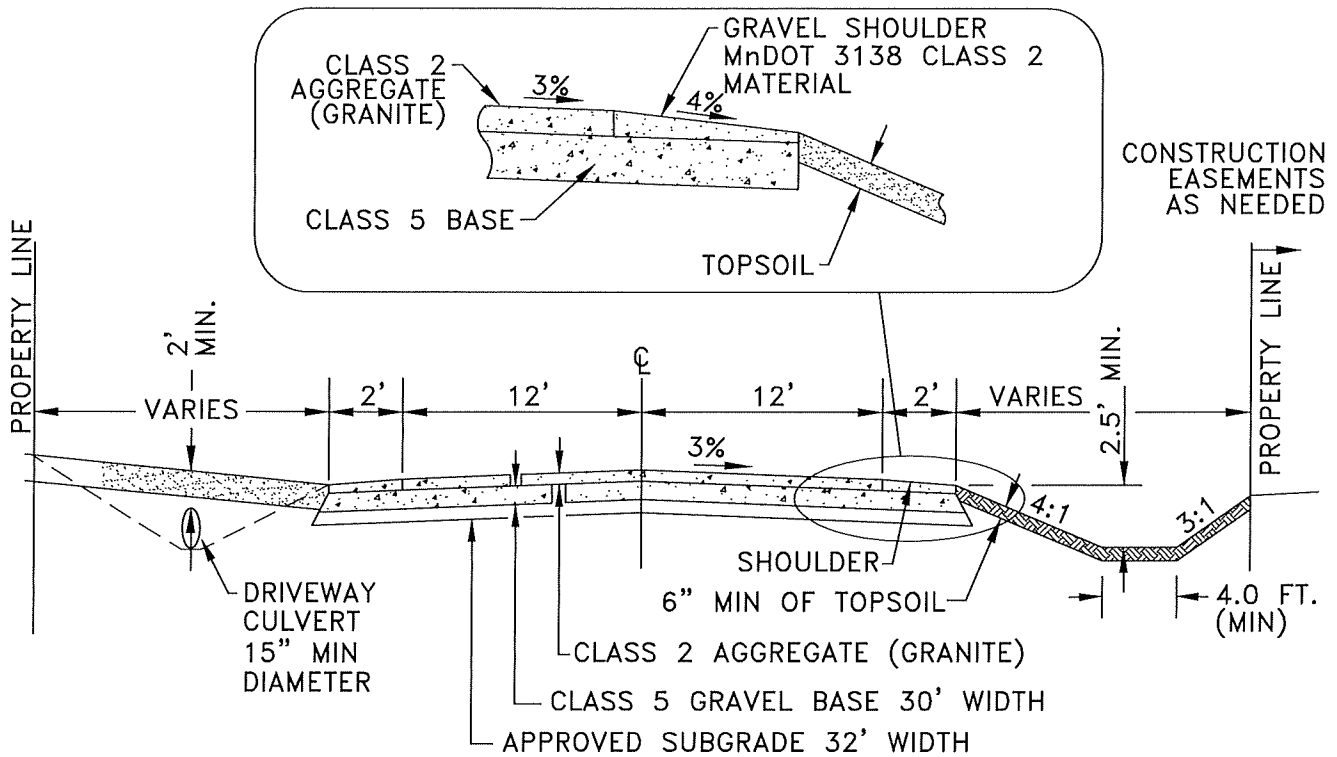
NO SCALE

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11/2025

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FRANKLIN TOWNSHIP

STANDARD PLATE NO.
STR-100



LEGEND	
AGGREGATE SURFACE	AGGREGATE BASE
CLASS 2 AGGREGATE (GRANITE)	CLASS 5 3138
4" **	6" *

* AGGREGATE AND SUBGRADE THICKNESS TO BE RECOMMENDED BY A LICENSED GEOTECHNICAL ENGINEER
CLASS 5 AGGREGATE BASE SHALL BE A MINIMUM OF 6"

** MINIMUM ALLOWABLE DESIGN THICKNESS, 100% CRUSHED

LOCAL RESIDENTIAL RURAL STREET SECTION – AGGREGATE

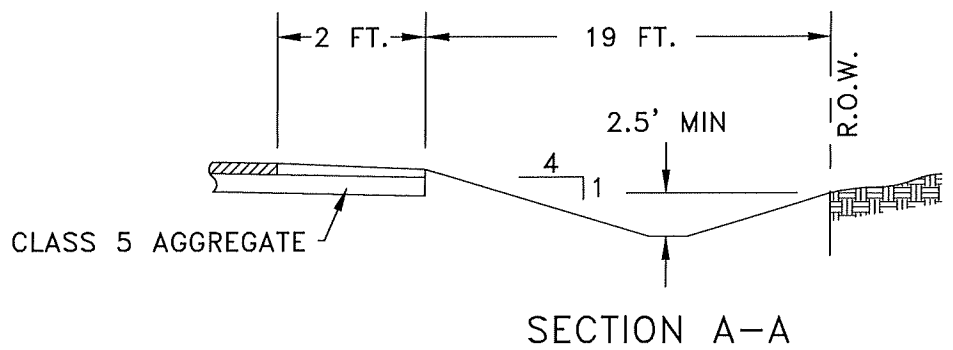
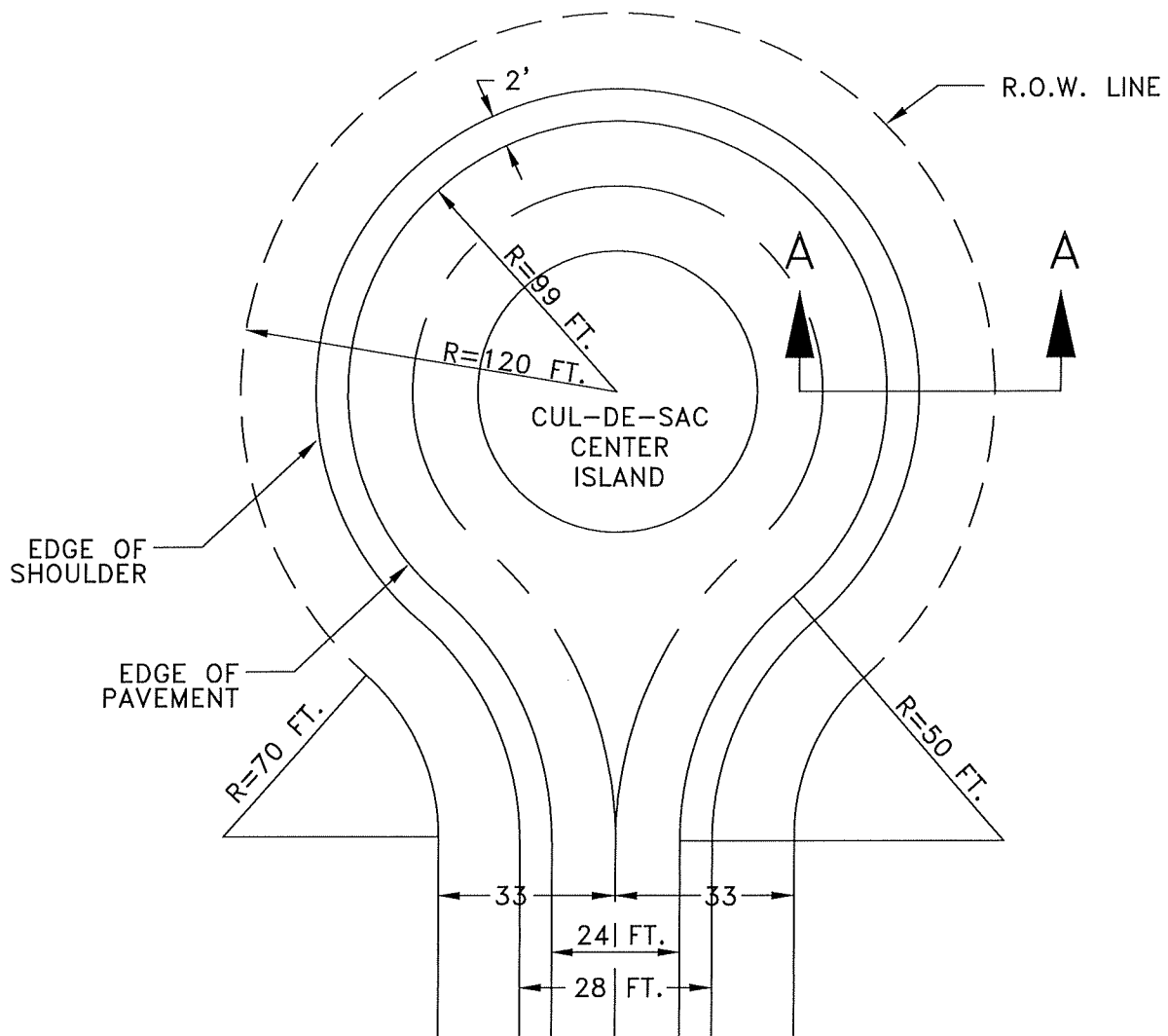
NO SCALE

APPROVED
11/2025

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FRANKLIN TOWNSHIP

STANDARD PLATE NO.
STR-101



RESIDENTIAL ISLAND CUL DE SAC RURAL SECTION

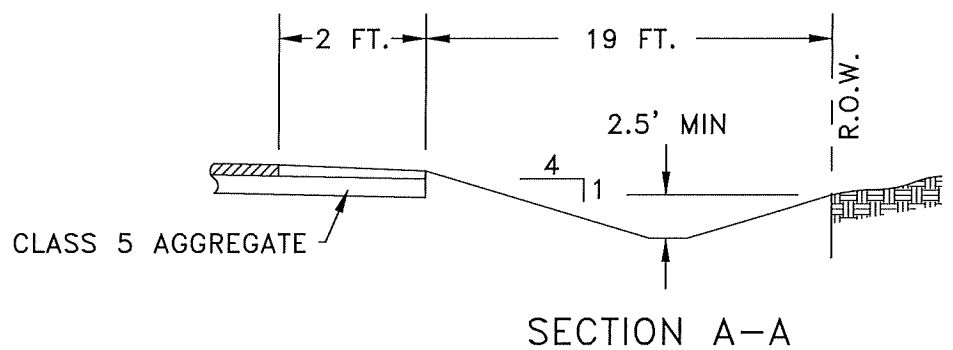
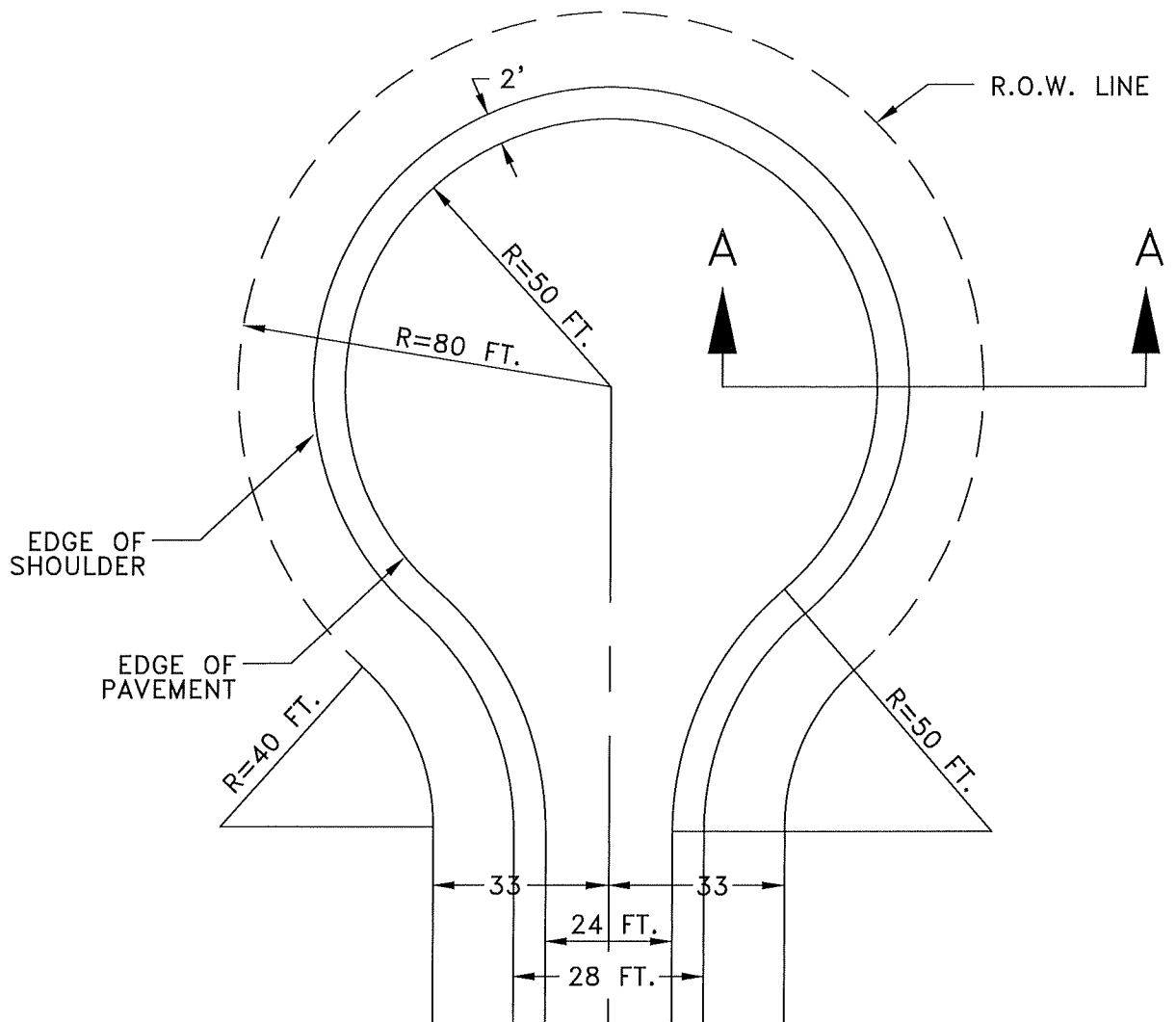
NO SCALE

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11/2025

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FRANKLIN TOWNSHIP

STANDARD PLATE NO.
STR-102



RESIDENTIAL TEMPORARY CUL DE SAC RURAL SECTION

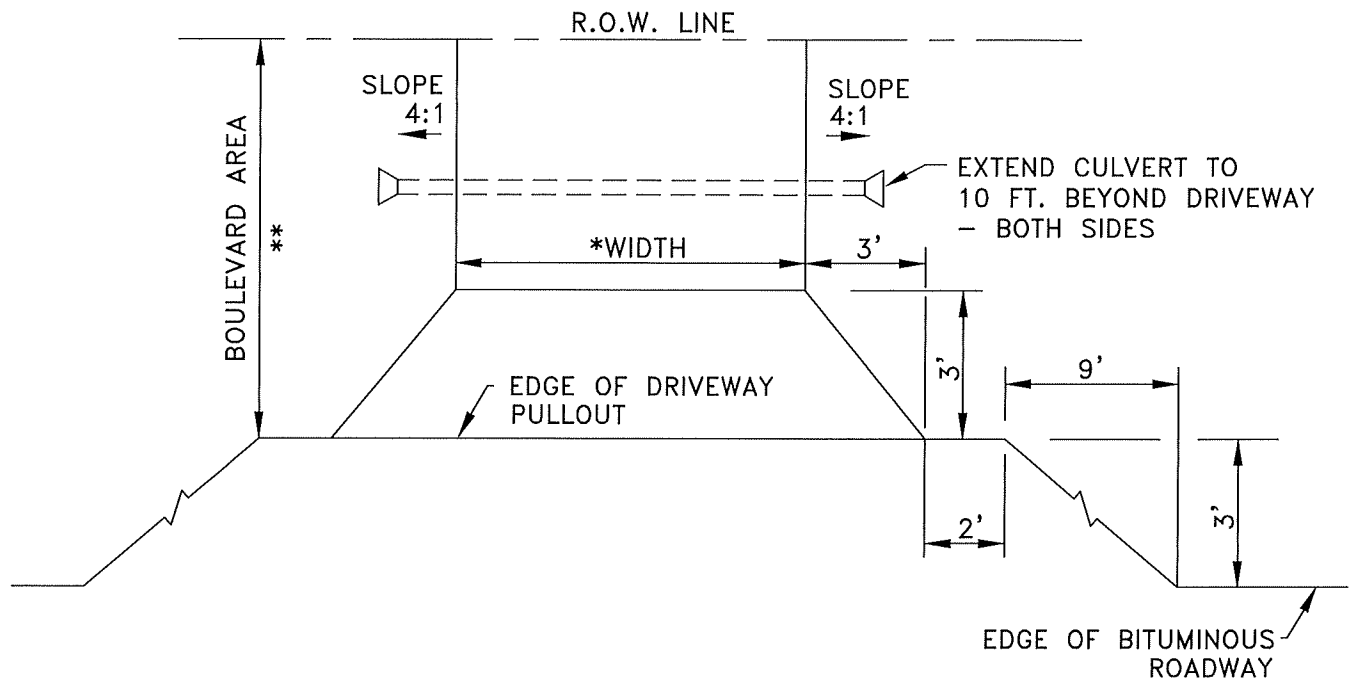
NO SCALE

APPROVED
11/2025

REVISED

FRANKLIN TOWNSHIP

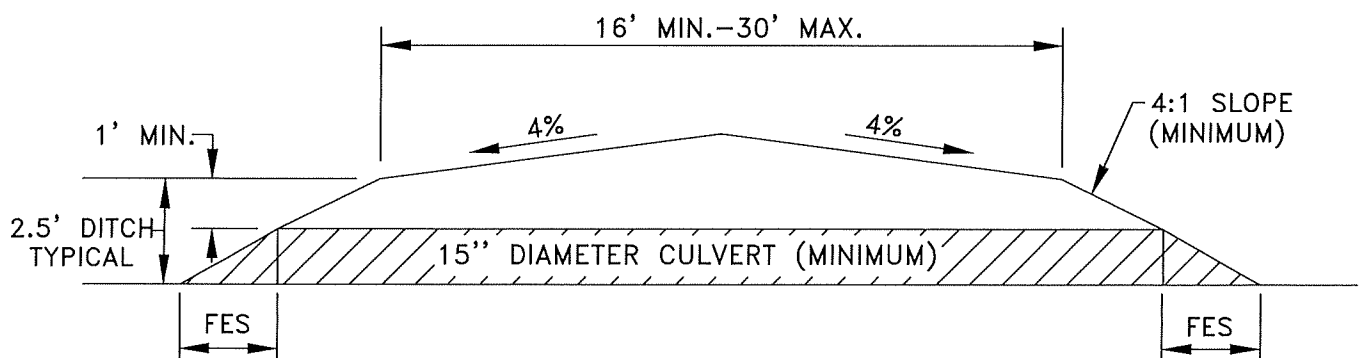
STANDARD PLATE NO.
STR-102A



* STANDARD WIDTH - 16 FT.
MAXIMUM WIDTH - 30 FT.

** DRIVEWAYS PAVED TO R.O.W. OR HOUSE FRONT

PLAN VIEW



CROSS SECTION VIEW

RURAL DRIVEWAY SECTION

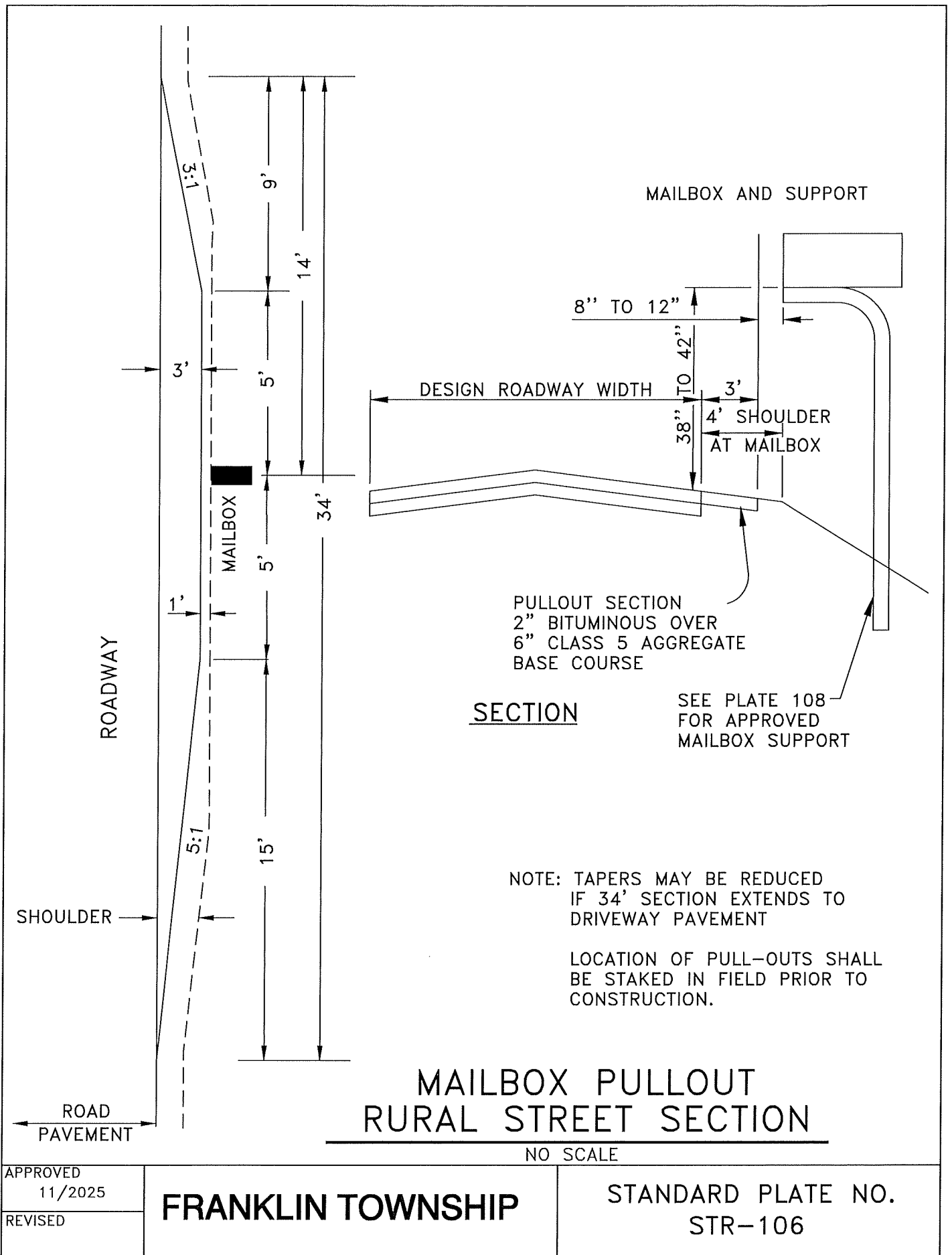
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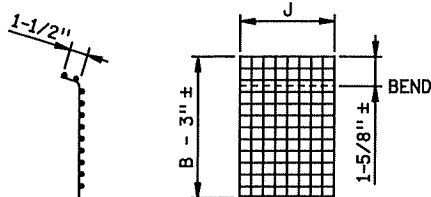
APPROVED
11/2025

REVISED

FRANKLIN TOWNSHIP

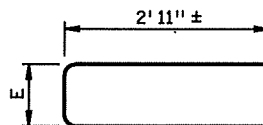
STANDARD PLATE NO.
STR-104



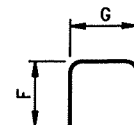


SIDE
FRONT
RODENT SHIELD ①

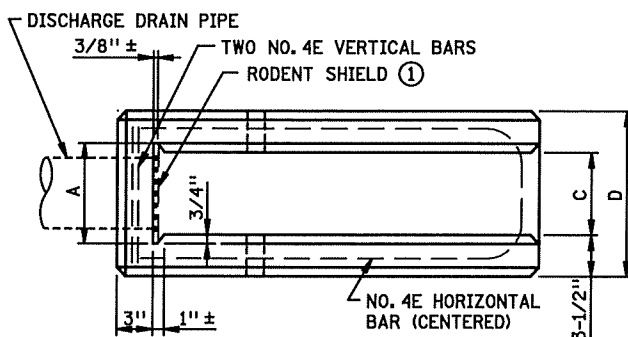
DIMENSIONS ARE APPROXIMATE TO ALLOW FOR BEND AND A SNUG FIT IN SLOT IN HEADWALL.



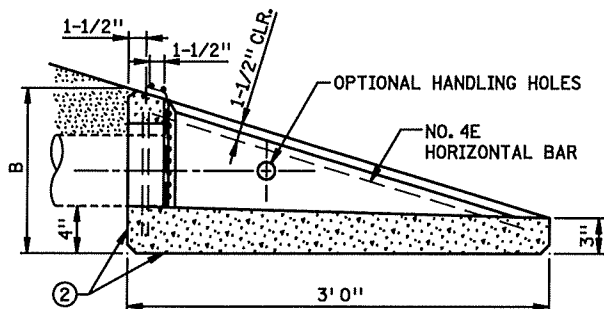
**NO. 4E
HORIZONTAL BAR**



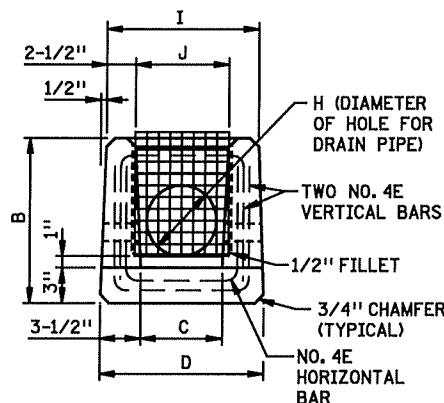
**NO. 4E
VERTICAL BAR
(2 REQUIRED)**



PLAN



SECTION



END VIEW

DIMENSIONS	4" DIA. PIPE	6" DIA. PIPE	8" DIA. PIPE
A	6-1/2"	8-1/2"	10-1/2"
B	1' 0"	1' 2"	1' 4"
C	5"	7"	9"
D	1' 0"	1' 2"	1' 4"
E	8-1/2"	10-1/2"	1' 0-1/2"
F	9"	11"	1' 1"
G	9-1/2"	11-1/2"	1' 1-1/2"
H Δ	5"	7"	9-1/2"
I	11"	1' 1"	1' 3"
J	6"	8"	10"
APPROX. WT.	210 LBS.	250 LBS.	300 LBS.

Δ EXACT DIMENSION DEPENDENT ON COUPLING METHOD.

NOTES:

ALL CONCRETE MATERIALS SHALL BE MN/DOT MIX DESIGNATION 3W46 AND/OR OTHER MIX AS APPROVED BY THE STATE MATERIALS ENGINEER. HEADWALLS SHALL NOT BE SHIPPED UNTIL CONCRETE HAS REACHED A COMPRESSIVE STRENGTH OF 5000 PSI. THE EPOXY BARS SHALL BE SECURELY RETAINED SO THEY ARE NOT DISPLACED DURING CONCRETE PLACEMENT. TIE WIRE SHALL BE EPOXY COATED. WELDING WILL NOT BE PERMITTED. THE FABRICATOR SHALL PROVIDE A QUALITY CONTROL PROGRAM APPROVED BY THE MATERIALS ENGINEER.

- ① THE RODENT SHIELD SHALL BE FABRICATED FROM CARBON STEEL FLATTENED EXPANDED METAL, STYLE 1/2" NO. 4F. IT SHALL BE HOT DIPPED GALVANIZED AFTER FABRICATION. ACTUAL SCREEN DIMENSIONS SHALL BE SUCH AS WILL SNUGLY FIT THE PROVIDED SLOT (TAPERED IF NECESSARY), WITH THE SCREEN LIP FITTING FLUSH WITH THE CASTING TOP AND THE BOTTOM FITTING TIGHT TO THE FLOW LINE.
- ② THE MANUFACTURER'S NAME AND DATE OF PRODUCTION (MONTH AND YEAR) SHALL BE CLEARLY CAST (NOT INK STAMPED) INTO EITHER THE BOTTOM OF EACH HEADWALL OR NEAR THE BOTTOM OF THE LARGE END. IF A MANUFACTURER HAS MORE THAN ONE PLANT, THEY SHALL BE APPROPRIATELY CODED.

APPROVED AUGUST 20, 2001

[Signature]
STATE DESIGN ENGINEER

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

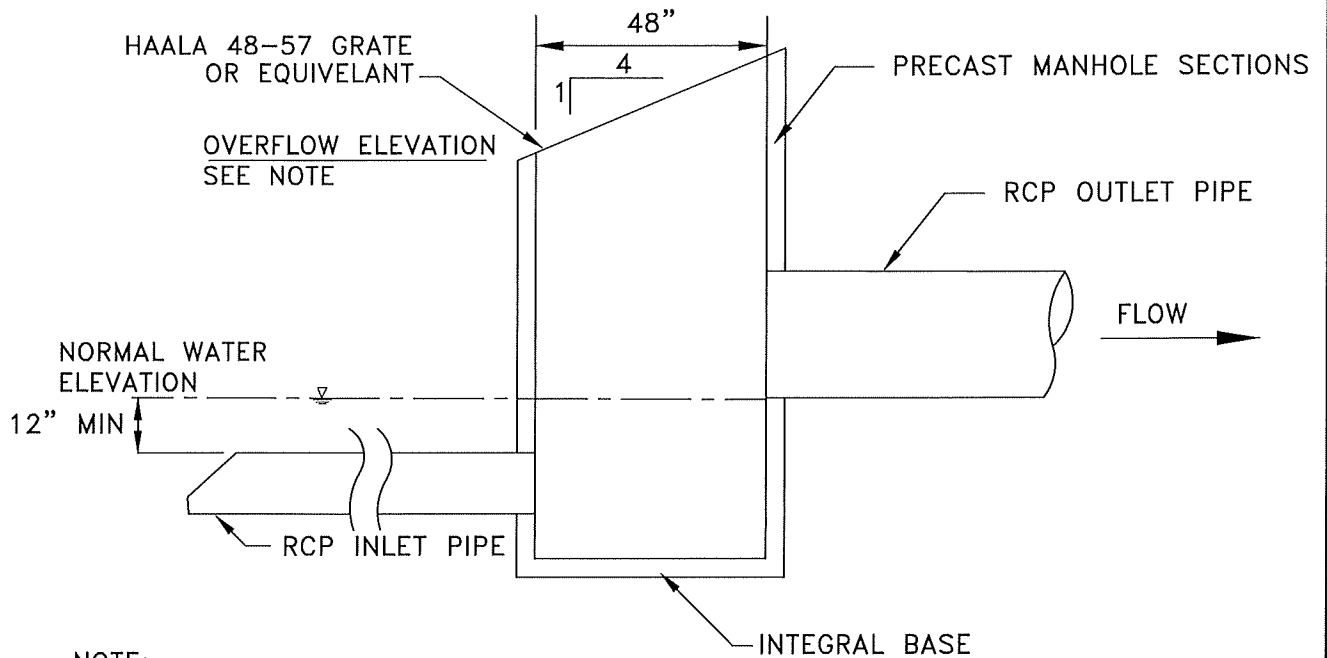
PRECAST CONCRETE HEADWALL FOR SUBSURFACE DRAINS

SPECIFICATION
REFERENCE
2502

REVISED
3-22-2013 M.J.E.

STANDARD
PLATE
NO.

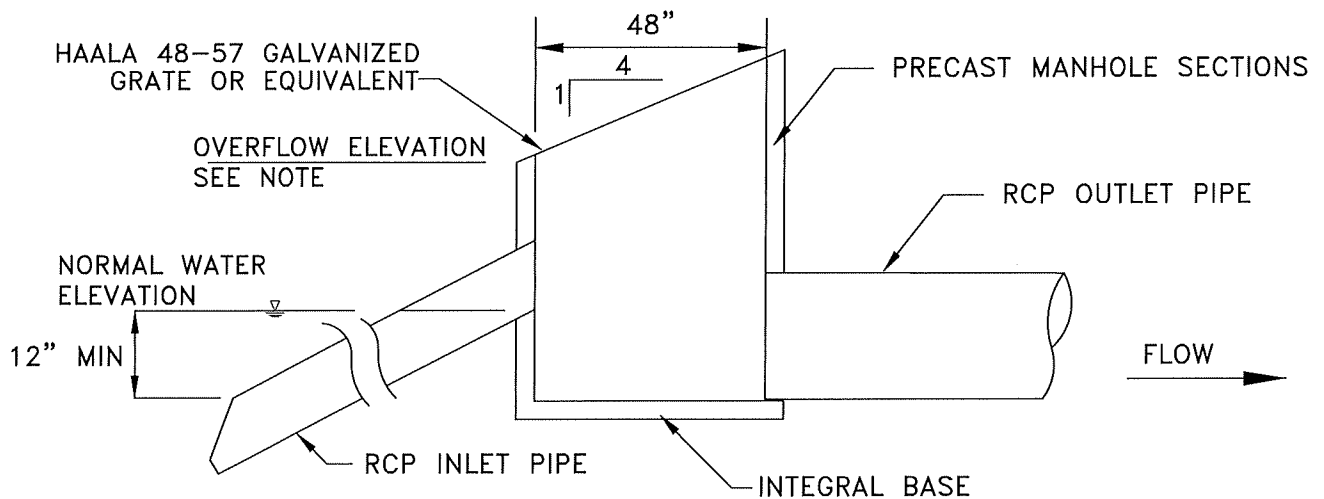
3131C



NOTE:
THE OVERFLOW ELEVATION SHALL BE AT OR
ABOVE THE PEAK 2-YEAR STORM EVENT ELEVATION

SKIMMER STRUCTURE

NO SCALE



NOTE:
THE OVERFLOW ELEVATION SHALL BE AT OR
ABOVE THE PEAK 2-YEAR STORM EVENT ELEVATION

SKIMMER STRUCTURE

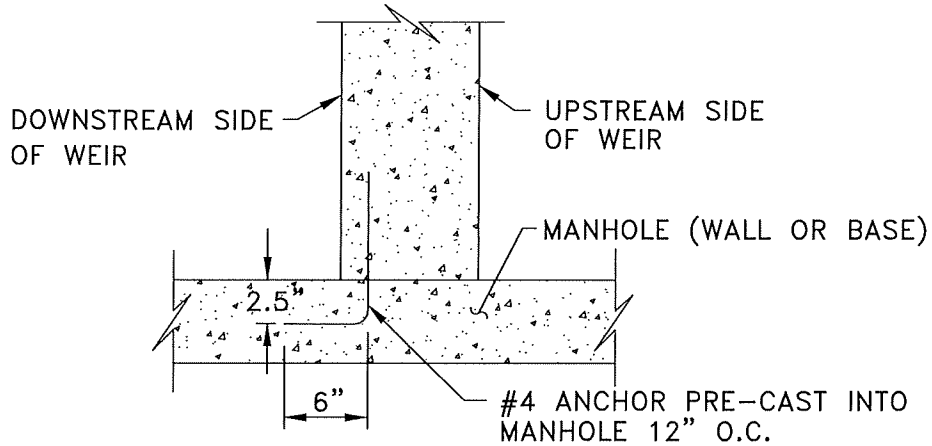
NO SCALE

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11/2025

REVISED

FRANKLIN TOWNSHIP

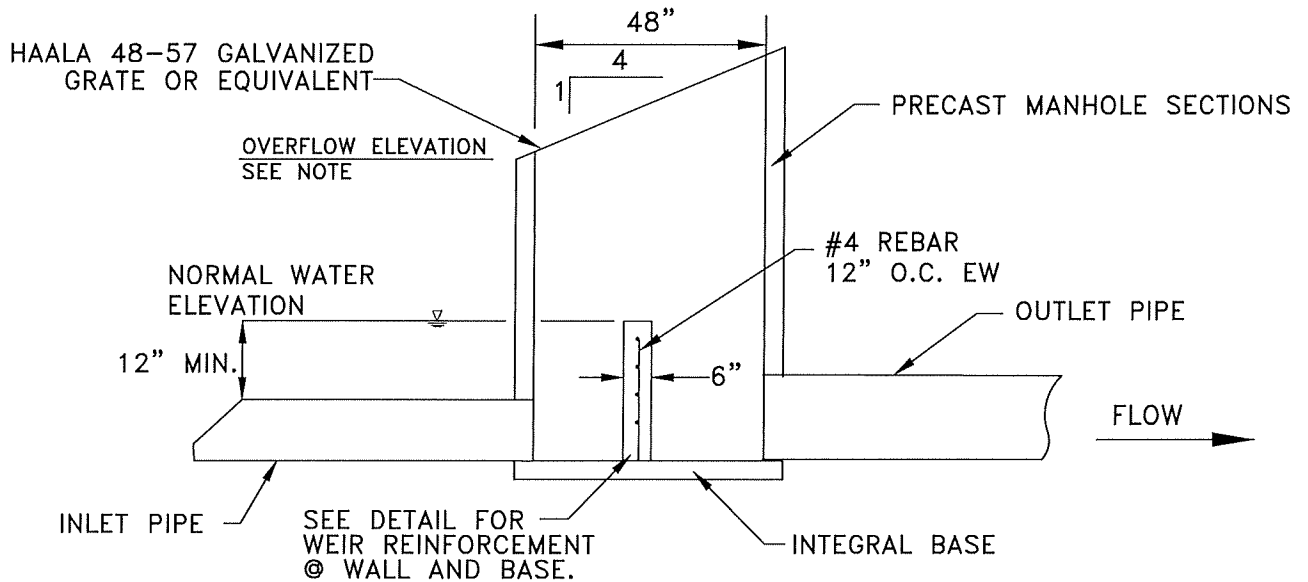
STANDARD PLATE NO.
STM-400



NOTE:

1. THE FOLLOWING MAY BE USED AS AN ALTERNATIVE TO THE PRE-CAST ANCHORS: HVA ADHESIVE ANCHOR SYSTEM, WITH HVA ADHESIVE CAPSULES AND #5 REBAR, AS MANUFACTURED BY HILTI CORP OR APPROVED EQUAL.
2. REINFORCEMENT BARS IN WEIR NOT SHOWN.

**WEIR REINFORCEMENT
© WALL AND BASE**



NOTE:

THE OVERFLOW ELEVATION SHALL BE AT OR ABOVE THE PEAK 2-YEAR STORM EVENT ELEVATION

SKIMMER STRUCTURE WITH WEIR

NO SCALE

APPROVED
11/2025
REVISED

FRANKLIN TOWNSHIP

STANDARD PLATE NO.
STM-401

Technical drawing of a circular hatch cover. The overall diameter is 58 1/2". A grid of 40 hinges, arranged in 8 rows of 5, is shown on the top half. A label "8" LONG HINGES" with an arrow points to one of the hinges. The distance from the centerline to the right edge is 57".

Technical drawing of a hinged grate. The grate is shown in an open position, hinged at the top. Dimensions are provided for the grate and its opening:

- Grate width: 58"
- Grate height: 48"
- Grate thickness: 4"
- Grate depth: 59 1/2"
- Grate height at the hinge: 49 1/4"
- Grate height at the bottom: 5"
- Grate width at the bottom: 48"

A label "HINGED GRATE" points to the grate. A note "1/4\" S F" is present on the right side.

1/2" DIAMETER, ANCHOR
BOLT. MINIMUM 4"
EMBEDMENT

NO SCALE

STANDARD PLATE NO.
STM-402

1. SLOPES SHALL BE NO STEEPER THAN THOSE SHOWN.
2. AN EMERGENCY RIPRAP OVERFLOW SHALL BE PROVIDED.
3. 10' WIDE ACCESS ROUTE TO BE PROVIDED TO SKIMMER STRUCTURE/RIPRAP OVERFLOW
4. TOPSOIL SHALL BE PLACED ON POND SLOPES FOUR INCHES THICK TO A DEPTH OF FOUR FEET BELOW NORMAL WATER LEVEL.

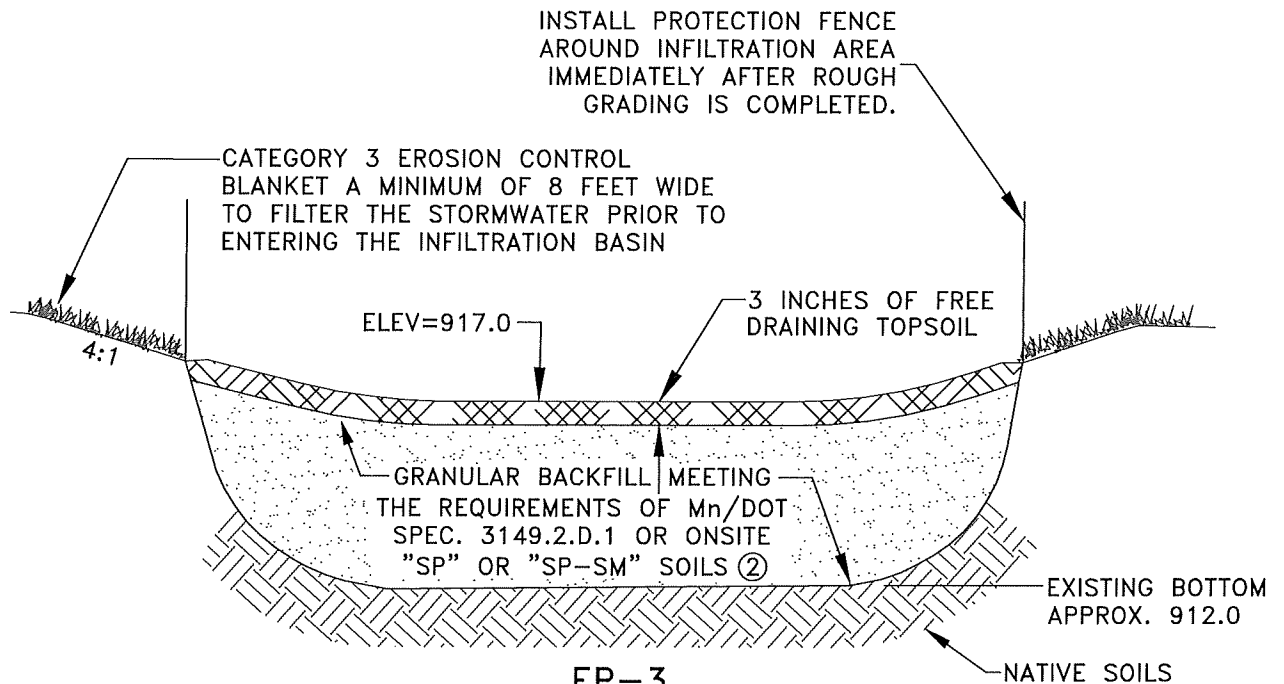
NO SCALE

APPROVED
11/2025

REVISÉ

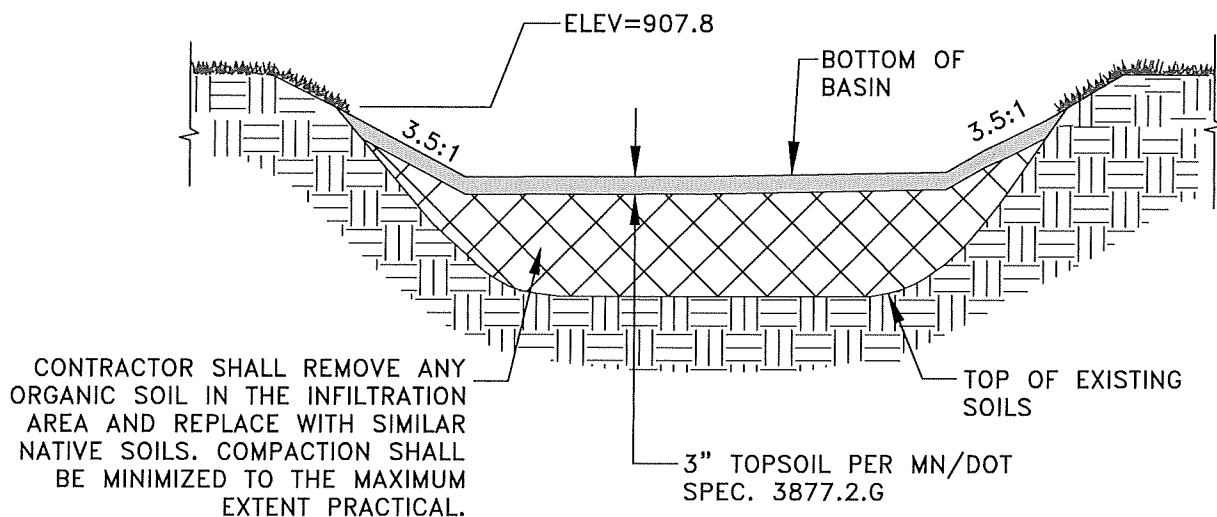
FRANKLIN TOWNSHIP

STANDARD PLATE NO.
STM-403



EP-3 INFILTRATION BASIN SECTION ②

NOT TO SCALE



- ② CONTRACTOR SHALL PROTECT THE INFILTRATION BASIN WITH 48" HIGH ORANGE SAFETY FENCE PRIOR TO THE START OF CONSTRUCTION.
- ③ CONSTRUCTION EQUIPMENT SHALL BE MINIMIZED OVER THE FOOTPRINT OF THE BASIN. ONLY LOW PRESSURE, WIDE TRACKED EQUIPMENT SHALL BE USED FOR CONSTRUCTION.
- ④ SEE SHEET XXX FOR INFILTRATION BASIN RESTORATION REQUIREMENTS.

TYPICAL INFILTRATION BASIN ②③④

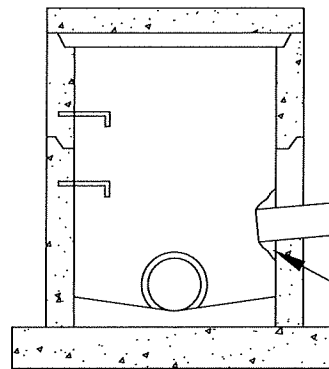
NO SCALE

APPROVED
11/2025

REVISED

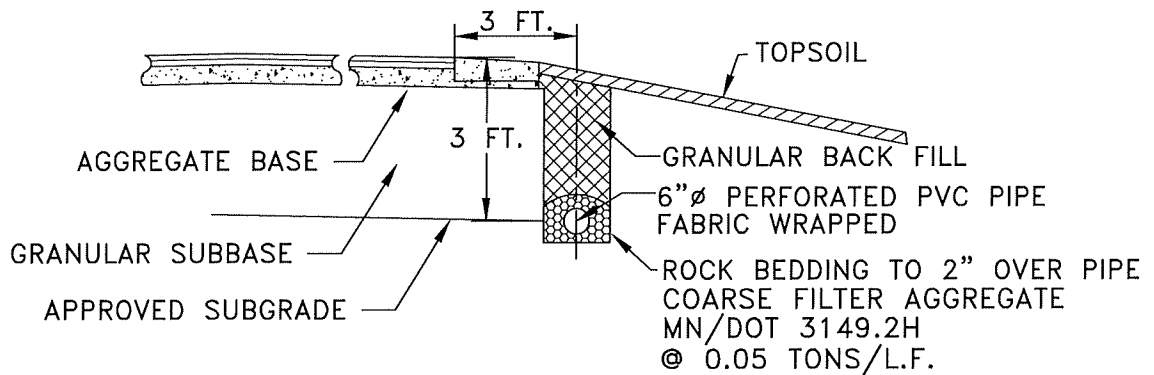
FRANKLIN TOWNSHIP

STANDARD PLATE NO.
STM-403A



CONNECTION TO STORM SEWER
STRUCTURE SHALL BE AT SPRING
LINE OR 6" MIN. ABOVE OUTLET
ALL GROUTING MUST BE AN APPROVED
NON-SHRINKABLE GROUT.

CONNECTION TO STORM SEWER



FILTER FABRIC WRAP SHALL BE
MIRAF1 NONWOVEN (140 NL)
EXXON NONWOVEN (GTF-130EX),
AMOCO NONWOVEN (4545), OR
APPROVED EQUAL.

PERFORATED DRAINTILE PIPE

NO SCALE

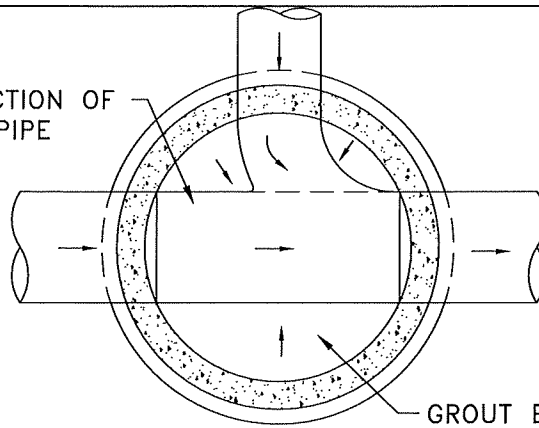
APPROVED
11/2025

REVISED

FRANKLIN TOWNSHIP

STANDARD PLATE NO.
STM-404

FORM 1/2 PIPE SECTION OF
LARGEST DIAMETER PIPE



GROUT BOTTOM TO SLOPE
TOWARD PIPE AS SHOWN
BY ARROWS

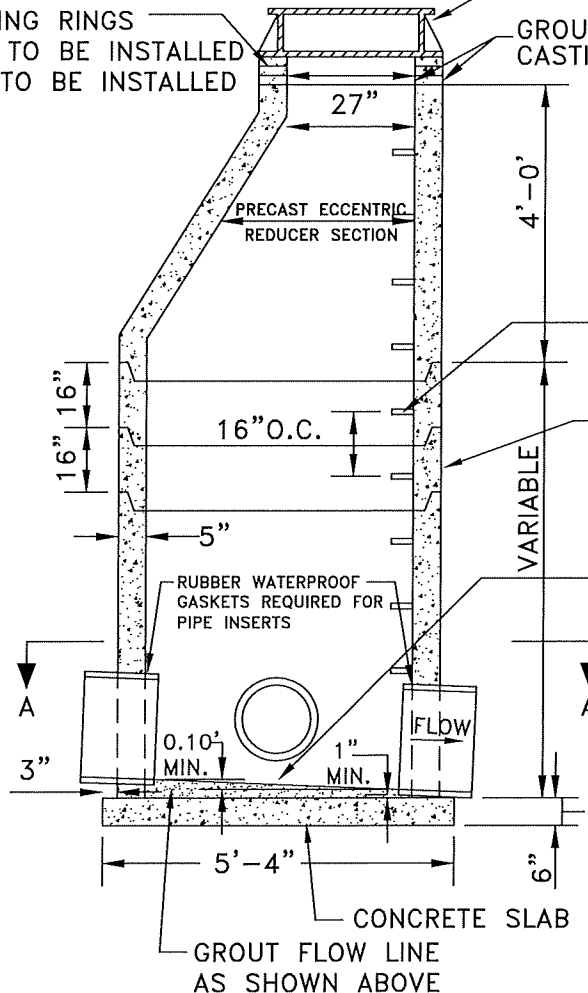
SECTION A-A

CONCRETE ADJUSTING RINGS
MAX. 4-2" RINGS TO BE INSTALLED
MIN. 2-2" RINGS TO BE INSTALLED

CASTING AS INDICATED
ON PLANS OR SCHEDULE

GROUT INSIDE AND OUTSIDE OF
CASTING & ADJUSTING RINGS

SHIMS USED FOR LEVELING
SHALL BE METAL OR CONCRETE



STEPS AS PER MN/DOT
STANDARD PLATE 4180J

WALLS TO BE CONSTRUCTED
OF PRECAST SECTIONS. JOINTS
SHALL BE CONSTRUCTED WITH
CONFINED O-RING GASKETS.

MANHOLE INVERT SHALL BE
SLOPED TO PROVIDE SMOOTH
FLOW FROM INLET TO OUTLET
SEE SECTION A-A

6" BASE FOR ALL MANHOLES LESS
THAN 14 FT. DEEP INCREASE BASE
2" PER 6 FT. OF DEPTH BEYOND
14 FT. 5" PRECAST BASE MAY BE
USED FOR MANHOLES LESS THAN
14 FT. DEEP.

STORM SEWER STANDARD MANHOLE

NO SCALE

APPROVED
11/2025

REVISED

FRANKLIN TOWNSHIP

STANDARD PLATE NO.
STM-405

MANHOLE COVER SHALL BE
TYPE II WITH 27" ECCENTRIC
OPENING

FRAME & CASTING
(SEE MH & CB SCHEDULE)

GROUT INSIDE AND OUTSIDE OF
CASTING & ADJUSTING RINGS

CONCRETE ADJUSTING RINGS
2 MIN. - 4 MAX.

APPROVED STEPS PER
MN/DOT STANDARD
PLATE 4180J

MANHOLE TO BE CONSTRUCTED
OF PRECAST CONCRETE SECTIONS
MIN. CLASS III REINFORCEMENT

VARIES

PRECAST OR
CAST IN PLACE
LOWER SECTION

GROUT LINE SHALL BE
UNIFORM SLOPE BETWEEN
PIPE INVERTS

FLOW
→

VARIES

POURED OR PRECAST CONCRETE
MANHOLE BASE

BASE 6" - 12 ft DEEP
8" - 12 ft TO 20 ft DEEP
10" - OVER 20 ft DEEP

SLAB TOP MANHOLE

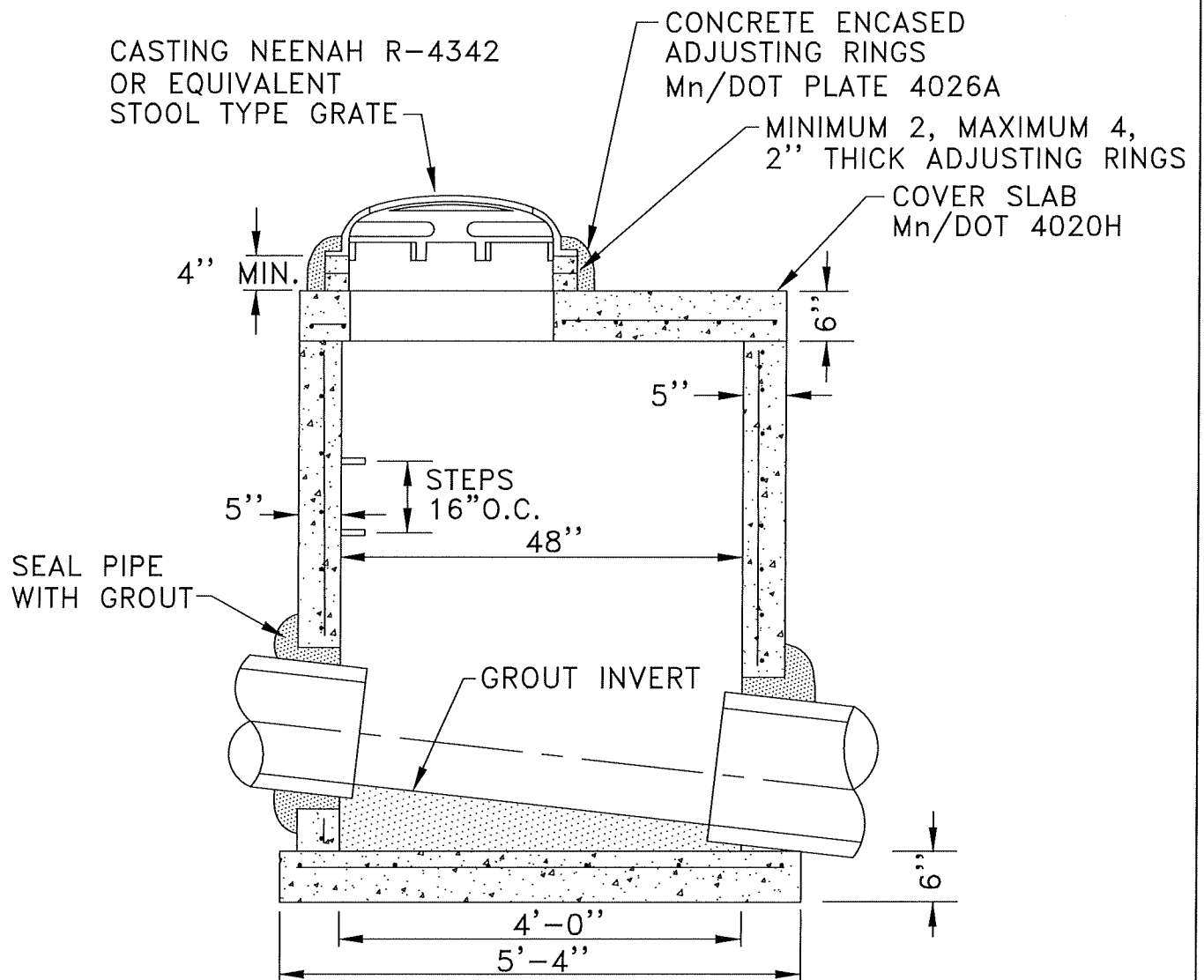
(STORM SEWER)
NO SCALE

APPROVED
11/2025

REVISED

FRANKLIN TOWNSHIP

STANDARD PLATE NO.
STM-406



STANDARD STORM MANHOLE-YARD INLET

NO SCALE

APPROVED
11/2025

REVISED

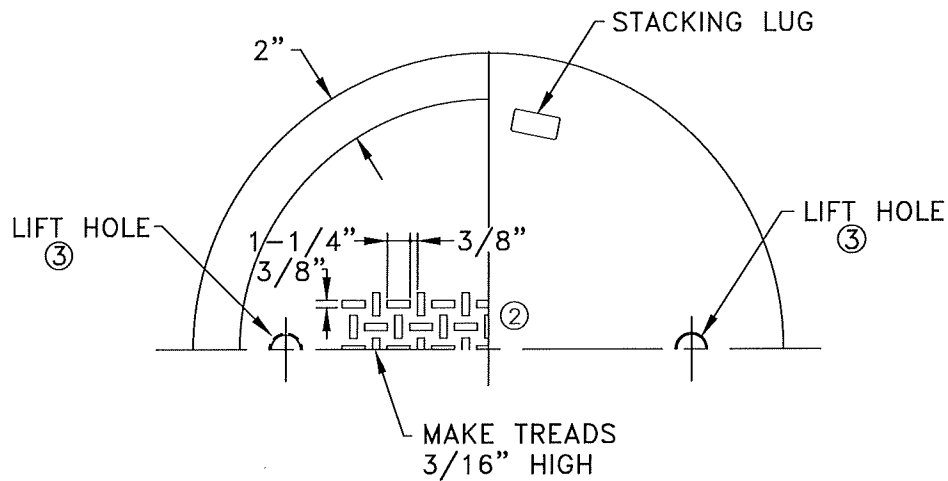
FRANKLIN TOWNSHIP

STANDARD PLATE NO.
STM-409



- ① ALTERNATING GUSSETS (3 EACH).

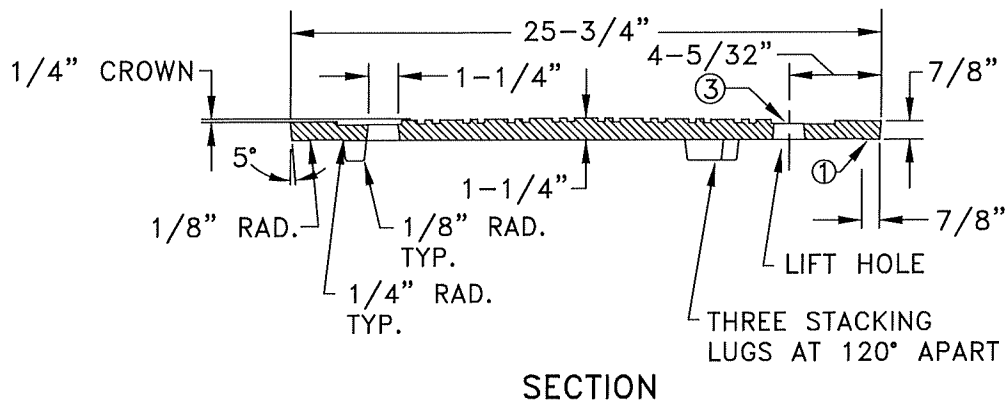
APPROVED 11/2025	FRANKLIN TOWNSHIP	STANDARD PLATE NO. STM-412
REVISED		



TOP VIEW

BOTTOM VIEW

CASTING NO. 716



NOTES:

THESE COVERS TO BE USED WITH RING CASTING NO. 700-7.

① MACHINE FINISHED THICKNESS TO BE 13/16".

② COVER SHALL BE MADE OF GRAY IRON. CLASS 35B.

③ LIFT HOLE 1-1/4" DIA. AT THE TOP, 1-1/2" AT THE BOTTOM.

STORM COVER (MnDOT 4110)

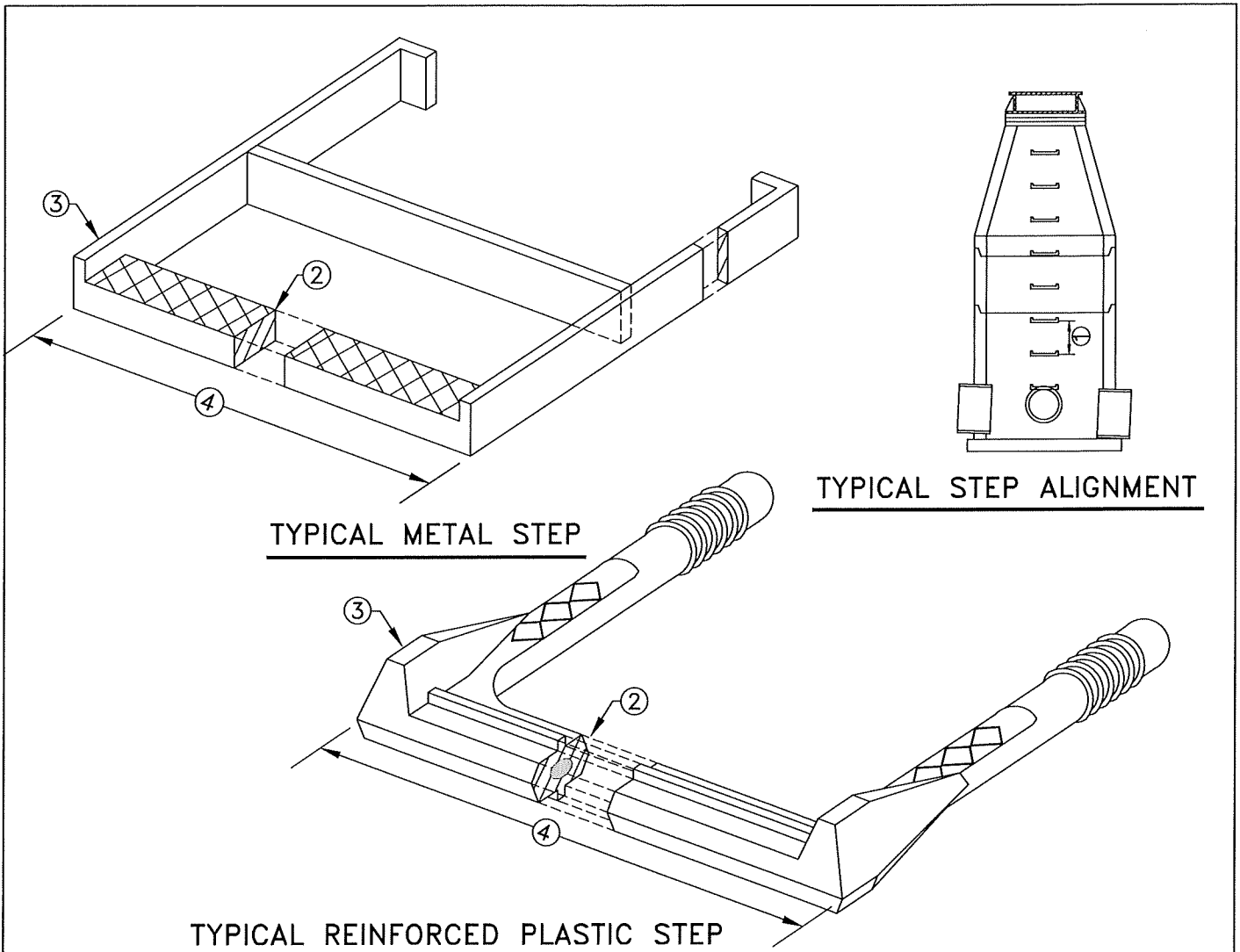
NO SCALE

APPROVED
11/2025

REVISED

FRANKLIN TOWNSHIP

STANDARD PLATE NO.
STM-413



NOTES:

STEPS SHOWN ARE BASIC DESIGN ONLY. FINAL CONFIGURATIONS MAY VARY FROM THESE DRAWINGS.

VARIATIONS IN THE ABOVE DESIGNS WHICH WILL NOT DECREASE STRENGTH WILL BE PERMITTED.

THE OFFICE OF MATERIALS, RESEARCH AND ENGINEERING WILL MAINTAIN A LISTING OF APPROVED MANHOLE STEPS. CURRENTLY APPROVED STEPS ARE ALUMINUM, CAST IRON AND STEEL REINFORCED PLASTIC. SELECTION OF APPROVED STEP DESIGN IS THE OPTION OF THE CONTRACTOR OR SUPPLIER.

ALUMINUM STEPS SHALL CONFORM TO ASTM 826-64A, ALLOY AA 514.0. EMBEDDED LEG SECTIONS SHALL BE GIVEN A NEOPRENE PROTECTIVE COATING OR EQUIVALENT FOR CORROSION PROTECTION. COATINGS SHALL BE APPROVED BY MATERIALS ENGINEERING.

EXCEPT AS OTHERWISE NOTED ON THIS PLATE, STEPS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C478.

STEPS SHALL BE EMBEDDED IN THE RISER OR CONICAL TOP SECTION WALL A MINIMUM DISTANCE OF 3 IN.

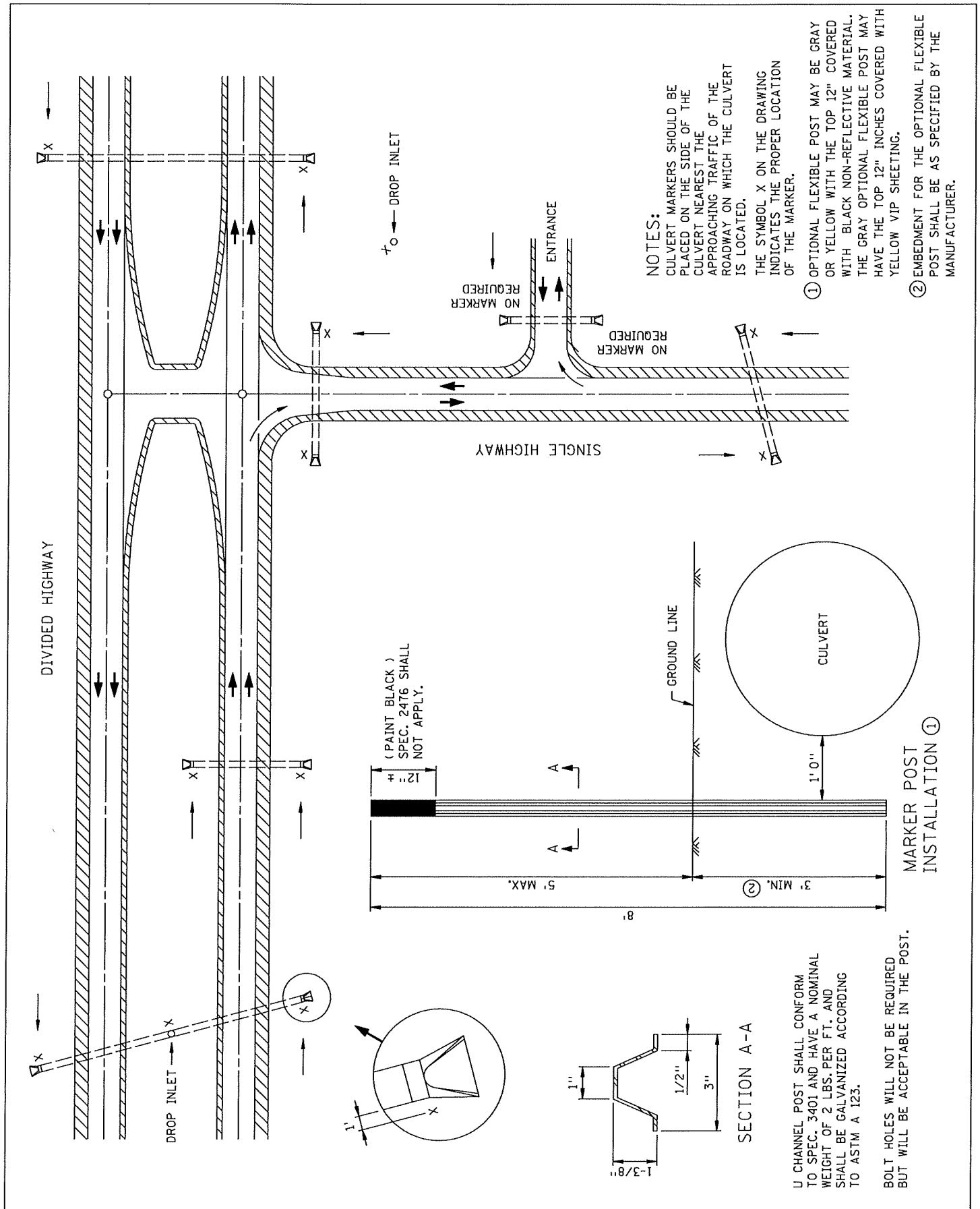
THE RUNG OR CLEAT SHALL PROJECT A MINIMUM CLEAR DISTANCE OF 4 IN. FROM THE WALL OF THE RISER OR CONE SECTION MEASURED FROM THE POINT OF EMBEDMENT.

THE MIN CLEAR DISTANCE BETWEEN THE RUNG OR CLEAT AND THE OPPOSITE WALL OF THE MANHOLE RISER OR CONE SHALL BE 18 IN. MEASURED AT THE CENTER FACE OF THE STEP.

- ① STEPS SHALL BE SPACED AT A MAXIMUM DESIGN DISTANCE OF 16" APART.
- ② STEPS SHALL HAVE A MINIMUM CROSS SECTION DIMENSION OF 1 IN.
- ③ MINIMUM VERTICAL SIDE DIMENSION TO PREVENT FOOT FROM SLIPPING OFF IS 1/2"
- ④ THE MINIMUM WIDTH OF RUNGS OR CLEATS SHALL BE 10 IN.

MANHOLE STEP (MnDOT 4180J)

APPROVED 11/2025	FRANKLIN TOWNSHIP	STANDARD PLATE NO. STM-414
REVISED		



APPROVED MAY 3, 2004

M. Rakus

STATE DESIGN ENGINEER

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

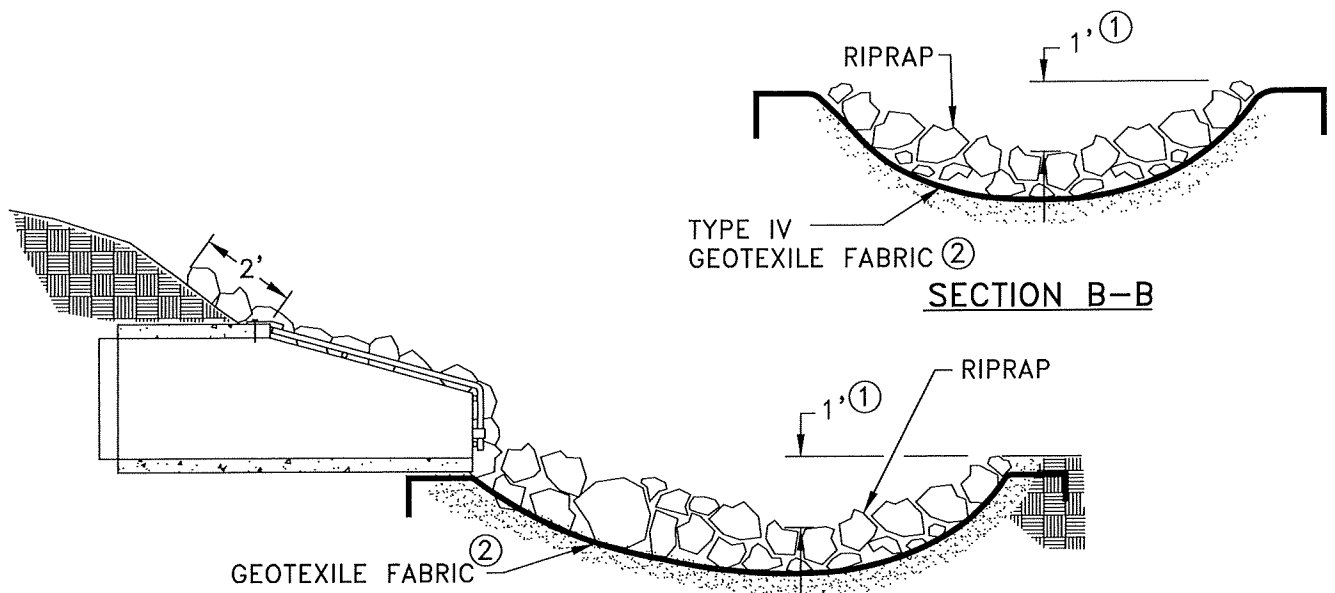
INSTALLATION OF CULVERT MARKERS

SPECIFICATION
REFERENCE

2554

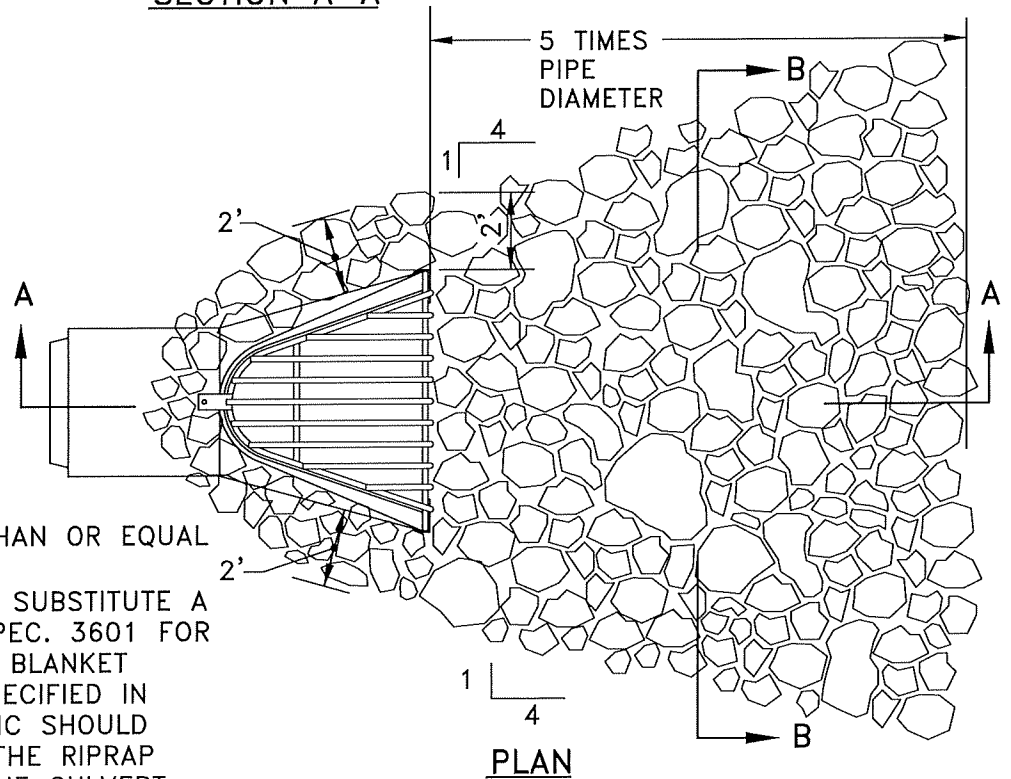
STANDARD
PLATE
NO.

8150C



SECTION A-A

SECTION B-B



PLAN

- ① FOR PIPES GREATER THAN OR EQUAL TO 48" USE 2.0'
- ② THE CONTRACTOR MAY SUBSTITUTE A GEOTEXTILE FABRIC, SPEC. 3601 FOR THE GRANULAR FILTER BLANKET UNLESS OTHERWISE SPECIFIED IN THE PLANS. THE FABRIC SHOULD COVER THE AREA OF THE RIPRAP AND EXTEND UNDER THE CULVERT APRON 3 FEET.
- ③ TRASH GUARD REQUIRED FOR 18" PIPE OR LARGER.
- ④ QUANTITIES AS PER MnDOT STANDARD PLATE UNLESS OTHERWISE SPECIFIED IN THE PLANS.

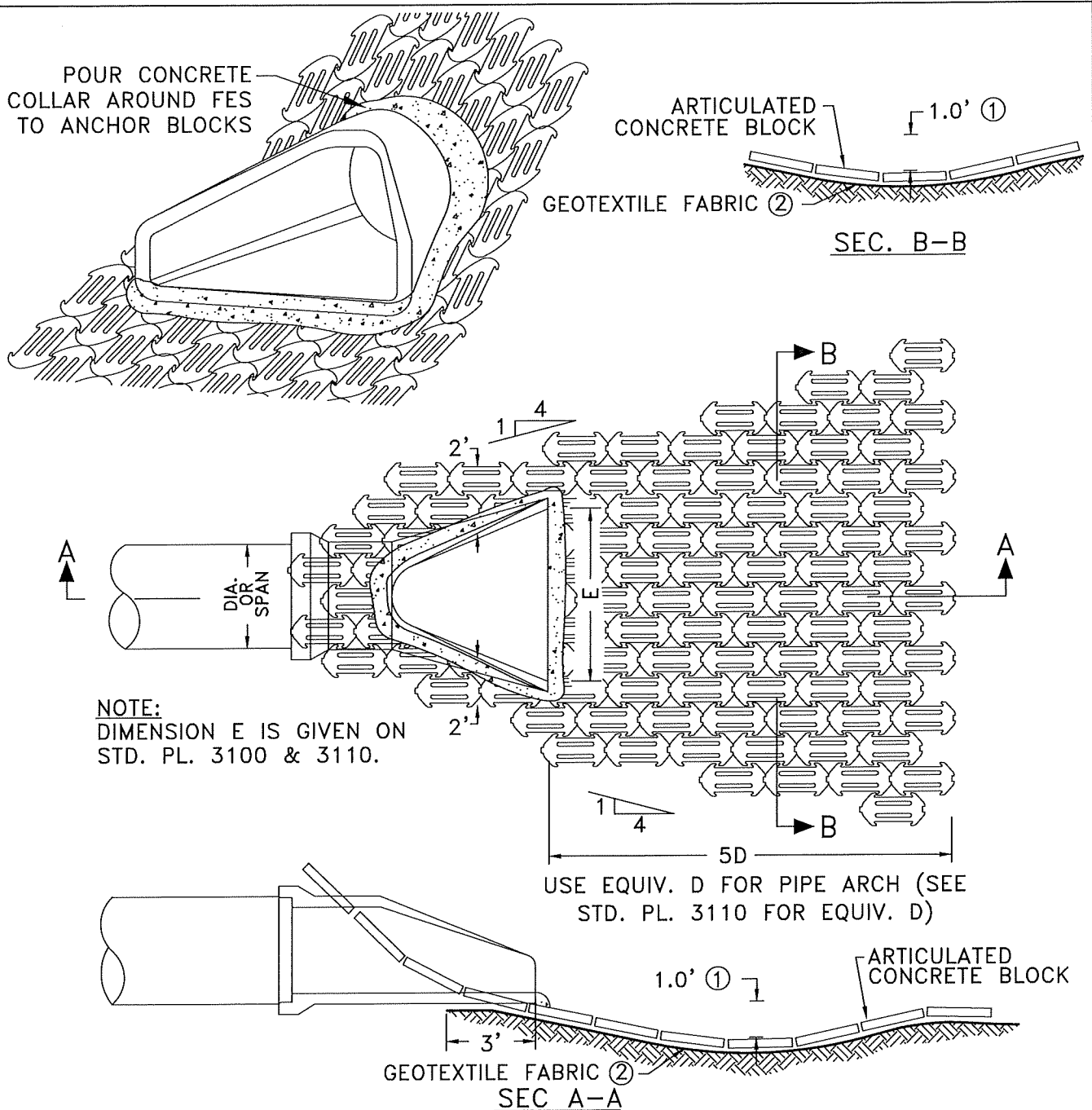
RIPRAP PLACEMENT

NO SCALE

APPROVED
11/2025
REVISED

FRANKLIN TOWNSHIP

STANDARD PLATE NO.
EROS-500



ARTICULATED CONCRETE BLOCK SHALL BE A HANDPLACED INTERLOCKING CONCRETE BLOCK SYSTEM OR CABLE CONNECTED CONCRETE BLOCK MAT.

- ① FOR PIPES GREATER THAN OR EQUAL TO 48", USE 2.0'
- ② GEOTEXTILE FABRIC PER Mn/DOT SPEC. 3733. FABRIC SHALL COVER THE AREA OF THE ARTICULATED BLOCK MAT AND EXTEND UNDER THE CULVERT APRON 3 FEET.
- ③ IF A CABLE CONCRETE SYSTEM IS USED, MULTIPLE MATS MUST BE TIED TOGETHER PER MANUFACTURERS SPEC. AND ALL CABLES PROTRUDING BEYOND THE FINISHED EDGES SHALL BE CUT FLUSH TO THE BLOCK.

ARTICULATED CONCRETE BLOCK AT R.C.P. OUTLET

NO SCALE

APPROVED
11/2025
REVISED

FRANKLIN TOWNSHIP

STANDARD PLATE NO.
EROS-500A

MnDOT 2573.503
PREASSEMBLED

MIN. 2 1/2'

6X6
EARTH FILL

FENCE
MATERIAL
6" APRON

5' POSTS - 8' MAX. ON CENTER
MINIMUM 2' PENETRATION

REF. MnDOT 3886

SILT FENCE

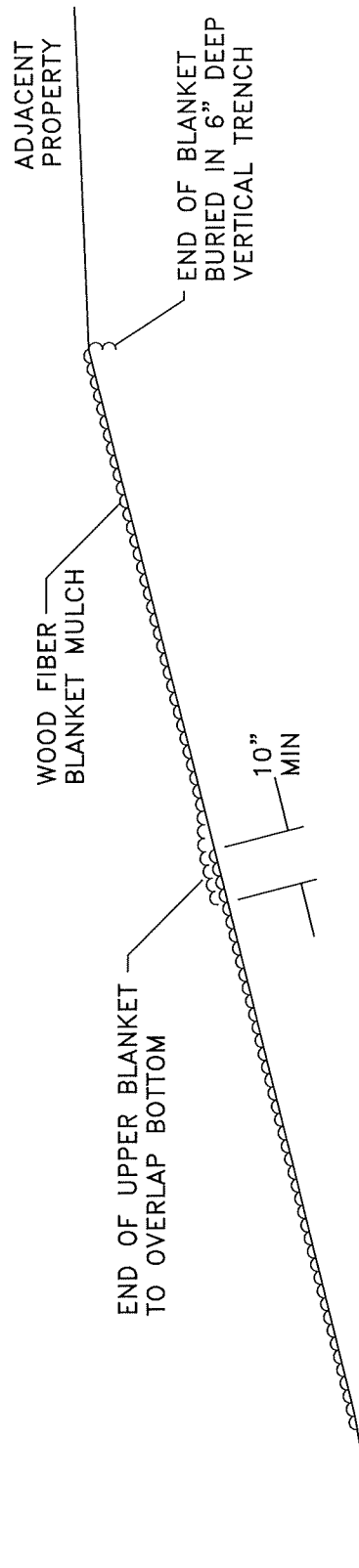
NO SCALE

APPROVED
11/2025

REVISED

FRANKLIN TOWNSHIP

STANDARD PLATE NO.
EROS-501



NOTE:

WOOD FIBER BLANKET SHALL BE PLACED AND STAPLED ACCORDING TO Mn/DOT SPECIFICATION 2575.3K2 WITH THE FOLLOWING EXCEPTIONS. ADJACENT STRIP EDGES SHALL BE OVERLAPPED A MINIMUM OF 6".

BIODEGRADABLE STAPLE STAKES (PLASTIC OR WOOD) SHALL BE USED IN PLACE OF METAL WIRE STAPLES.

ECOSTAKES AND BIOSTAKES ARE ACCEPTABLE PRODUCTS FOR USE TO FASTEN WOOD FIBER BLANKET.

WOOD FIBER BLANKET INSTALLATION ON A CUT SLOPE

NO SCALE

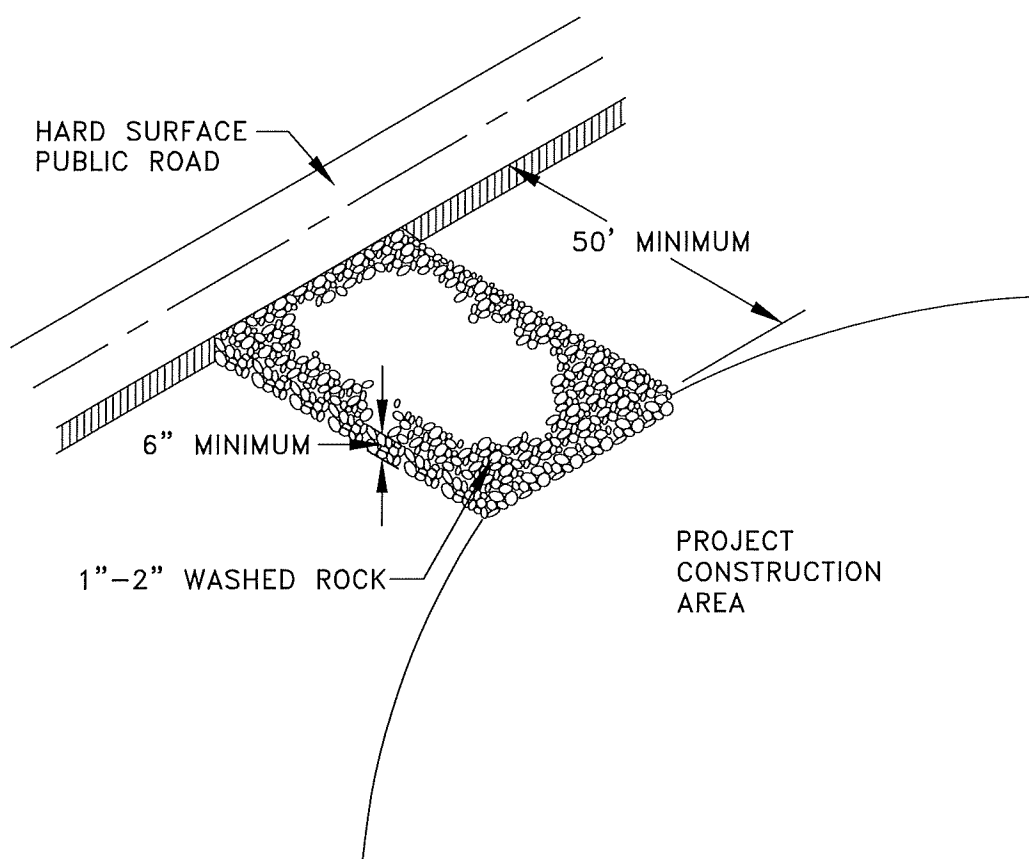
APPROVED
11/2025

REVISED

FRANKLIN TOWNSHIP

STANDARD PLATE NO.
EROS-502

SEDIMENT TRACK OUT CONTROL



* ALTERNATE DEVICES AND METHODS REQUIRE TOWNSHIP ENGINEER APPROVED PLANS.

ROCK CONSTRUCTION ENTRANCE

NO SCALE

APPROVED
11/2025
REVISED

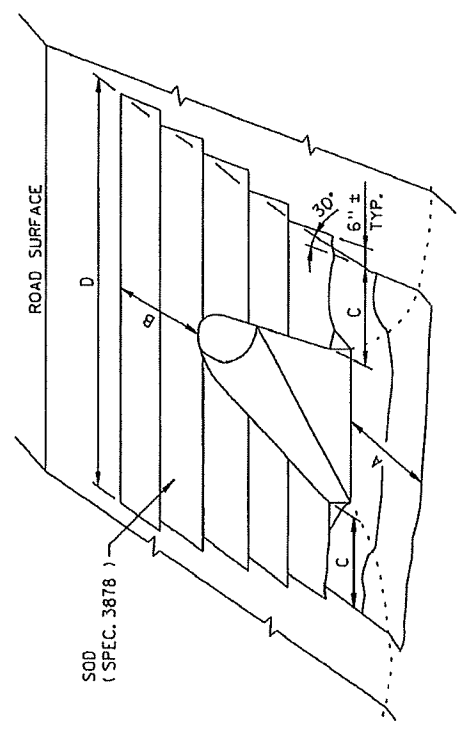
FRANKLIN TOWNSHIP

STANDARD PLATE NO.
EROS-503

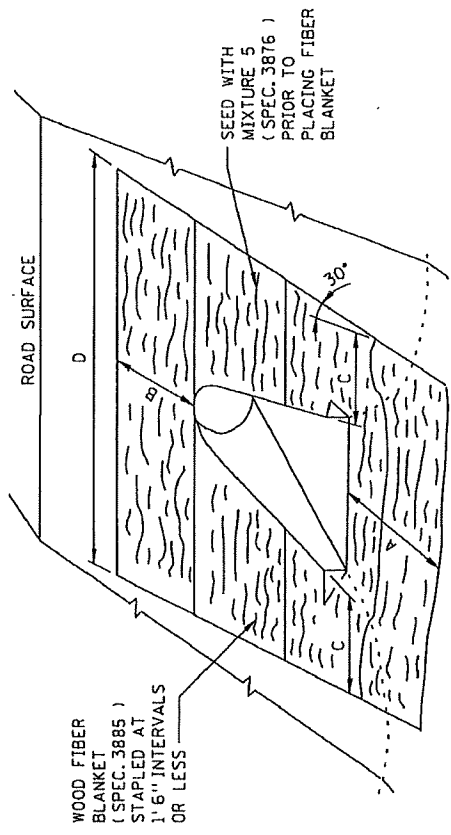
APPROVED Dec. 12, 1990
R.M. Hill
DIRECTOR
OFFICE OF TECHNICAL SUPPORT

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION
TURF ESTABLISHMENT AREAS
(AT PIPE CULVERT ENDS)

SPECIFICATION
REFERENCE
2575
STANDARD
PLATE
NO.
9102D



SODDING DETAIL



MULCHING & SEED DETAIL

QUANTITIES (SQ. YDS.) AROUND CULVERT APRONS ①

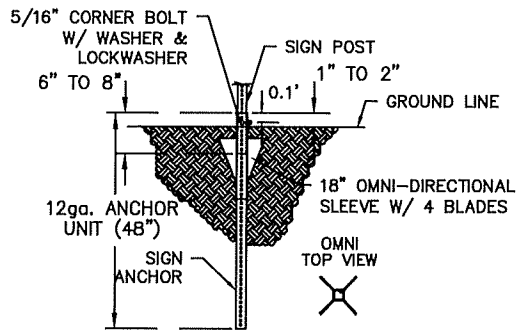
CULVERT DIAMETER	INLET APRON			
	SOD OR MULCH AREA (SQ. YDS.)		"A"	"B"
	METAL APRON	CONCRETE APRON	"A"	"B"
15" & SMALLER	7	8	3'	1.5'
18"	11	10	3'	3'
24"	13	13	3'	3'
30"	19	19	3'	4.5'
36"	28	29	4.5'	4.5'
42"	36	34	4.5'	6'
48"	45	42	4.5'	7.5'
54"	54	47	4.5'	9'
60"	57	46	4.5'	9'
66"	58	50	4.5'	9'
72"	65	59	4.5'	10.5'
78"	78	75	6'	10.5'
84"	79	76	6'	10.5'
90"	—	77	6'	10.5'

CULVERT DIAMETER	OUTLET APRON			
	SOD OR MULCH AREA (SQ. YDS.)		"A"	"B"
	METAL APRON	CONCRETE APRON	"A"	"B"
15" & SMALLER	9	9	4.5'	1.5'
18"	11	11	6'	1.5'
24"	15	15	7.5'	1.5'
30"	19	20	9'	1.5'
36"	30	30	10.5'	1.5'
42"	36	34	12'	1.5'
48"	41	39	13.5'	1.5'
54"	47	41	15'	1.5'
60"	62	52	16.5'	1.5'
66"	63	56	16.5'	1.5'
72"	64	58	16.5'	1.5'
78"	65	62	16.5'	1.5'
84"	66	63	16.5'	1.5'
90"	—	65	16.5'	1.5'

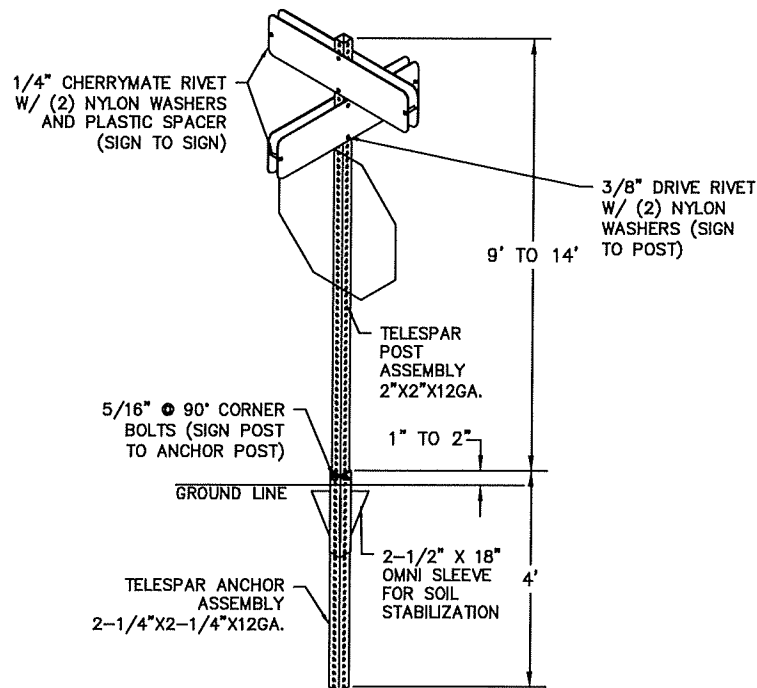
NOTES:

AREA SHOWN IN SQUARE YARDS IS FOR ONE CULVERT END. FOR PIPE ARCHES USE
AREA OF EQUIVALENT DIAMETER PIPE.
AREAS AND DIMENSIONS ARE APPROXIMATE AND ARE BASED ON CULVERT SLOPES.
BUT NO STEEPER THAN 2:1.
DETAILS ARE SHOWN FOR METAL APRON, THE SAME DIMENSIONS EXCEPT DIMENSION
"D". APPLY WHEN A CONCRETE APRON IS USED. DIMENSION "D" MAY VARY SLIGHTLY
DUE TO DIFFERENT WIDTHS OF APRON FROM METAL AND CONCRETE. DIMENSION "D"
SHOWN FOR 90" DIA. APRON IS FOR CONCRETE APRON.

① ADDITIONAL QUANTITIES MAY BE SHOWN IN THE PLAN OR REQUIRED BY THE ENGINEER.



TELESPAR ANCHOR DETAIL
NOT TO SCALE



STREET SIGN INSTALLATION

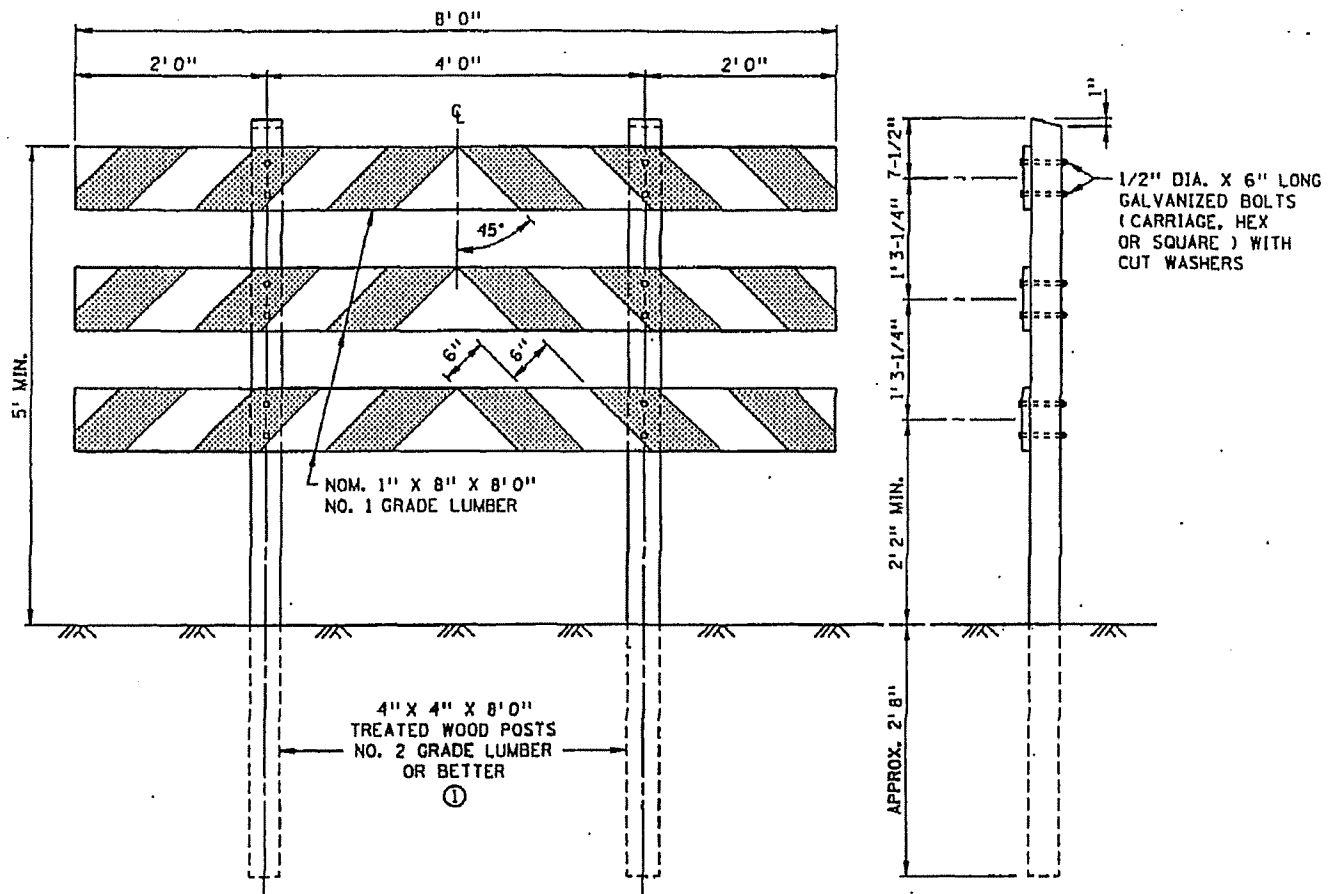
NO SCALE

APPROVED
11/2025

REVISED

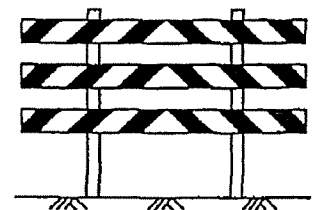
FRANKLIN TOWNSHIP

STANDARD PLATE NO.
TRAF 800

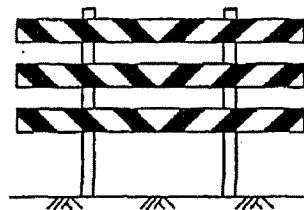


ELEVATION
(TURNS PERMITTED SHOWN)

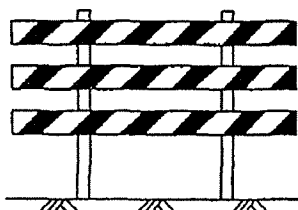
END VIEW



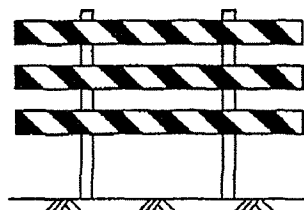
TOTALLY CLOSED ROADWAY
TURNS PERMITTED



TOTALLY CLOSED ROADWAY
NO TURNS PERMITTED



TOTALLY CLOSED ROADWAY
LEFT TURN ONLY



TOTALLY CLOSED ROADWAY
RIGHT TURN ONLY

NOTES:

THE BARRICADE BOARD FACE SURFACES SHALL BE FULLY REFLECTORIZED IN ALTERNATE SILVER-WHITE AND RED STRIPING, USING REFLECTIVE SHEETING CONFORMING TO THE REQUIREMENTS OF SPEC. 3352.2A2b, STANDARD NO. 2.

PRIOR TO INSTALLING THE REFLECTIVE SHEETING, THE BARRICADE BOARDS SHALL BE GIVEN A COMPLETE COATING OF WHITE WOOD PRIMER PAINT FOLLOWED BY A SECOND COAT OF WHITE EXTERIOR PAINT APPLIED ONLY TO THE SURFACES NOT COVERED WITH REFLECTIVE SHEETING.

THE BARRICADE BOARDS SHALL BE COMPLETELY PAINTED AND REFLECTORIZED SHEETING APPLIED BEFORE BEING INSTALLED ON THE POSTS.

- ① ALTERNATE MATERIALS FOR POSTS MAY BE USED WHEN APPROVED BY THE OFFICE OF TRAFFIC ENGINEERING.

APPROVED AUGUST 8, 1995

David J. Robinson
STATE DESIGN ENGINEER

STATE OF MINNESOTA
DEPARTMENT OF TRANSPORTATION

PERMANENT BARRICADE

SPECIFICATION
REFERENCE

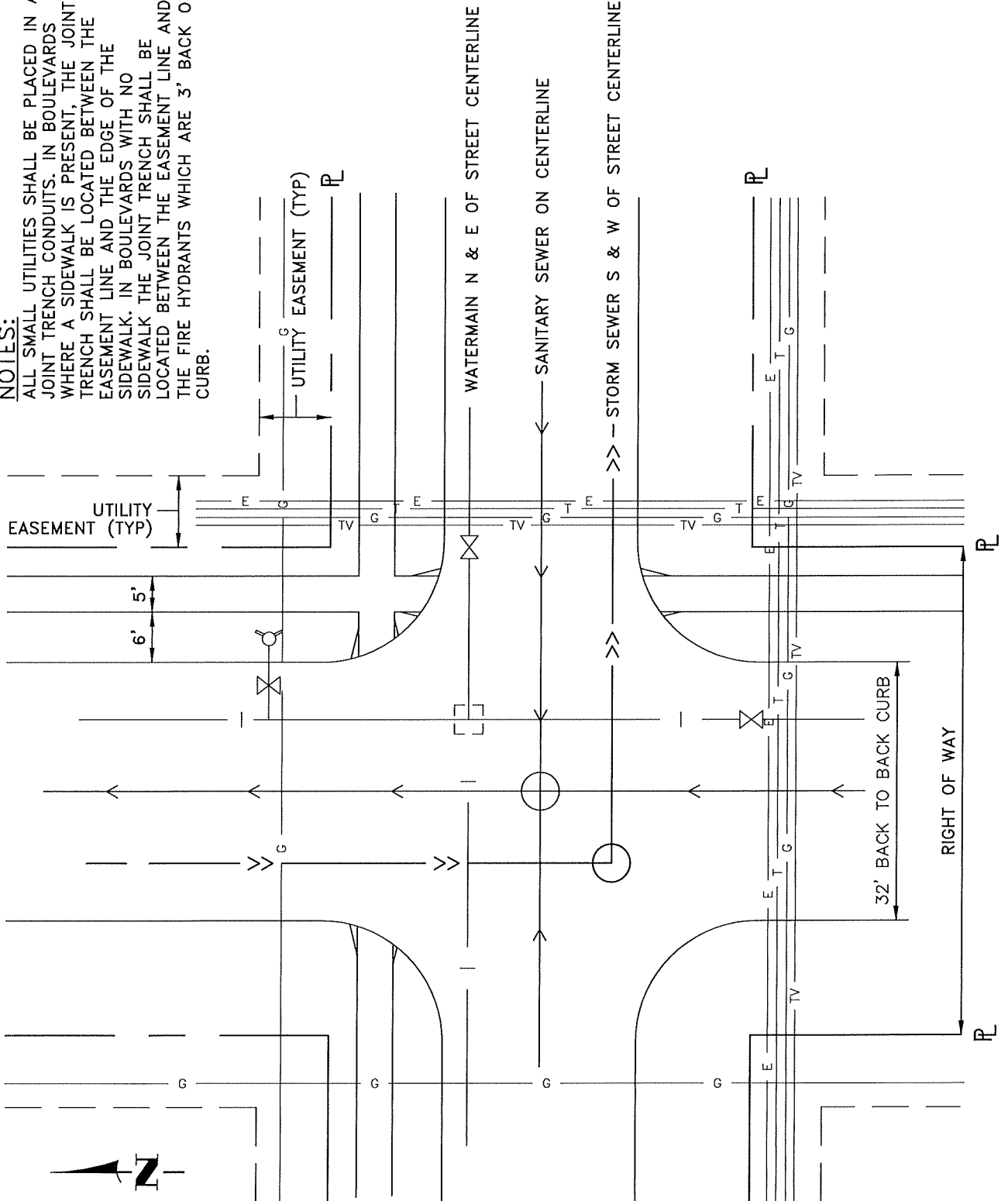
2554

STANDARD
PLATE
NO.

8002G

NOTES:

ALL SMALL UTILITIES SHALL BE PLACED IN A JOINT TRENCH CONDUITS. IN BOULEVARDS WHERE A SIDEWALK IS PRESENT, THE JOINT TRENCH SHALL BE LOCATED BETWEEN THE EASEMENT LINE AND THE EDGE OF THE SIDEWALK. IN BOULEVARDS WITH NO SIDEWALK THE JOINT TRENCH SHALL BE LOCATED BETWEEN THE EASEMENT LINE AND THE FIRE HYDRANTS WHICH ARE 3' BACK OF CURB.



LOCATIONS OF PUBLIC UTILITIES

NO SCALE

APPROVED
11/2025
REVISED

FRANKLIN TOWNSHIP

STANDARD PLATE NO.
MISC 900

APPENDIX B

Stormwater Requirements

**FRANKLIN TOWNSHIP
POLICY ON STORMWATER DRAINAGE
REQUIREMENTS**

APPENDIX B: STORMWATER DRAINAGE REQUIREMENTS

Storm drainage design shall conform to Federal, State and Wright County ordinances, codes, regulations and requirements, the requirements of Franklin Township Policy on Storm Water Drainage requirements and the Local Watershed Management Organization. In addition, the Wright County Local Water Management Plan and Comprehensive Plan are to be utilized on projects in Franklin Township. Documents are available on the Wright County Website.

POLICY ON STORMWATER DRAINAGE
REQUIREMENTS
FRANKLIN TOWNSHIP

1.0 Purpose and Intent

This policy is intended to provide City's Engineers with a standardized format for submitting drainage plans and calculations to the Town for review. A standardized format will provide the following:

- Reduce preparation time for submittals by providing direct guidelines for City's Engineers to follow
- Reduce review time required by the Town's Engineer by insuring a complete and comprehensive drainage plan and calculations are submitted
- Ensure that the Town will receive the best possible protection of its resources, which could be adversely affected by inadequate stormwater management planning

2.0 Incorporation by Reference

Protecting Water Quality in Urban Areas (Best Management Practices for Minnesota) prepared by the Minnesota Pollution Control Agency, Division of Water Quality, latest edition, shall be incorporated by reference into this policy.

Recommendations set forth in the above referenced manual shall be implemented by the City's Engineer. All recommendations set forth within the above referenced manual shall be termed "required" when applicable unless otherwise amended by this policy.

3.0 State and Federal Requirements

State and Federal Ordinances, Codes, Regulations, and Requirements shall be adhered to by the City.

4.0 Calculations and Considerations

A. General Hydrology

Hydrological analysis of storm water runoff for the planning and design of flows in storm sewers, ditches, streams, and channels to lakes, detention basins, and wetlands shall be made using generally accepted hydrograph methods.

Determination of total runoff volume should follow the USDA-SCS curve

number method which incorporates land use and hydrologic soil groups. Specific step-by-step process can be found in the Soil Conservation Service (SCS) publication National Engineering Handbook: Chapter 4, SCS Hydrology (1972), and Hydrology Guide for Minnesota (1992). Peak runoff rates should be determined through the use of the SCS method incorporating "time of concentration" for both pre and post development conditions.

Then the storm water should be routed through the drainage area, that is, mathematically the peaks and volumes are followed as they move in a wave progressively downstream.

"Design Storms" or storm volumes for hydrologic analyses shall be based upon Hershfield, D.M., 1961, Rainfall Frequency Atlas of the United States for Durations of 30 minutes to 24 hours and Return Periods from 1 to 100 years, Technical Publication Number 40 (TP-40) along with the supplementary documents entitled: Oberts, G. L., 1984, Surface Water Management: Precipitation Frequency Analysis for the Twin Cities Metropolitan Area, Metropolitan Council, Publication Number 10-84-007 and Fredrick, R.H., 1977, Five-to-Six-Minute Precipitation Frequency for the Eastern United States, NOAA Technical Memorandum NWS HYDRO-35, Office of Hydrology, Silver Spring, Maryland.

The rational method may be used to determine peak runoff rates for primary systems. Construction of a hydrograph should be undertaken which characterizes the movement of surface water as a function of time and precipitation. Rainfall intensity shall be determined by using the current ATLAS 14 IDF curves.

The minimum time of concentration shall be 10 minutes for drainage areas with tributary areas, 7 minutes without tributary areas. When a portion of the drainage area is highly impervious, the drainage area shall be evaluated both with and without tributary area to verify that just the highly impervious area does not result in greater peak discharge than the area evaluated as a whole.

B. Rainfall

Usually the standard 24-hour SCS rainfall distribution will be used to calculate the peak discharge rates and levels. The following rainfall values shall be used in calculations for Franklin Township:

<u>Event</u>	<u>Rainfall (inches)</u>
1-year, 24 hour	2.45
2-year, 24 hour	2.84
10-year, 24 hour	4.21
25-year, 24 hour	5.24

	50-year, 24 hour	6.13
	100-year, 24 hour	7.09
C.	Curve Numbers	

Table 1 lists the minimum allowable Curve Numbers (CN) which shall be used for design. Hydrologic soil groups shall be determined based upon the Soil Survey for Wright County, Minnesota as published by the United States Department of Agriculture Soil Conservation Service in Cooperation with Minnesota Agricultural Experiment Station.

D. Flood Protection

Consistent with state and federal regulations, Franklin Township requires that the level of flood protection along all ditches, detention basins, lakes, streams, and wetlands be established based upon the 1 percent (100-year frequency) flood. Land use within floodplains shall be regulated in accordance with state floodplain zoning regulations.

The following freeboard values are required for Franklin Township:

- Landlocked Basins (no outlet) 3 feet (Established high water)
- Non-landlocked basins 2 feet (100-year frequency)

E. On-Site Detention Basins

It is the policy of Franklin Township to require developments to control storm water quantity and quality through a management approach of detention basins. Detention basins, whether on-site or regional in nature, shall be designed in accordance with the Mn/DOT Drainage Manual requirements and based off conditions in the most current Construction Stormwater Permit.

F. Storm Sewer

1. Storm sewer sizing shall use the Mn/DOT Drainage Manual with design based upon the 10-year storm event utilized. Inlet capacities and roadway spread at each inlet shall be determined. The maximum allowable roadway spread at any inlet shall be one-half of the traveled lane.

Storm sewer inlets shall be spaced to insure that not more than ½ of the traveled lane is inundated during the 10-year storm event. Manning's equation shall be utilized to determine the flow in the street at each catchbasin for verification of actual spread. A manning's n of 0.016 shall be utilized for asphalt pavement. Additionally, grate inlet capacities shall be verified at the maximum

allowable depth of flow to verify that the proposed grates will pass the 10-year flows. When appropriate, bypass flows shall be considered in calculations.

2. Storm sewer systems shall also meet the following requirements:
 - a. Maintain a minimum velocity of 3 fps for 10-year storm event.
 - b. Maintain a minimum cover of 2 feet from top of pipe to top of casting, conveyance flow elevation.
 - c. Maintain a minimum of 3 feet of final cover over corrugated high-density polyethylene (HDPE) pipe. See engineering guidelines to determine when HDPE is allowed.
 - d. Maintain a minimum of 1.5 feet of final cover over RCP in areas not used for vehicle traffic.
 - e. Storm sewers inverts, which outlet to detention basins, shall be placed at the normal water elevation of the basin. Storm sewers may be submerged to a maximum of 1/2 the pipe diameter below the basin normal water elevation.

5.0 General Requirements - Grading, Drainage, and Erosion Control Plan

Grading, Drainage, and Erosion Control Plans shall be provided by the City in accordance with this manual. Several items critical to the review of the drainage system must be adequately depicted on the plan by the City's Engineer. The following key elements must be depicted on the plan:

- A. Existing and proposed contours at a minimum of 2-foot intervals. A 1-foot contour interval or proposed spot elevations shall be used where conditions dictate. The determination of contour interval shall be made based upon clarity and readability of the plans.
- B. Basin locations as depicted by the proposed contours. Normal level and 2-year, 10-year, and 100-year flood water levels shall be depicted on the plan for each basin. Detention basins are required at each ditch and storm sewer outfall point from the proposed plat. Perimeter berm elevation and width shall be clearly labeled on plan sheets.

Permanent detention basins may be utilized as construction detention basins, provided they are cleaned after permanent erosion control measures are established. Design features of the detention ponds shall be as described in the BMP Manual.

- C. Locations of silt fence, bale checks, erosion control blanket, rock construction entrances, storm drain inlet protection, outlet projection, rip rap, temporary seeding, permanent seeding, sod, mulch, or other erosion

control features proposed to be implemented for the project.

- D. Storm sewer facilities, when utilized, shall be adequately depicted on the drawings. As a minimum, the following must be shown on the plan:
 - 1. Storm sewer pipe length, grade, type of material, and size between each catch basin and manhole.
 - 2. Catchbasin and manhole structural data including size or diameter, and depth. A typical section depicting each different type of catchbasin, or manhole used shall be shown on the drawing. Type of casting utilized shall be referenced for each catchbasin or manhole. Elevations for the top of inlet and each invert shall be referenced on the drawing.
 - 3. A typical curb section for urban design streets shall be shown on the drawing.
 - 4. If ditch sections are used, a typical section shall be shown on the drawing depicting the bottom width and side slopes of the ditch.
 - 5. Details of skimming structures utilized.
- E. Individual lot grading shall ensure positive drainage. Lot grading shall clearly depict a minimum design slope of 2%. Slopes of 1% to 2% may be allowed on a case-by-case basis with approval from the Town Engineer. Under no circumstances will slopes less than 1% be allowed.

6.0 Storm Drainage System Submittal Requirements

- A. The stormwater drainage report shall be comprised of the following sections to provide the Town Engineer with adequate base information for which to review the report. The following data must be included in the report:
 - 1. Title Page. The title page shall list the project name, project location, date prepared, and preparer's name, title, and company.
 - 2. Signature Page. The report shall be signed by a licensed professional engineer.
 - 3. Table of Contents. The table of contents must provide a description of the major categories of the report and list each hydrograph and reservoir report presented in the report.

4. Stormwater Summary. The summary must provide descriptions of items critical to the review of the entire report. Assumptions and results of the calculations shall be included in the summary. As a minimum, the following items must be discussed in the summary:
 - a. Pre-development site conditions (Existing)
 - i. Total site area
 - ii. Delineation of sub-drainage areas, as appropriate.
 - iii. For each drainage area, or sub-drainage area, provide the following information:
 1. Area in acres
 2. Curve number (with justification)
 3. Time of Concentration (with justification)
 4. Runoff rate and runoff volume
 - b. Post Development Site Conditions (Proposed)
 - i. Total site area
 - ii. Delineation of sub-drainage areas, as appropriate.
 - iii. For each drainage area, or sub-drainage area, provide the following information:
 1. Area in acres
 2. Curve number (with justification)
 3. Time of Concentration (with justification)
 4. Runoff rate and runoff volume
 - c. Comparison of pre-development to post-development runoff rates and volumes.
 - d. Discussion of temporary and permanent erosion control measures utilized.
 - e. A discussion of the storm sewer system, if applicable, to include a summary of flows to each catchbasin and the depth of water over each catchbasin during the ten-year event.
5. Drainage maps depicting pre-development and post-development conditions. The maps may be 22" x 34" plans but shall also be provided on 11" x 17" reductions. The plans shall delineate drainage area and sub-drainage area boundaries. All areas shall be labeled and referenced to those presented in the report.
6. Easement areas shall encompass the 100-year water surface elevation for all retention and detention areas.
7. Computer printouts of all hydrograph and reservoir files shall be included at the back of the report for reference.

7.0 Glossary

Critical Storm

Critical Storm means that rainfall event whose distribution and duration results in a runoff volume and rate establishing the appropriate level of protection.

Freeboard

Is the vertical difference between the lowest floor of proposed buildings and the critical 100-year storm event elevation or established high water level.

Level of Protection

The amount of secondary storm water runoff capacity required to avoid flood damage and provide adequate public safety.

Level of Service

The amount of primary storm water runoff capacity required to avoid unusual hardship or significant interference with normal public activities (transportation, sanitary, or utilities).

Normal Level

For basins, that water elevation maintained by a natural or man-made outlet.

NURP

Nationwide Urban Runoff Program (USEPA, 1983).

100-Year Storms

Rainstorms of varying duration (e.g. 2-, 6-, 24- or 48-hour) and intensities expected to recur on average once every hundred years (1% frequency probability).

On-Site Detention

A method of temporarily storing storm water runoff at a development site in the form of wet basins.

Primary Capacity

The volume and/or rate of storm water runoff is defined as that level of service provided by the primary system.

Primary System

The primary system conveys runoff from the more frequent events such as the 2 to 10-year events. In general, the system is composed of swales, ditches, gutters, and storm sewers.

Secondary Capacity

The volume and/or rate of storm water runoff in excess of the primary capacity and defined as that level of protection provided by the secondary system.

Secondary System

The system is composed of all the pathways that runoff takes when the capacity of the primary system is exceeded and in general is composed of streets, swales, ditches, storm sewers, detention basins, creeks, streams, and rivers.

Storm Water Runoff

The flow on the surface of the ground, resulting from precipitation in the form of rainfall or snowmelt.

Table 1
Franklin Township Minimum Runoff Curve Numbers

Cover Description	Curve numbers for hydrologic soil group			
Cover type and hydrologic condition	A	B	C	D
<i>Fully developed urban areas (vegetation established)</i>				
Open space (lawns, parks, golf courses, cemeteries, etc.				
Grass Cover > 75%	39	61	74	80
Grass Cover < 75%	49	65	77	82
Impervious areas:				
Paved parking lots, roofs, driveways, etc. (excluding right-of-way)	98	98	98	98
Streets and roads:				
Paved; curbs and storm sewers (excluding right-of-way)	98	98	98	98
Paved; open ditches (including right-of-way)	83	89	92	93
Gravel (including right-of-way)	76	85	89	91
Dirt (including right-of-way)	72	82	87	89
Water Surface:	100	100	100	100
Urban Districts:				
Commercial and business	NA ¹	92	94	95
Industrial	NA ¹	88	91	93
Residential districts by average lot size:				
1/8 acre or less (town houses)	NA ¹	85	90	92
1/4 acre	NA ¹	75	83	87
1/3 acre	NA ¹	72	81	86
1/2 acre	NA ¹	70	80	85
1 acre	59	68	79	84
2 acres and greater	55	65	77	82
Developing Urban Areas				
Newly graded areas (pervious areas only, no vegetation)	77	86	91	94
<i>Undeveloped areas</i>				
Agricultural land (all current uses)	55	65	77	82
Pasture, grassland, or range – continuous forage for grazing	49	65	77	82
Meadow – continuous grass, protected from grazing and generally mowed for hay	30	58	71	78
Brush – brush-weed-grass mixture with brush the major element	35	56	70	77
Woods – grass combination (orchard or tree farm)	43	65	76	82
Woods	36	60	73	79

¹Use of Type A soil is not allowed for this hydrologic condition.

APPENDIX C

Standard Specifications

**FRANKLIN TOWNSHIP
STANDARD SPECIFICATIONS
FOR
STREET CONSTRUCTION**

Township Standards

INDEX

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1.00 SUMMARY OF CONTENTS

1.01 Introduction

These Standard Specifications are provided to meet the following objectives of the Township for Street Construction.

- A. Provide a written description of what is expected with regard to plan preparation and subsequent construction.
- B. Provide uniform standards for street construction for the City.
- C. Aid the Township in the review of the City's submittals.
- D. Provide the Township with streets that are functional, safe and have public value.

These Specifications are divided into several sections, each of which is utilized at different stages of a project. All sections must be referenced to ensure a smooth project line is obtained and also to ensure that a beneficial final product is received by the Township. The following paragraphs provide a summary of each individual section. The individual sections provide detailed requirements for use to complete improvements within Franklin Township, Wright County, Minnesota.

1.02 General Requirements Section

This section gives a broad overview of the improvement requirements. All work shall conform to the latest edition of the Minnesota Department of Transportation (Mn/DOT) Standard Specifications for Highway Construction unless modified in supplemental specifications. This is to ensure that a uniform set of guidelines is followed during construction. Most Contractors are familiar with the Mn/DOT Specifications, and therefore, will know what is expected of them.

- 1.03 STRICTER PROVISIONS. To the extent any requirement contained herein is less strict than any other requirement which may apply by ordinance or otherwise, the stricter requirement shall apply. However, the Town Board may expressly agree to alter the requirements of these Specifications as part of a development agreement entered into between the Town and City if the Town Board determines such alteration is appropriate to respond to the circumstances of a particular situation or is otherwise in the public interest.

1.04 Submittal Procedures and Construction Plan Requirements Section

This section informs the City of the plan submittal requirements established by the Township. The requirements for the number of drawings, when to submit the drawings and what should be shown on the drawings are outlined in this section.

1.05 Design Considerations Section

The design considerations section informs the City's Engineer of the guidelines to follow in the design of the street and drainage systems. The majority of the items listed are safety related items. Items such as cul-de-sac length and right-of-way width are items with significant public safety implications requiring review and approval by the Town Engineer. This is to provide for the safe conveyance of motorists in the Township. The design standards listed also take into account maintenance items such as snow removal.

1.06 Description and Construction Requirements and Construction Materials Section

The Description and Construction Requirements and the Construction Materials Sections both reference the Mn/DOT Standard Specifications as previously mentioned. The Mn/DOT Specifications were written to cover construction of streets in a wide variety of locations. For instance, Turf Establishment can be accomplished in many different ways. These sections instruct specifically what seed mix is to be used, at what rate to apply it, and how much to fertilize it to obtain the best results in Franklin Township.

1.07 Construction Staking, Observation and Testing Requirements Section

This section is intended to specify the staking, observation, and testing requirements, which shall be followed during the construction phase to ensure that the final product meets the design requirements. This gives the Township a high degree of certainty that the final product is serviceable and of high quality. This allows Contractors to know 1) what is expected for construction staking; 2) when Township site reviews are required; and 3) what tests are expected of them and at what frequency testing is to occur.

1.08 Standard Construction Details Section

This section is intended to provide a graphical representation of the design requirements for various street sections. They are intended to be utilized together with the design standards section to provide a complete picture for the City. These sections are commonly copied onto the drawings to aid the Contractor in construction. A copy of these standard construction details is available electronically from the Township Engineer.

1.09 COSTS. All costs associated with complying with these Specifications, including all testing and inspections, shall be the responsibility of the City or other person, entity, or group responsible for constructing the Street (collectively referred to herein as the "City"). The City shall also be required to fully reimburse the Town for all professional costs and expenses it may incur to oversee, inspect, or otherwise ensure compliance with these Specifications.

2.00 GENERAL REQUIREMENTS

2.01 All work shall conform to current Minnesota Department of Transportation Standard Specification for Construction, with all supplements except as modified herein.

2.02 All work shall be completed in a workman like manner in accordance with typical industry standards.

2.03 All materials utilized for street construction, site drainage and site restoration as described herein shall meet all requirements as defined in each specific reference cited.

2.04 Minimum design standards shall meet:

- A. All streets must be paved or surfaced with crushed granite as approved by the township board.
- B. An obstacle free zone shall be provided adjacent to Streets in accordance with the standards of the Minnesota Department of Transportation Road Design Manual.
- C. All boulevards shall have at least 6 inches of topsoil (black dirt) placed on them and be seeded or sodded.

2.05 PAVEMENT DESIGN. Bituminous section shall be for a 10-ton design and as determined by the Township Engineer based on soil exploration and expected traffic. The Street shall be designed in accordance with Standard Details Appendix A with a minimum of 8" of aggregate base, Class 5, 100% crushed aggregate, 2-1/2" inches of bituminous non-wearing course, and 2 inches of bituminous wearing course. Some developments, especially commercial or industrial sections, may be subject to thicker pavement sections and/or wider street sections to facilitate special traffic conditions or to accommodate certain subgrade soil classifications.

2.06 CUL-DE-SACS. Dead end streets shall have a Cul de sac with a center island in new developments. A snow storage area shall be provided at the end of the Island Cul-de-sac, 40' deep by 34' wide. Cul-de-sacs shall not exceed a profile grade of 2.5 percent. Cul-de-sacs are to be avoided. However, if deemed the best option, the Town Board may allow a cul-de-sac if the Street is platted solely to provide future access into adjoining parcels.

2.07 SHOULDERING. Shouldering shall meet specifications for Class 2 Aggregate and shall be 100% crushed granite.

2.08 Definitions:

Owner: Owner shall mean the City.

Engineer: Engineer shall mean the City's Licensed Professional Engineer.

Township Engineer: Township Engineer shall mean the Licensed Professional Engineer(s) under contract to the Township to serve in that capacity.

Approved Plans: Shall mean all Plans and Specifications and information required to be shown thereon per the Franklin Township Ordinances, along with these Standard Specifications.

3.00 SUBMITTAL PROCEDURES AND CONSTRUCTION PLAN REQUIREMENTS

3.01 The City shall submit a complete set of Grading, Drainage and Erosion Control Plans and Street Construction Drawings together with required supplementary information for improvements to be constructed within Franklin Township. The drawings shall be submitted with the subdivision Preliminary Plat for Township review. The drawings shall be revised, if required, after review by the Township Engineer and Town Board and resubmitted. Four sets of construction drawings shall be submitted with both the Preliminary Plat and Final Plat. Preliminary Plats and Final Plats will not be approved until this requirement has been satisfied. The Construction Drawings shall be in compliance with the requirements and standards as set forth herein.

3.02 The Grading, Drainage and Erosion Control Plans and Preliminary Street Construction Drawings shall be complete and submitted. The drawings shall be on standard 22" x 34" sheets. The street and storm sewer information shall be drawn on plan and profile style sheets. Street cross shall be drawn with vertical and horizontal grid lines. The following minimum information shall be depicted on the Grading, Drainage and Erosion Control Plans and Street Construction Drawings:

A. General

1. North arrow
2. Scale with bar-graph
3. Date of preparation
4. Proposed name of the subdivision in which the street is to be constructed.
5. Proposed name of all streets.
6. Name of the plan preparer, Engineer, Surveyor, and City.
7. Seal or signature of the preparer, Licensed Engineer, and Surveyor.
8. The Grading, Drainage and Erosion Control Plan shall be drawn at a maximum scale of 1" = 50'. The plan shall include the entire boundary of the plat.

9. Street and storm sewer plan and profiles shall be drawn at a maximum scale of 1" = 50' horizontal and 1" = 5' vertical.
10. Street cross sections shall be drawn at a scale of 1" = 10' horizontal and 1" = 5' vertical.
11. Benchmark(s) based on USGS datum within the proposed subdivision boundary.

B. Existing conditions

1. Location, street width, right-of-way width, street name and street improvements for all streets abutting, adjacent or within 500 feet of the proposed subdivision. Bearings and distances for all existing street centerlines and right-of-way described above shall be shown.
2. When any existing street provides access to a proposed subdivision street, all existing access points to that street shall be shown for a distance of 500 feet on either side of the proposed intersection. The existing accesses shall be labeled as to width, type, and condition.
3. Location, size, type, invert elevations, catchbasin location and condition of all storm sewers and culverts located within 500 feet of the proposed subdivision.
5. Location and size of buildings, structures, power and telephone lines and poles, and other above ground facilities within 100 feet of the proposed subdivision.
6. Natural topography including trees, water courses, wetlands, and other above ground natural features within 100 feet of the proposed subdivision.
7. Existing ground surface contours at an interval of two feet within 100 feet of the proposed subdivision. The Township Engineer may require one foot contour intervals where conditions require more detailed grading information.

C. Proposed Conditions

1. Plan and profile of proposed streets showing centerlines and right-of-way. Centerline stationing shall be shown with station 0+00 being the centerline of an accessed street. Centerline information shall include:
 - a. Bearings and distances of all tangent sections.

- b. Radius, degree of curvature, delta, length and stationing of the PC and PT for all curves.
 - c. Vertical data including all existing and proposed grades and vertical curve information such as length of curve and superelevation requirements.
- 2. Cross sections of all proposed streets at 100-foot stations and other pertinent locations such as maximum cut and fill areas, through cul-de-sacs and adjacent to wetlands. Cross sections shall depict existing and proposed grades, and any existing and proposed surface and subsurface features, located at the cross-section location. The cross sections shall be labeled to define the street stations from which they were taken.
- 3. Plan and profile of all proposed storm sewer depicting size, type, location of pipe, flow line gradients and manhole and catchbasin locations. The locations of flared end sections, riprap and other appurtenances shall be shown on the Plans.
- 4. Locations, sizes, types, and inverts of all culverts shall be shown. Location and type of end sections shall be depicted.
- 5. Typical street sections, typical manhole and catchbasin details, typical ditch sections and standard riprap details shall be shown if proposed.
- 6. The Grading, Drainage and Erosion Control Plan shall show the proposed contours at two-foot intervals. The Township Engineer may require one-foot intervals where conditions require more grade information. The plan shall also show all proposed temporary and permanent erosion control features.

D. Supplemental Information

- 1. A soils investigation shall be performed by a licensed geotechnical engineer and a report of their findings submitted to the Township Engineer. The report shall specifically address the adequacy of the existing subgrade to support the proposed street. Areas of weak soil and associated depths shall be discussed. Typical R-values of the soils shall be discussed. Estimate the seasonal high-water elevations along the street and present this data in the report. Test holes shall be taken at a maximum interval of 500 feet along the proposed street centerline. Test hole data shall be included in the soils report and shall depict depth of bore, depth to water table, soil stratification and soil type within each stratification, and thickness of

each strata. Design recommendations for street sections shall be included in the report.

2. A site-specific Stormwater Management Plan shall be prepared by a properly trained (Mn/DOT, U of M) Certified Stormwater Management Plan preparer or a Licensed Professional Engineer and submitted to the Township Engineer with the street construction drawings. Drainage calculations shall be performed in accordance with the design considerations section of this standard. The report shall include the minimum items:

- a. **Title Page.** The title page shall list the project name, project location, date prepared, and preparer's name, title, and company.
- b. **Table of Contents.** The table of contents must provide a description of the major categories of the report and also list each hydrograph and reservoir report presented in the report.
- c. **Summary.** The summary must provide descriptions of items critical to the review of the entire report. Assumptions and results of the calculations shall be included in the summary:
 - Pre-Development Site Conditions (Existing)
 - Total site area
 - Delineation of sub-drainage areas, as appropriate
 - For each drainage area, or sub-drainage area, provide the following information:
 1. Area in acres
 2. Curve number (with justification)
 3. Time of Concentration (with justification)
 4. Runoff rate and runoff volume
 - Post-Development Site Conditions (Proposed)
 - Total site area
 - Delineation of sub-drainage areas, as appropriate
 - For each drainage area, or sub-drainage area, provide the following information:
 1. Area in acres
 2. Curve number (with justification)
 3. Time of Concentration (with justification)
 4. Runoff rate and runoff volume
 - Comparison of pre-development to post-development runoff rates and volumes when rate control is required.

- Discussion of temporary and permanent erosion control measures utilized.
- A discussion of the storm sewer system, if applicable, to include a summary of flows to each catchbasin and the depth of water over each catchbasin during the ten-year event.
- d. **Drainage maps:** Drainage maps depicting pre-development and post-development conditions. The maps may be 22" x 34" plans but shall also be provided on 11" x 17" reductions. The plans shall delineate drainage area and sub-drainage area boundaries. All areas shall be labeled and referenced to those presented in the report.
- e. **Computer Printouts:** Drainage maps of all hydrograph and reservoir files shall be included at the back of the report for reference.

4.00 DESIGN CONSIDERATIONS

- 4.01 Storm Water: The methodology presented in the National Engineering Handbook Section 4 (1972), prepared by the USDA, is the hydrologic practice to be used for determining storm water drainage and ponding within the Township. Both Pre and Post runoff conditions are to be evaluated, and ponding provided for 2 year and 100-year event storm water runoff difference. The post rate of runoff shall not exceed the pre-rate of runoff. The difference must be ponded for the 2-year and 100-year storm event.

The Mn/DOT Drainage Manual and Standards SCS 24-hour rainfall shall be used to design culvert capacity under roadways and driveways for the 50-year storm water event without overtopping of the roadway.

The construction of Nationwide Urban Runoff Program (NURP) ponds is required to treat the concentrated storm water runoff from hard surfaces such as but not limited to roadway and parking lots where pollutants can conceivably be deposited. The pond volume required below the outlet elevation (dead storage) shall be equal to or greater than the volume of runoff produced by a 2.5-inch rainfall event. The runoff volume shall consider the entire area contributing to the pond; however, the minimum permanent pool volume must be greater than or equal to the volume produced from 0.5 inches of runoff from all impervious areas in the contributing watershed.

The Best Management Practice Manual and the Township's Standard Specifications shall be used as a guide for the design and construction of these ponding devices for removal of sediments and surface pollutants.

- 4.02 Street design shall be in accordance with the State of Minnesota Department of Transportation Street Design Manuals, State Aid Manual, Grading Base Manual, Bituminous Manual and Standard Plates Manual, all as amended herein.
- 4.03 All right-of-way widths, street widths and shoulder widths shall conform to the following minimum standards. All design information shall be subject to review by the Township Engineer. Additional widths of right-of-way, street or shoulder may be required by the Township Engineer, if, in his/her opinion, conditions warrant.

RURAL DESIGN

CLASSIFICATION	ROW WIDTH	ROAD TOP WIDTH	STREET SURFACE EDGE TO EDGE
Local	66'	28'	24'
Cul-de-sac turnaround	120'	87' radius 28' wide	24'

- 4.04 Streets shall intersect at right angles or within ten degrees. Intersections having more than four corners shall be prohibited. A 2% maximum grade shall extend 100 feet from all intersections or as deemed necessary by the Engineer.
- 4.05 A minimum typical street section tangent of 100 feet shall be placed between reverse curves on all streets. A minimum typical street section tangent of 100 feet shall be placed between tangent runout portions of reverse super elevated curves. The minimum tangent distance may be increased to facilitate tangent runout for super elevated curves.
- 4.06 Street design speed shall be based upon the functional classification of the street. Horizontal and vertical alignment shall be designed to accommodate a minimum 55 mile per hour design speed for collector streets unless otherwise approved by the Commissioner of Transportation, and a 35 mile per hour design speed on all other streets. The minimum curve radius, without super elevation, shall be 450 feet for local streets at 35 miles per hour. Where the required radius cannot be met, a maximum superelevation of 2.5% will be allowed.
- 4.07 Centerline gradients of urban street sections shall have a minimum vertical gradient of 0.6 percent and a maximum gradient of 8.0 percent. Rural street sections may have a minimum vertical gradient of 0.5 percent and a maximum gradient of 8.0 percent. Rural street section ditch inverts shall have a minimum vertical gradient of 1.0%.
- 4.08 Street intersection jogs with centerline offsets of less than 200 feet shall be prohibited.
- 4.09 Access of local streets onto collector and arterial streets shall be prohibited at less than 500-foot intervals. When roads are designed and meet existing road

requirements, the new development road, if paved and within ¼ mile of another paved township road, must connect to the existing township paved road. The City will construct and bear the cost for the roads and ditches and for the connection of the roads. Every development will be looked at individually to determine the best road surface for each development.

4.10 Residential street intersections shall be rounded by a radius of not less than 30 feet. Corners of entrances to the turnaround portions of cul-de-sacs shall be rounded by a radius of not less than 50 feet. The corner radius to arterial and collector streets shall not be less than 40 feet.

4.11 Residential streets shall be ditch section (rural) streets.

4.12 Cul-de-sacs shall not exceed a profile grade of 2.5 percent. The centerline of the pavement is an 87-foot radius, so outside pavement edge is 99-foot radius and inside pavement edge radius is 75 feet. The right of way radius is 120 feet. The cul-de sac lead in radius shall be a minimum radius of 50 feet, or as approved by the Township Engineer and Township Board of Supervisors.

4.13 Utilities shall be located within easements. Disturbed areas shall be restored upon completion of utility construction.

5.00 DESCRIPTION AND CONSTRUCTION REQUIREMENTS

5.01 Clearing and Grubbing:

All work related to this item shall be performed in accordance with the Minnesota Department of Transportation Standard Specifications for Construction, Section 2101 as modified herein. All trees, shrubs, brush, stumps, roots, windfalls, and other plant life, including dead and decayed matter, that exist within the entire street right-of-way width shall be removed from site and disposed of in accordance with Wright County regulations. Items listed above which are specifically designated to remain as shown on the approved Plans shall be preserved.

At a minimum all clearing and grubbing operations shall extend into the back slope of the ditch cross section or to the right-of-way line.

5.02 Subgrade Preparation:

All work related to subgrade preparation shall conform to the Minnesota Department of Transportation Standard Specifications for Construction, Section 2106 & 2112 as modified herein. Subgrade preparation shall consist of preparation of the street subgrade after installation of all underground work and prior to placing the design section as depicted in the appendix of this Specification. The required density in the top three feet of the subgrade shall be a minimum 100% of standard proctor density. Cohesive soils shall be compacted

in lifts not exceeding 3" loose thickness and at a moisture content of $\pm 10\%$ of optimum moisture content.

Test rolling shall be applied to subgrade per Mn/DOT Specification Section 2111 except as modified in subsection 2111.2 where the Township Engineer may allow other suitable equipment for the test rolling.

Soft, wet, or unsuitable soils encountered below the aggregate base elevation shall be corrected either by excavation and disposal, or by a recommendation from a licensed geotechnical engineer that has been presented to the township and the township engineer for review and approval.

- 5.03 Aggregate Base and Surface: Aggregate base and surface shall be placed in accordance with the Minnesota Department of Transportation Standard Specifications for Construction, Section 2118, and Section 2211.

Aggregate shall be placed to the dimensions as shown on the construction details in the appendix of this Specification. In-place density shall be a minimum of 100% standard proctor density.

- 5.04 Bituminous Placement: Bituminous materials shall be furnished and installed in accordance with the Minnesota Department of Transportation Standard Specifications for Construction Section 2360 as modified herein.

All bituminous mixtures shall be compacted in accordance with MnDOT specifications section 2360 for Maximum Density.

The thickness of all single course of pavement shall be within a tolerance of plus minus $\frac{1}{4}$ inch of thickness as shown on the construction details in the appendix of this Specification. Two courses of bituminous material shall be required for all paved street sections.

The Control Strip Method of compaction may be used as an alternate to the Specified Density Method with permission of the Township Engineer; however, cores are still required per Section 7.03.1c.

- 5.05 Pipe Culverts and Pipe Sewer: All pipe culverts and pipe sewers shall be furnished and installed in accordance with the provisions of the Minnesota Department of Transportation Standard Specifications, Section 2501 and Section 2503. Pipe culverts shall be a minimum of 18" in diameter and pipe sewers shall be a minimum of 15" in diameter and sized based upon a Licensed Engineer's recommendation. All pipe culverts and pipe sewers, except driveway culverts, located within the right-of-way shall be reinforced concrete pipe. The minimum size of driveway culverts shall be 15" in diameter and 36' long with flared end section aprons centered in the ditch flow line.

All storm sewer shall have a minimum cover of 24 inches as measured from the final pavement grade to the top of the pipe and shall have a minimum of a 1:4 slope from the pavement or shoulder edge to the invert of the pipe.

- 5.06 Manholes and Catchbasins: All manholes and catch basins shall be furnished and installed in accordance with the provisions of the Minnesota Department of Transportation Standard Specification 2506 as modified herein.
- 5.07 Temporary Traffic Signs and Devices: Temporary traffic signs and devices shall be furnished and installed in accordance with the Minnesota Department of Transportation Standard Specifications for Construction, Section 2564 and in accordance with the Minnesota Manual on Uniform Traffic Control Devices for Streets and Highways.
- 5.08 Temporary Erosion Control: Erosion control devices shall be installed prior to construction to insure the protection of adjoining properties, wetlands, ponds, lakes, and rivers. All work shall be in accordance with the Minnesota Department of Transportation Standard Specifications for Construction and Specifications, Section 2573. Erosion control devices shall remain in-place after construction until such time as the Township Engineer determines that they are no longer required. At such time that the Township Engineer orders the removal of the erosion control devices, they shall be removed and disposed of by the City. Silt accumulated shall be spread evenly or disposed of to insure the protection of wetland and drainage areas.
- 5.09 Riprap: Riprap shall be furnished and placed in accordance with the Minnesota Department of Transportation Standard Specifications for Construction, Section 2511. Riprap shall be utilized as a protective cover for earth slopes or wherever the soil is susceptible to erosion. A geotextile fabric is required to serve as a filter layer beneath all riprap placed.
- 5.10 Turf Establishment: All disturbed areas not surfaced shall be topsoiled, seeded, mulched, disc anchored and fertilized in accordance with the Minnesota Department of Transportation Standard Specifications for Construction, Section 210 and Section 2575. These areas include but are not limited to in-slopes, ditches, backslopes, boulevards, temporary construction easements, disturbed lot areas, and permanent construction easements. Topsoil shall be placed to a minimum of four inches and maximum of eight inches in-place compacted depth. All areas shall be graded to drain per the approved Plans.
- 5.11 Other Work: Work not specifically described herein shall be performed in accordance with the appropriate section(s) of the Minnesota Department of Transportation Standard Specifications for Construction and Supplemental Specifications.

- 5.12 Sediment dirt and dust shall be controlled by the City by means or methods to contain within the project limits. Watering or other approved means to minimize nuisance for existing residents.

6.00 CONSTRUCTION MATERIALS

- 6.01 Aggregate Sub-base: Aggregate sub-base course shall be Class III or Class IV in accordance with Section 3138 of the Minnesota Department of Transportation Standard Specifications for Construction.

- 6.02 Aggregate Base and Surface: Aggregate base and surface courses shall be Class II or Class V in accordance with Section 3138 of the Minnesota Department of Transportation Standard Specifications for Construction.

- A. Class II aggregate surfacing shall be modified to 12-20% passing #200 sieve. Surfacing aggregate shall be 100% crushed granite.
- B. Class V aggregate base shall be modified to 5-10% passing #200 sieve.
- C. Class V aggregate surfacing shall be modified to 7% to 12% passing #200 sieve.
- D. Street shouldering material shall be Class 2, 100% crushed granite, meeting Mn/DOT Specification 3138, where street grades do not exceed 4%.

- 6.03 Bituminous Mixture: Materials required under this section shall be in accordance with the Minnesota Department of Transportation Standard Specifications for Construction Section 2360.

Bituminous mixture for base course shall be Gyratory Mixture Design, Non-Wear, with aggregate size B ($\frac{3}{4}$ " maximum size) and specified asphalt binder grade B (58-28). Bituminous mixture for wearing courses and surfacing shall be Gyratory Mixture Design, wear, with aggregate size A ($\frac{1}{2}$ " maximum size) and a specified asphalt binder grade B (58-28). Bituminous mixture containing recycled mixture may be utilized for Non-Wearing courses only. Asphalt binder grade shall be adjusted per Specification 2360 for recycled mix.

A tack coat shall be applied between pavement courses and to contact surfaces between pavement and abutting concrete or bituminous edges. Bituminous material for tack coat shall be CSS-1 or CSS-1h (emulsified asphalt) or approved equal applied at a minimum rate of 0.05 gallons per square yard.

- 6.04 Pipe Culverts and Pipe Sewers:

- A. Corrugated steel pipe shall conform to Minnesota Department of Transportation Standard Specification for Construction, Section 3226 and to Minnesota Department of Transportation standard plate 3040. Pipe shall be 2- $\frac{2}{3}$ " x $\frac{1}{2}$ " corrugation, minimum 16 gauge. Bands shall be 10 $\frac{1}{2}$ " minimum width, same thickness and coating as the pipe.

- B. Reinforced concrete pipe shall be in accordance with Section 3236 and of the size and class on the approved construction drawing. Reinforced concrete aprons shall conform to Section 3236 and be utilized for all "daylight" situations. Pipe joint sealer materials shall be preformed rubber, Type A, in accordance with Section 3726. Connections shall be made with bell and spigot joints. Clamp-on-bands shall not be allowed. Pipe couplers shall be subject to rejection upon failure to conform to any requirements of this specification.
- 6.05 Manholes and Catchbasins: Manholes and catchbasins shall conform to Minnesota Department of Transportation Standard Specifications for Construction Section 2506.
- A. Catch basin structures shall be 27" Reinforced Concrete unless otherwise approved by the Town Engineer.
 - B. Manhole inlets shall be Neenah Foundry R-1733 or equal with Type B lid with "storm sewer" inscribed.
 - C. Catchbasin manhole and catchbasin inlets shall be Neenah Foundry R-3250-1 or equal with type K grate.
 - D. Off-street catchbasin manhole and catchbasin inlets shall be per standard plate 409 and 410.
- 6.06 Stormwater outlet construction structures shall be precast concrete structures with reverse grade pipes.
- 6.07 Concrete Mats and Geotextile Fabric: Concrete Mat and geotextile fabric shall conform to the Minnesota Department of Transportation Standard Specifications for Construction, Section 2515, 3604 and Section 3733. Concrete mats shall be open cell precast blocks with a Type IV geotextile fabric.
- 6.08 Signs and Markings: All signs and markings will be provided and installed by the City to meet Township and County standards.
- 6.09 Turf Establishment: Turf establishment shall be in accordance with the Minnesota Department of Transportation Standard Specification for Construction.
- A. Seed mixture shall be in accordance with current MnDOT seeding manual utilizing Southern Boulevard, Mesic Inslope, or as directed by the Township Engineer depending on the location within the township. Seeding rates shall be as indicated in the Seeding Manual or as directed by the Township Engineer.
 - B. Topsoil borrow shall be in accordance with Section 3877.

- C. Sod shall be low maintenance in accordance with Section 3878.
 - D. Commercial fertilizer shall be in accordance with Section 3881 and MnDOT seeding Manual, shall have a minimum analysis of 20-10-20, and be applied at a rate of 350 lbs. per acre.
 - E. Mulch material shall be in accordance with Section 3882 and shall be Type I applied at the rate of two tons per acre. Mulch material shall be disc anchored.
 - F. Wood Fiber Blanket shall meet the requirements of Mn/DOT Specification 3885. Shall be used in areas where slope is greater than 4:1 and anchored with biodegradable pegs.
 - G. Silt fence utilized for erosion control shall be in accordance with Section 3886.
6. 10 All materials to be utilized for construction and not specifically detailed above shall be in accordance with the Minnesota Department of Transportation Standard Specifications for Construction and Supplemental Specifications.

7.00 CONSTRUCTION STAKING, OBSERVATION AND TESTING REQUIREMENTS

7.01 Construction Staking

Construction staking shall be performed by a surveyor licensed in the State of Minnesota and contracted by the City to perform such work. All plat and right-of-way boundaries shall be delineated. Street centerline shall be referenced off the established plat and right-of-way boundaries. One set of slope stakes or offset hubs is required prior to construction and one set of blue tops placed either in the subgrade or gravel surface is required during construction.

Street grade hubs shall be placed at a maximum of 100 feet on center and shall be required at a maximum of 50 feet on center for all curves. The street grade hubs shall be placed along the street on each edge of pavement at the spacing stated above.

- 7.02 Township Observation: The Township Engineer and/or his/her representative shall observe the work to ensure compliance with and conformance to Township Standards and approved plan. The Township Engineer shall observe the work at the following times during construction and prior to proceeding with the next phase of construction:

- A. After clearing limits are staked and prior to construction.
- B. Upon completion of site clearing and grubbing.

- C. Upon completion of removal of all required topsoil and unsuitable subgrade materials. The City's Soils Engineer shall be present to provide assurance that all unsuitable soils have been removed. Alternatively, a written communication from the City's Soils Engineer to the Township's Engineer stating that "all unsuitable soils have been removed from the street sub-base" may be supplied by the City. The Township Engineer may require soil borings to verify the removal of unsuitable soils.
- D. Upon completion of sub-base preparation. The sub-base shall be considered complete when it has been graded and compacted to ± 0.05 feet of the lines and grades as established in the approved Plans. Compaction tests will be required in embankments and cut sections by the Township Engineer.
- E. During placement of stormwater structures.
- F. Upon completion of base course preparation. The base course shall be considered complete when it has been placed, graded and compacted to ± 0.05 feet of the lines and grades established on the approved Plans. Compaction test results which verify in-place density of the base material shall be submitted to the Township Engineer at this time.
- G. During placement of aggregate surface, bituminous base course and bituminous wearing course. Compaction test results for the in-place bituminous material, as required by the Minnesota Department of Transportation Standard Specifications for Construction and Supplemental Specifications, shall be submitted to the Township Engineer prior to acceptance of the street by the Township.
- H. Upon completion of the work as shown on the approved Plans. The complete work shall meet all drainage related, street related, turfing related and other such items required by the approved Plans and Specifications as set forth herein.

The Township Engineer shall be notified by the City 24 hours in advance to schedule site reviews for the above mentioned times. The Township Engineer may, at his/her discretion, perform additional site reviews. The City shall provide access to the site for the Engineer or his/her representative to perform his/her site reviews.

7.03 Construction Materials Testing

- A. The cost of all materials testing shall be born by the City including costs related to secure and maintain an independent testing firm to provide testing services. The testing shall be performed to insure compliance with these standards.

1. Compaction tests shall be performed in the embankments, sub-base and the base materials. A minimum standard proctor density of 100% is required on all base materials located within the upper three feet of the proposed finished grade of the street and a standard proctor density of 95% is required on materials below this level. An in-place compaction testing rate of one test per 500 feet of street in each sub-base and base materials shall determine the minimum number of tests required. Testing shall be performed in accordance with the Minnesota Department of Transportation Grading & Base Manual at the rates indicated above.
2. Compaction shall be by the Ordinary Compaction Method. Acceptance testing shall be performed by driving a fully loaded tandem truck gross weight of 25 tons over street prior to placement of aggregate material and bituminous material. The Township Engineer reserves the right to require soil borings or excavation to verify unsuitable material is removed from the subgrade. If there appears to be insufficient compaction, the Township reserves the right to order additional compaction tests.
3. Sieve analysis shall be performed on all Class 5 aggregate material and any other manufactured sub-base or base materials to be utilized for the project. The City shall provide the Township Engineer with sieve analysis performed by an independent approved soils testing firm. A minimum of one test for every 350 tons of material placed shall be performed. Sampling and testing shall be in accordance to the Minnesota Department of Transportation Grading and Base Manual at the rates indicated above.
4. Core samples are required in the Non-Wear Course and shall be taken at random location for every 500 tons placed. The cores shall determine thickness of pavement and be used to measure density of the core by Rice Test (Maximum Density). A minimum of three cores shall be provided on each layer. Cores shall be taken, and asphalt repaired within 48 hours of the paving.
5. The Township reserves the right to have tests run on other materials placed on the street or in the right-of-way at the City's expense. Those tests may include but are not limited to topsoil analysis, horizonation of soils and seed analysis.

8.00 STANDARD CONSTRUCTION DETAILS

The City shall construct all streets to the sections shown on the Standard Construction Details, which are attached to these Specifications.

9.00 ACCEPTANCE

The City shall construct all streets to the sections shown on the Standard Construction Details, which are attached to these Specifications.

9.01 GENERAL

If the City fails to reasonably allow for inspections if such inspections are required by the Town Board, the Street will not be accepted and the City will be required, at his/her own expense, to either reconstruct the portion of construction not inspected, or place a 20-year performance bond with the Town in the amount equal to the estimated cost of the repair. Any work considered unacceptable shall be subject to Mn/DOT Specification 1512. The City shall be responsible for maintaining a Street until the Town Board adopts the street by resolution. The City may be required to provide a performance bond or letter of credit in the name of the Town in an amount set by the Town Board to warranty the work for a period of two years following acceptance by the Town. If the Town Board adopts a resolution to open and maintain a Street as a Town road within a required warranty period, the City shall remain obligated to immediately repair or replace at his/her own expense any work caused by faulty workmanship or materials during the warranty upon notification by the Town.

9.02 FINAL ACCEPTANCE. Final acceptance of the work to construct or improve a Street shall only occur after the established warranty period.

APPENDIX D

Signage & Striping

**STANDARD SPECIFICATIONS
FOR
SIGNAGE & STRIPING

TOWNSHIP OF FRANKLIN**

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STANDARD SPECIFICATIONS
FOR
SIGNAGE, STRIPING, AND LIGHTING

TOWNSHIP OF FRANKLIN

1.00 GENERAL REQUIREMENTS

1.01 Specification Reference:

All traffic control devices shall conform and be installed in accordance with the "Minnesota Manual of Uniform Traffic Control Devices" (MN MUTCD) and Part 6, "Field Manual for Temporary Traffic Control Zone Layouts", Mn/DOT 2564, 3352 & 3401, Minnesota "Standard Signs Manual", the Mn/DOT "Traffic Engineering Manual", and as modified herein.

All pavement markings shall be installed in accordance with the "Minnesota Manual of Uniform Traffic Control Devices" (MN MUTCD), Mn/DOT 2582, the Mn/DOT "Traffic Engineering Manual", the Traffic Control Layouts/Typical Traffic Control Layouts in the Plans, and as modified herein.

All lighting shall be approved by the Township and adhere to the Subdivision Ordinances, Mn/DOT 2545, and as modified herein. The Mn/DOT "Road Design Manual" and AASHTO "Roadside Design Guide" should be referenced when considering placement of the lighting structures within any Right-of-Way or clear zone.

1.02 Definitions:

Owner: Owner shall mean the City.

Engineer: Engineer shall mean the Owner's engineer.

Town: Town shall mean the Township of Franklin.

Town Engineer: Town Engineer shall mean the engineer designated by the Township as such.

2.00 MATERIALS

2.01 Signage:

- A. All signs deemed necessary by the Town Engineer will be supplied and installed by the Developer. Owners will be financially responsible for all required signs.
- B. All Type C and Type D signs (except stop and street name signs) shall be placed on galvanized flanged channel signposts (U-Posts) conforming to Mn/DOT 3401. The posts shall have a minimum nominal mass of 2.5 per foot and 3/8" diameter holes punched according to the Minnesota Standard Signs Manual.
- C. All Type C and Type D, delineator, and marker sign base and face materials shall be extruded aluminum and conform to Mn/DOT 2564 and 3352. Refer to the Mn/DOT Traffic Engineering Manual, the Mn/DOT Standard Signs Manual, and/or the MN MUTCD for signage type, color, size, and layout.
- D. All Type C and Type D regulatory and warning signs shall be sized according to the MN MUTCD Conventional Road (CR) or Standard classification. These signs shall have Diamond Grade VIP sheeting (ASTM Type IX) with series C lettering (except No Parking signs).
- E. If a sign structure is to be located within the clear zone as shown in the Mn/DOT Road Design Manual Table 4-6.04A and the speed limit is greater than 40 mph, the sign structure shall meet FHWA breakaway requirements.
- F. Stop signs and street name signs shall be mounted on a 2-3/8" O.D., 12 gauge cold rolled galvanized steel tubular posts. The street name signs shall be double faced, notched, and mounted in an E450 bracket and placed above the stop signs on the same post.
- G. Street name plates at the intersections of arterial, collector, or minor collector streets shall be 9" plates. All name plates at the intersections of local-to-local streets shall be 6" plates. These plates shall have high intensity prismatic sheeting (ASTM Type IV) with series B lettering.
- H. No Parking signs shall be spaced a minimum of 400' apart or so as not to create visual "clutter". No Parking signs shall be 18"x18" plates when placed within the Right-of-way. 12"x12" plates are recommended in private driveway areas. All No Parking signs shall have Engineering Grade or Commercial Grade sheeting (ASTM Type I).

- I. Fluorescent Yellow or Fluorescent Yellow Green signs shall have ASTM Type HP FLY or HP FLYG sheeting respectively.
- J. All temporary traffic control equipment shall be in accordance with Part 6 of the MN MUTCD.

2.02 Striping:

- A. All pavement markings shall be High Solids Water-Based Traffic Paint in conformance with Mn/DOT 3591 and shall be covered with treated glass beads in conformance with Mn/DOT 3592 for retroreflectorizing the paint.

3.00 DESIGN LAYOUT

3.01. Signage:

- A. No regulatory, warning, street name or any other permanent traffic control signs will be placed until the street(s) has been paved with at least the bituminous base course.
- B. Signs along streets with urban sections and speed limits of less than 40 mph shall have a lateral offset of 2' from the face of the curb to the edge of the sign panel and shall have a vertical clearance of 7' from the ground to the bottom of the sign panel.
- C. Lateral offsets of signs placed along streets with rural sections or speed limits of 40 mph or greater shall be 12' from the edge of the shoulder or face of curb and shall have a vertical clearance of 7' from the ground or 5' from the elevation of the traveled roadway whichever is greater, unless further considerations require otherwise (i.e. degree of horizontal curves, Right-of-Way limits, etc).
- D. Placement of stop signs shall be marked in the field by the Township Engineer. Stop signs shall be placed beyond the through traffic clear zone when possible. See Mn/DOT Road Design Manual Table 4-6.04A for clear zone distances.
- E. All temporary traffic control layouts shall be in accordance with Part 6 of the MN MUTCD.

3.02. Striping:

- A. Permanent pavement markings are required on all arterial and collector streets and streets identified by the Town Engineer.

- B. Temporary pavement markings are required when permanent markings are not feasible, and the road is open to public traffic. Temporary markings are required prior to opening the road to traffic and shall include all centerlines, edge (fog) lines, and lane lines.
- C. Crosswalk pavement markings shall consist of two parallel 12" wide white lines when crossing local streets at an intersection. All other crosswalk crossings shall be marked using a zebra pattern crosswalk (3' wide x 6' high, white blocks spaced 3' apart). The crosswalk blocks shall be spaced so that they avoid the wheel path.
- D. Stop bars are required at the intersections of all arterial, collector, or minor collector streets unless crosswalk markings exist or are to be installed at the intersection. Stop bars shall be located in the field by the Town Engineer.

4.00

STANDARD PLATES

Standard Plates are included in Appendix A of the Franklin Township Engineering Manual. Where standard plates are not shown for a particular circumstance, the Owner's engineer shall insure the design and installation procedure meets the requirements of this specification.

EXHIBIT 5





Delano
MINNESOTA

City of Delano

P.O. Box 108
Delano, MN 55328
(763) 972-0550

MBAU Administrator at the Court of
Administrative Hearings
Attn: MBAU Administrator
PO Box 64620
St. Paul, MN
55164-0620

MINNESOTA LAKES BANK
DELANO 763-972-3385
MOUND 763-472-5556

TO THE CITY CLERK/TREASURER
CITY OF DELANO
234 2ND STREET NORTH, P.O. BOX 108
DELANO, MINNESOTA 55328

75-544/919

084608

DATE

AMOUNT

07/09/2026

\$200.00

Two Hundred and NO/100 Dollars*****

PAY
to the
order
of

COURT OF ADMINSTRATIVE HEARINGS
ATTN: MBAU ADMINISTRATOR
PO BOX 64620
SAINT PAUL

MN 55164-0620

Holly Schrump MAYOR
Brian R. Blach FINANCE DIRECTOR

⑈084608⑈ ⑆091905444⑆ 00 16030⑈

CITY OF DELANO
DELANO, MN 55328

COURT OF ADMINSTRATIVE HEARINGS

07/09/2026

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7-9-2026

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Office of Administrative Hearings

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